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PEACE HANDBOOKS

VOL. XVI

BRITISH POSSESSIONS, II:
THE CONGO

1920

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PEACE HANDBOOKS

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VOL. XVI.

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BRITISH POSSESSIONS, II: THE CONGO

96. KENYA, UGANDA AND ZANZIBAR

97. BRITISH SOMALILAND AND SOKOTRA

98. ANGLO-EGYPTIAN SUDAN

99. BELGIAN CONGO

LONDON:
H.M. STATIONERY OFFICE

1920

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v. 16

Editorial Note.

IN the spring of 1917 the Foreign Office, in connection with the preparation which they were making for the work of the Peace Conference, established a special section whose duty it should be to provide the British Delegates to the Peace Conference with information in the most convenient form—geographical, economic, historical, social, religious and political—respecting the different countries, districts, islands, &c., with which they might have to deal. In addition, volumes were prepared on certain general subjects, mostly of an historical nature, concerning which it appeared that a special study would be useful.

The historical information was compiled by trained writers on historical subjects, who (in most cases) gave their services without any remuneration. For the geographical sections valuable assistance was given by the Intelligence Division (Naval Staff) of the Admiralty; and for the economic sections, by the War Trade Intelligence Department, which had been established by the Foreign Office. Of the maps accompanying the series, some were prepared by the above-mentioned department of the Admiralty, but the bulk of them were the work of the Geographical Section of the General Staff (Military Intelligence Division) of the War Office.

Now that the Conference has nearly completed its task, the Foreign Office, in response to numerous enquiries and requests, has decided to issue the books for public use, believing that they will be useful to students of history, politics, economics and foreign affairs, to publicists generally and to business men and travellers. It is hardly necessary to say that some of the subjects dealt with in the series have not in fact come under discussion at the Peace Conference: but, as the books treating of them contain valuable information, it has been thought advisable to include them.

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It must be understood that, although the series of volumes was prepared under the authority, and is now issued with the sanction, of the Foreign Office, that Office is not to be regarded as guaranteeing the accuracy of every statement which they contain or as identifying itself with all the opinions expressed in the several volumes; the books were not prepared in the Foreign Office itself, but are in the nature of information provided for the Foreign Office and the British Delegation.

The books are now published, with a few exceptions, substantially as they were issued for the use of the Delegates. No attempt has been made to bring them up to date, for, in the first place, such a process would have entailed a great loss of time and a prohibitive expense; and, in the second, the political and other conditions of a great part of Europe and of the Nearer and Middle East are still unsettled and in such a state of flux that any attempt to describe them would have been incorrect or misleading. The books are therefore to be taken as describing, in general, *ante-bellum* conditions, though in a few cases, where it seemed specially desirable, the account has been brought down to a later date.

G. W. PROTHERO,

General Editor and formerly

Director of the Historical Section.

January 1920.

*HANDBOOKS PREPARED UNDER THE DIRECTION OF THE
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KENYA, UGANDA AND ZANZIBAR

LONDON:
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1920

The name "Kenya" has now been officially adopted as a collective title for the new Kenya Colony and the Kenya Protectorate (the mainland dominions of the Sultan of Zanzibar), which together constituted the former East Africa Protectorate. But, as this book was prepared for publication before the adoption of the collective title, and as the territories concerned are sufficiently indicated by the older names, it has not been thought advisable to incur the additional expense of altering them in the text so as to correspond exactly with the new nomenclature.

EDITOR.

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I. GEOGRAPHY PHYSICAL AND POLITICAL

EAST AFRICA PROTECTORATE

(1) POSITION AND FRONTIERS

THE East Africa Protectorate extends from the Indian Ocean to Lakes Rudolf and Victoria Nyanza. It marches on the north with Abyssinia, on the south with the Tanganyika Territory (German East Africa), on the east with Italian Somaliland, and on the west with the Uganda Protectorate. It lies between $4^{\circ} 40'$ S. and $4^{\circ} 30'$ N. latitude, and between 34° and $42^{\circ} 40'$ E. longitude, and has an area of some 247,000 square miles.

The southern boundary follows a straight line north-west from the mouth of the River Uмба to Lake Jipe, the east shore of which it ascends; thence it proceeds northwards, leaving Mount Kilimanjaro in German territory, to about 3° south latitude, whence it again follows a straight line north-west to Mohuru Bay on Victoria Nyanza, in 1° south latitude. In the east the boundary between British East Africa and Italian Somaliland is the River Juba, from its mouth to the confluence of the Daua. From this point the boundary between British East Africa and Abyssinia follows the River Daua as far as Malka Murri. Thence it runs roughly west-south-west, and again west, following tribal boundaries, to the eastern end of the Goro escarpment, which it follows for some distance, afterwards turning in a north-westerly direction to near the southern end of Lake Stefanie, and thence directly west to Lake Rudolf. Between the East Africa Protectorate and Uganda the boundary passes down the middle of Lake Rudolf to the mouth of the River Turkwel, the course of which

it follows to its source. It then crosses the summit of Mount Elgon, and, striking the River Sio, follows it to Victoria Nyanza, and passes west of the islands of Sumba, Mageta, and Mfwanganu, to the point on Mohuru Bay at which the former German frontier reaches the lake.

(2) SURFACE, COAST, RIVERS, AND LAKES

Surface and Coast

Apart from a narrow belt of coast-land and the plains of Jubaland and Tanaland, the whole territory forms part of the East African Plateau. The country is traversed from north to south by the Eastern Rift valley, which forms a series of lake basins from Lake Rudolf in the north to Lake Natron on the southern frontier.

The highland region in the south-west, which extends far into the Tanganyika Territory, lies at an altitude of between 5,000 and 8,000 feet. Northwards to Lake Rudolf, beyond the region of high mountains, the general level declines rapidly, though there are mountains south-east of the lake. Farther east a steppe region, bounded on the north by the escarpment of the Abyssinian highlands, slopes downwards towards the south-east, passing into the plains of Jubaland. West of the Rift valley the Nandi and Mau escarpments fall sharply to the great depression of Victoria Nyanza.

The whole territory may be divided roughly into five regions: (1) the coast and coastal plain, (2) the slopes of the south-western plateau, (3) the largely volcanic highlands rising therefrom, (4) the depression of Victoria Nyanza, and (5) the northern steppes and the plains of Jubaland and Tanaland. Of these regions the third is by far the most important and characteristic.

(1) *The Coast*.—From the River Umba, as far north as Formosa Bay, the coast consists of sandy beaches and low coral cliffs, broken by mangrove-fringed creeks and protected by a barrier reef. Farther north it be-

comes lower and more sandy, and in the neighbourhood of the Lamu group consists of a maze of creeks and islands. North of Kwaihu Bay it is low and unbroken, though small islands and reefs are still numerous.

It is well provided with natural harbours, of which Mombasa is the most important. Port Durnford and Kismayu, in Jubaland, have some importance owing to the lack of harbours further north along the Benadir coast.

The islands, Wasin (near the mouth of the Umba), the Lamu group, and the Bajun islands north of Port Durnford, are the site of the chief Arab towns on the coast, and still possess a considerable population.

The Coastal Plain.—The section furthest south between the River Umba and the River Sabaki consists of a narrow strip between the sea and the Shimba and Giriama Hills (600 to 1,500 ft.). Sandhills also rise in places to a height of several hundred feet.

This zone is fertile and well cultivated, and southwest of Malindi there is a large tract of forest. North of the River Sabaki the coast plain widens greatly, being joined by the inland plains of the Tana. In the Witu and Lamu districts the soil is especially fertile. Further north, in Jubaland, the coast plain is completely merged in the great plains of the interior. In this section it is covered with bush, and there is little cultivation. A line of sandhills about 200 ft. high here follows the coast, not far inland.

(2) *The Plateau Slopes.*—The southern part of the coast plain is bounded on the west by a range of sandstone hills, and behind these are the thinly peopled steppes of Nyika or Taru, which rise gradually westward to a height of 3,000 ft. The soil of these plains is a characteristic red earth, which is fertile when irrigated, and the vegetation consists of a dense thorn scrub. To the south and west of Voi the plains are broken by a number of lofty summits, ranging from 4,000 to 7,000 ft. high, among them being Bura and Kadiaro. Between Tsavo and Taveta, the country is well watered and fertile.

(3) *The Volcanic Highlands*.—The plateau rises towards the west in a series of ridges running roughly north and south, and having a general altitude of some 5,000 ft. Beyond these ridges rise Mount Kenya and the great ranges of the south-western plateau, which are mainly of volcanic origin. This highland region is divided into two parts by the Eastern Rift valley. Kenya, the Laikipia plateau, the Kikuyu uplands and the Masai plains lie to the east of the valley, and Mount Elgon, the Gwas Ngishu (Uasin Gishu) plateau, and the Nandi, Mau and Lumbwa districts to the west.

The great volcanic mass of Kenya, which lies north of Kikuyu, facing the northern end of the Aberdare Mountains, rises to a height of 17,040 ft., and its slopes are thickly wooded.

The Laikipia plateau lies north-west of Mount Kenya, and consists for the most part of rolling grass plains with an altitude of 6,000 to 7,000 ft. The Lorogai Mountains form the northern scarp of the plateau, and on the east it shelves downwards towards the Jubaland plains and the Lorian swamp. The district is badly watered, save near the River Gwaso Nyiro, and is very difficult of access.

The Kikuyu uplands, which slope westwards from the wall of the Eastern Rift valley, are one of the most fertile and thickly peopled regions of British East Africa. The Kikuyu country proper lies at an altitude of 4,500 to 6,500 ft., and consists of a succession of well-watered valleys, which were originally covered by forests, but have now been cleared. The zone of cultivation is extending far up the slopes of the Kikuyu escarpment and the Aberdare Mountains, which attain in places an altitude of 12,000 to 13,000 ft. The Masai plains, which have an altitude of 5,000 to 6,000 ft., run southwards from Kikuyu towards the former German frontier and Mt. Kilimanjaro, and, with the exception of the Athi and part of the Kapiti plains, south and east of Nairobi, are now included in the Masai reserve. They consist of flat and open grass-lands, badly

watered, but nevertheless affording good grazing, except in the Nyiri district in the south-east.

The Eastern Rift valley crosses the entire territory from north to south, and in the region of Lake Baringo is bounded on the west by the double line of the Elgeyo and Kamasia escarpments. In its central portion, where the escarpment walls are most clearly defined, and where its floor is highest, it has a width of 20 to 30 miles, and lies at a depth of 800 ft. below the general level of the highlands, and 1,500 to 3,000 ft. below the heights of the neighbouring escarpments. The valley floor is divided by a series of transverse folds, which form many lake basins. (See section on "Lakes" below.) The high central portion of this region is well watered and affords excellent pasturage and fertile agricultural land, but north and south of this the valley becomes arid and the climate hot.

The great Gwas Ngishu plateau is bounded on the east by the Elgeyo escarpment, on the north by the Suk Mountains, on the west by Mount Elgon, and on the south by the Nandi escarpment. It consists mainly of level grass-covered plains, with an altitude of 6,000 to 8,000 ft., but there are large tracts of forest.

The Nandi and Mau escarpments are clothed in dense forest, which continues through the broken Lumbwa and Sotik hill country, westward to the Victoria Nyanza depression and southward to the former German frontier.

(4) *The Depression of Victoria Nyanza.*—That portion of the territory which borders Victoria Nyanza belongs naturally rather to the Uganda Protectorate than to British East Africa. East of the Kavirondo Gulf the shore of the lake is low and swampy, and the country here consists of open plains. Farther south the surface is high and broken, and there is much forest and bush.

(5) *The Northern Steppes and the Plains of Jubaland and Tanaland.*—This district is a northerly continuation of the coastal plain described in (1). The whole of the territory between Lake Rudolf and the

River Juba consists of arid thorn-covered steppe (mostly under 2,000 ft. above sea-level), which slopes eastwards and south-eastwards from the region of the Laikipia plateau. This steppe region is in some places almost a desert, although there are occasional wells and oases.

Rivers and Lakes

Owing to the comparative closeness of the eastern water-parting to the sea, there are no very large rivers. The most important are those of the coast area—the Juba, the Tana, and the Sabaki. There are three drainage areas: (a) that of the coast, (b) that of the Rift Valley, and (c) that of Victoria Nyanza.

(a) The River Juba rises in the Abyssinian highlands, and touches British East Africa at about 42° east longitude and 4° 10' north latitude, from this point forming the frontier between British East Africa and Italian Somaliland. It is navigable to light draught river steamers as far as Yonte all the year round, and in the wet season as far as Bardera. The Gwaso Nyiro River, which drains the Laikipia plateau and the northern slopes of Mount Kenya, flows into the Lorian swamp; it belongs to the Juba system, with which it is connected in very wet seasons by the Deshek Wama swamp and the Lakdera.

The River Tana rises in the Aberdare Mountains, and drains the eastern and southern slopes of Mount Kenya, the Kikuyu country, and the plains of Tana-land. Its principal tributary is the Thika.

The valleys of the Juba and Tana have a rich alluvial soil and abundant vegetation. On both rivers there are large tracts of forest, and on the Upper Juba there is a considerable amount of cultivation.

The River Sabaki, which is known in its upper course as the Athi, drains the Ukamba country and the plains south of Nairobi. Its principal tributary is the Tsavo, on the right bank.

(b) The drainage area of the Rift Valley contains no important rivers, since it is very narrow in the only

part where there is any rain. The southern affluents of Lake Rudolf, the Kerio and Turkwel rivers, are the largest, but these usually dry up in their lower course.

(c) Only a small part of the basin of Victoria Nyanza is in the East Africa Protectorate, but its rivers are fairly large in consequence of the heavy rainfall of that region. The most important rivers are: the Nzoia, which drains the Gwas Ngishu plateau, the Nyando, the Sondo, and the Kuja.

There are numerous lakes in the Rift valley. The largest is Lake Rudolf, the southern and eastern parts of which lie within the territory, and which has a total area of about 3,500 square miles. Next in size are Baringo (13 miles by 5 miles), Naivasha (the highest—6,165 ft. above sea-level), Nakuru, and Magadi. Smaller ones are Elmenteita, Hannington, and Bollossat (El-Bor Lossat).

(3) CLIMATE

Temperature

Owing to the high elevation of the central part of the Protectorate, a large part of the country enjoys a temperate and bracing climate. The maximum temperature of this highland region is about 80° F. (26·6° C.), and the minimum about 50° F. (10° C.). The low-lying coastal region has naturally a higher average temperature, ranging from 90° F. (32° C.) to 70° F. (21° C.). It will thus be seen that the seasonal variation is not great.

A high degree of heat prevails in the regions south and east of Lake Rudolf, especially in the neighbourhood of the Lorian swamp, while the plains of Jubaland are the hottest part of the Protectorate.

Rainfall

There are two rainy seasons, the greater rains falling between March and June and the lesser between October and December. Local variations, however,

exist, as in Jubaland the lesser rains fall somewhat earlier, while in the Nyanza Province, at the other extremity of the country, they are almost continuous from March to December.

In the southern coastal districts there is a high but irregular rainfall, which varies between 45 and 70 in. (1,140 and 1,780 mm.). A considerable rainfall, about 30-70 in. (760-1,780 mm.), prevails in the lake shore district, and also in the Kikuyu and Kenya districts. The rainfall of the central highland region is irregular, and varies between 25 and 50 in. (635 and 1,270 mm.).

The regions of smallest rainfall are the southern plains, the Rift valley north of Lake Baringo, the Laikipia plateau, and the districts south and east of Lake Rudolf.

(4) SANITARY CONDITIONS

Owing to the high elevation and consequent temperate climate of the central parts of the territory, the Protectorate is more suitable for European residence than any other part of tropical Africa. Moreover, the coastal regions, with the exception of the district immediately north of the River Uмба, compare favourably with other African coast-lands, Kismayu in particular being fairly healthy.

Malaria is, however, very prevalent, and appears to be increasing in highland districts, such as Naivasha, where it was at first unknown. Blackwater fever, a common sequel of neglected malaria, also causes some mortality, and dysentery is on the increase; there is much enteric, due probably to the pollution of the water supply of the towns. Measures are being taken to remove this source of infection at Kisumu, Nakuru and Mombasa.

Plague, both bubonic and pneumonic, frequently occurs in different parts of the Protectorate. It is endemic on the shore of Victoria Nyanza and is fairly common in the Asiatic quarter of Nairobi. It also occurs on the coast, especially at Mombasa.

Other prevalent diseases are small-pox; cerebro-spinal meningitis; sleeping sickness, which is common in the Victoria Province; venereal diseases; beri-beri, which is endemic on the upper Juba; and leprosy, which is found in the Victoria Province and near the coast, especially in the towns of Mombasa and Malindi.

Bilharzia, filariasis and ankylostomiasis also occur, especially in the coast regions.

There are Government hospitals at Nairobi and Mombasa.

(5) RACE AND LANGUAGE

Race

Ethnologically the Protectorate forms an intermediate zone between the negro and the Hamitic races. The north-eastern districts are inhabited by pure Hamites such as the Somali and the Galla; Bantu tribes are found scattered through the whole territory, and the central highlands are occupied by peoples of a mixed race, the most important and characteristic of which are the Masai. In addition to these natives, the coast and its islands were colonised in very early times by Asiatic settlers. The latter consisted of Arabs and Persians, and their descendants still form a considerable part of the population of the coast towns, especially in the Lamu group.

The following are the chief divisions of the population.

(1) *Arabs and Swahili*.—The Arabs of Mombasa, and, to a lesser extent, those of the rest of the coast, are mostly immigrants from Muscat during the Zanzibari period, the original Arabs of Mombasa—the Mazrui—having retired at Takaungu. The original Arab and Persian settlers are represented by the Bajuns northwards from Patta and by the Swahili south of that point. In the Lamu Islands the latter are as pure in blood as the Muscat Arabs, but elsewhere they are much mixed with the Bantu, and the name is commonly extended to all coast natives who use the Swahili tongue.

(2) *Hamites*.—The Somali are by far the most important Hamitic race in the Protectorate, and now extend as far south as the left bank of the River Tana, and as far west as the Lorian swamp, Wajheir and El Wak. They are a handsome and intelligent people, resembling the Galla in physical type, but taller and of a slighter build.

The most important Somali tribes in the territory are the Herti on the coast, and the Ogaden and Marehan in the interior, while closely allied tribes are the Adjuran and the Shurri, Gurre or Garre, who inhabit north-west Jubaland and the Moyale district.

The Galla belong to two distinct stocks, the Wurde of Tanaland and the Borana of the northern plains. The Wurde Galla have long inhabited the coast region of Tanaland, but are now confined to the right bank of the Tana and to Witu. The Borana are found in the plains east of Lake Rudolf and west of Jubaland. The Galla of Tanaland have intermixed to some extent with negroes, but the Borana are light in colour and pure in race.

(3) *Hamitic negroid group*.—This group is represented by the Masai, the Samburu, the Nandi, Suk and Turkana. It appears to have originated in the steppe country south of the Abyssinian Highlands by the intermixture of Galla and Somali with Nilotic negroes. Thus it is essentially a transitional type, and examples may be found ranging from pure Hamitic to pure negro.

The Masai are the most important of these races, and show the greatest signs of Hamitic blood. Since the British occupation they have been removed to the Southern Reserve in order to leave room for European settlement. Closely allied to the Masai and speaking the same language are the Samburu of the Northern Plains.

The Nandi, with whom are allied the Elgeyo, Kamasia, Sotik and Lumbwa, inhabit the western escarpment of the central highlands. They have been greatly influenced by the Masai, whom they resemble in

physical type. The Suk are a tribe of mixed origin who live north and east of the Gwas Ngishu plateau.

The Turkana are a very large and important tribe who inhabit the plains west of Lake Rudolf and have recently pressed south-eastwards across the River Kerio and the River Sugota. They are an extremely tall race, flat-faced and negroid in feature, and are of a much more massive build than the Masai.

The Dorobbo or Ogiek may be included in this group, since they have strong affinities to the Nandi. They are a people of hunters, who are looked down upon by the other tribes. It is probable that they represent an aboriginal race of Bushman type, but they have intermingled with the surrounding peoples and the Nandi-Masai strain is now dominant.

(4) *Negro group*.—The negro peoples of the Protectorate all belong to the Bantu family, with the exception of the Jalu, or Nilotic Kavirondo, who inhabit the eastern shores of Victoria Nyanza, alongside of the Bantu Kavirondo. The three most important Bantu peoples are the Wakikuyu, who have been much influenced by the Masai, the Wakamba and the Kavirondo. In the east of the Protectorate the Wagosha inhabit the lower Juba Valley, and the Wapokomo are found in the Tana. Further south dwell the restless and backward Wanyika tribes, of which the most important is the Giriama.

Other Bantu peoples, the Meru and the Embu, are found in the district of Mount Kenya.

Language

The language which is in most common use in the Protectorate is Swahili, which is held to have originated in the district of Lamu. It is a blend of Bantu and Arabic, and has become a *lingua franca* far into the interior.

Of the languages spoken by the Hamitic group of peoples by far the purest and most widespread is Galla. The Somali speech has affinities with Galla, but has been much more influenced by Arabic.

The languages spoken by the Hamitic-Negroid tribes, (Masai, Nandi, &c.), are of exceptional interest to the student of African languages owing to their peculiarities of structure. The negroes of the Protectorate all speak regular Bantu tongues.

(6) POPULATION

Distribution

The population of the different provinces of the Protectorate was estimated as follows in the years 1915-16:—

Province.	Europeans.	Asiatics.	Natives.	Total.
Seyidie	366	7,677	195,000*	203,043*
Ukamba	2,875	5,679	372,948	381,502
Kenya	361	266	867,152	867,779
Masai Reserve ..	—	—	36,000	36,000
Naivasha	1,541	498	156,734	158,773
Nyanza	431	2,052	1,116,655*	1,119,138*
Tanaland	19	699	40,000*	40,718*
Jubaland ¹	39	367	17,000*	17,406*
Totals	5,632	17,238	2,801,489*	2,824,359*

* Approximate.

The greater part of the population of the Protectorate is concentrated in four thickly peopled districts. These are (1) the Kavirondo district to the east of Victoria Nyanza; (2) the Kikuyu and Kenya districts; (3) the Machakos and Kitui districts of Ukamba; (4) the southern part of the coast region.

The thinness of the population elsewhere is due in the northern districts to the aridity of the country. In the central highlands it is, however, mainly due to

¹ It must be noted, however, that the above estimate of the native population of Jubaland apparently refers only to the settled population and excludes the nomadic tribes, and the *Statesman's Yearbook* for 1918, containing the officially revised figures, gives the total population of the Protectorate as 4,038,000.

the predominance of the warlike Masai, who monopolised all the open grass-lands of that region and were checked in their raids only by forest country.

Towns

The largest town is Mombasa, the chief port, which has a population of about 30,000, 130 of whom are Europeans. The other towns of the coast, all of which except Witu are very ancient, are now much decayed. The most important are Lamu, Takaungu, Malindi and Kismayu, of which the last two have each about 5,000 inhabitants.

The towns of the interior are all of recent growth. Nairobi, the capital of the Protectorate, has about 14,000 inhabitants, including 800 Europeans and 3,000 Indians. Naivasha and Nakuru in the Rift valley and Eldoret on the Gwas Ngishu plateau are centres of the chief areas of European settlement, and Kisumu on Victoria Nyanza is the terminus of the Uganda Railway.

Movement

Although birth and death statistics are not obtainable, there is reason to believe that the former dominant races of the Protectorate are declining. The new conditions are unfavourable on the one hand to the Arabs and Swahili and on the other to the Masai. In addition to this, disease and immorality probably account for the infecundity of these races, while the same is said to be true of some of the negro tribes such as the Wapokomo and the Wanyika.

The Somali, on the other hand, are an advancing race, and the Turkana are also said to be increasing at the expense of the Suk and the Samburu.

UGANDA

(1) POSITION AND FRONTIERS

The Uganda Protectorate, lying between $1^{\circ} 30'$ south and $4^{\circ} 35'$ north latitude, and $29^{\circ} 30'$ and $36^{\circ} 5'$ east

longitude, has an area of about 109,000 square miles, including over 16,000 square miles of water. It marches in the north with the Anglo-Egyptian Sudan, in the west with the Belgian Congo, in the south with the Tanganyika Territory, and in the east with the British East Africa Protectorate.

The northern boundary, which is provisional, from the shore of the Sanderson Gulf of Lake Rudolf, in about $4^{\circ} 34'$ north latitude, crossing the Nile (Bahr el-Jebel) at Nimule, to the frontier of the Belgian Congo in about $3^{\circ} 30'$ north latitude and $30^{\circ} 50'$ east longitude, is more fully described in *The Anglo-Egyptian Sudan*, No. 98 of this series.

The western boundary follows the water-parting between the basins of the Welle and the Nile to the north-west corner of Lake Albert, whence it passes down the centre of the lake to the mouth of the Semliki River, the course of which it ascends for about 50 miles. It then crosses the Ruwenzori range and Lake Edward to the summit of Mount Sabinio (see *Belgian Congo*, No. 99 of this series).

Starting from this point, the southern boundary skirts the Mfumbiro district to the Lower Kagera, the course of which it then follows as far as its second point of intersection with latitude 1° south. It then follows this parallel to Victoria Nyanza, and across the lake itself to Mohuru Bay on the east shore.

The eastern boundary has already been described in treating of the East Africa Protectorate (p. 1).

(2) SURFACE AND RIVER SYSTEM

Surface

The Uganda Protectorate is predominantly a lake country. More than one-seventh of the whole area consists of water, and by far the most important part of the territory from a social and economic point of view is that which borders the lakes.

The greater part of the country lies at an altitude of between 3,000 and 4,000 ft. There are extensive

highland districts, especially in the south-west, but the three great mountain regions—Mount Elgon (14,698 or 14,140 ft.) on the east and Ruwenzori (16,795 ft.) and Mfumbiro (14,500 ft.) on the south-west—are all situated actually on the frontiers of the Protectorate.

The territory may be divided into three regions: (1) the depression of Victoria Nyanza; (2) the western lakes and highlands; and (3) the eastern plains.

(1) *The Depression of Victoria Nyanza.*—Victoria Nyanza, the largest of the African lakes, has a total area of about 27,000 square miles. Its maximum length from north to south is about 270 miles, and its maximum breadth from east to west about 225 miles. The northern coast is low and much broken by reed-fringed creeks. There are numerous groups of islands, most of which are included in the Uganda Protectorate. The lake is of great importance as a means of communication between Uganda, British East Africa, and the former German territories.

The region of Victoria Nyanza includes the old kingdom of Buganda or the southern parts of the present Buganda province, and the district of Busoga, east of the Victoria Nile. The surface consists of alternate hill and valley, the latter being generally occupied by papyrus swamps or dense forest. The whole of this region is fertile and well watered, although the rivers are for the most part not running streams but stretches of swamp. There are large tracts of tropical forest in Buddu, on the west side of the lake, in Kiagwe, west of the Victoria Nile, and in Busoga. The rest of the country is well cultivated, save in Busoga, where depopulation has caused many districts to revert to bush.

The Sese Islands—which consist of one large island, several smaller ones, and a multitude of islets—and the island of Buvuma, south of the Nile outlet, share in the general characteristics of this region, and contain much dense forest. The inhabitants of the islands have been removed to the mainland, owing to the prevalence of sleeping sickness.

(2) *The Western Lakes and Highlands.*—The western lakes of the Protectorate, Lake Albert, Lake Edward and Lake George, belong to the system of the Western Rift. This is broken south of Lake Edward by the intrusion of the great volcanic mass of the Mfumbiro Mountains; while north of Lake Edward the western shoulder of the Ruwenzori range protrudes into the depression. Only in the case of Lake Albert are both walls of the Rift valley regular and clearly defined.

This region includes the districts of Kigezi, Ankole, Toro, the north-west portion of the Buganda province, and Bunyoro.

Kigezi.—This district is bounded on the north by Lake Edward (830 square miles). A clearly-defined escarpment runs east of this lake and of Lake George (114 square miles), and there is a strip of low grass- and forest-covered country along the lake shores. In the extreme south-west lie the Mfumbiro Mountains, the loftiest of which—Muhavura—has an altitude of 13,547 ft. North-east of Mfumbiro lies the mountain district of Kayonsa, which is covered by dense virgin forest. South-east, towards the former German frontier, the country is more open, the general level sinking from 7,000 to 5,000 ft. There are a number of small lakes in this south-west frontier region.

Ankole.—East of Kigezi and of Lake Edward lie the lofty, rolling uplands of Ankole, at an altitude of between 4,500 and 6,000 ft. They are mostly open pasture lands which support great herds of Bahima cattle. The north-western part is rich in forest, and there are numerous crater lakes.

Toro is bounded on the west by the great isolated range of Ruwenzori. It is a well-watered highland region, and exceptionally fertile. There are large tracts of forest on the Mpanga River, and in the Semliki Valley. East and Central Toro, together with the north-western districts of Buganda and Central Bunyoro, is an open country of rocky and grassy hills.

Bunyoro is traversed from north-east to south-west

by a range of open rocky hills rising to about 4,800 ft. North and west of these lie the great Budonga and Bugoma forests. North-west, towards Lake Albert, (2,064 square miles), which lies at an altitude of 2,028 ft. above the sea, the ground falls abruptly about 1,000 ft. The plains at the foot of this escarpment are salt and barren. North of Lake Albert, along the Bahr el-Jebel, the country is mainly a thinly-inhabited, grassy plain, with strips of forest in the tributary valleys. On the west it rises rapidly to the broken highlands of the Congo-Nile watershed, which have an altitude of between 4,500 and 6,000 ft. The Nile trough and also that portion of East Bunyoro which lies between Masindi and the Victoria Nile are decidedly arid.

(3) *The Eastern Plains*.—This region consists of open plains which rise gradually from the Nile Valley to the edge of the Lake Rudolf escarpment, thence dropping to the arid Turkana plains. The south-eastern corner of this region, on the border of the East Africa Protectorate, is occupied by the isolated volcanic mass of Mount Elgon. Further west the country sinks to the rolling plains of Budama. The country is well watered and fertile, and supports a dense agricultural population.

Further north also, in the district of Teso, there is much cultivation. The land here slopes westward to Lake Kioga in a succession of low ridges and swamps. West of Teso and north of Lake Kioga and Lake Kwania lies the district of Lango, a region of flat grass and bush-covered plains with numerous granite outcrops. The soil is fertile, and the district, like Bukedi and Teso, supports a very large population.

To the north of these districts the country is much more arid. Thinly-peopled, bush-covered plains rise gradually eastward from the Nile trough to the hilly region which runs southward from Mount Agoro (9,400 ft.) to the Lobar-Nakwai Hills. These separate the Acholi country on the west from the Dodosi-Karamojo country to the east. The latter is a plateau.

broken by isolated granite peaks, and opening out southwards into wide cotton-soil plains. It is badly watered, but much grain is grown near the hills.

In the south rises Mount Debasien (about 10,000 ft.), and on the east the country is bounded by the escarpment of the Turkwel-Lake Rudolf depression. The lofty Moruasokor and Pelegech Mountains, on the east, are inhabited, like the whole of the arid thorn-covered plains west of Lake Rudolf, by the Turkana and their numerous flocks.

River System

The whole territory, with the exception of the eastern frontier districts which border Lake Rudolf, forms a single drainage area. Lake Albert and the valley of the White Nile are connected on the one hand with Lake Kioga and Victoria Nyanza by the Victoria Nile, and on the other with Lake Edward by the River Semliki.

The whole system may be divided into three sections: (1) the basin of Victoria Nyanza; (2) the Victoria Nile and Lake Kioga; (3) the Western Rift valley.

(1) The most important river flowing into Victoria Nyanza, namely, the Kagera, which drains the highlands of Karagwe and Ruanda, lies south of the frontier for almost its entire course, and enters Buganda a few miles above its mouth. The River Katonga, which enters the lake at its north-western corner, consists of a chain of swamps and lakes. East of this there are no affluents of the slightest importance until the eastern frontier is reached at the River Sio.

(2) The Victoria Nile, which forms the outlet to Victoria Nyanza, leaves the lake at the northern end of the Napoleon Gulf. For 61 miles, as far as Kakindu, it is unnavigable, but thence to Foweira, a distance of 160 miles (part of which lies through Lake Kioga), it is an important waterway. Below Foweira is a series of rapids which terminate above Fajao in the Murchison Falls, where the river descends 140 ft. in a single fall. From here to Lake Albert it is broad and

navigable. The chief tributary of the Victoria Nile is the River Kafu, the basin of which includes a great part of Buganda and Bunyoro.

The many-branching system of Lake Kioga and Lake Kwania, through which the Victoria Nile runs for part of its course, is much obstructed by *sudd*, through which all the navigable channels have to be cut. It is connected on the north-east with Lake Salisbury by a channel 120 miles long, choked by papyrus.

(3) The principal affluents of Lake Edward, the Ishasha and the Ruchuru, drain the mountain country to the south. Lake George, which is connected with Lake Edward by a broad channel, is fed by the River Mpanga, which drains the eastern slopes of Ruwenzori. The River Semliki, which connects Lake Edward with Lake Albert, flows through Belgian territory for the greater part of its course, but south of Lake Albert it forms the western frontier of Buganda.

The White Nile leaves Lake Albert at its northern extremity. It continues broad and navigable as far as Nimule, where the rapids commence. Its only important tributary is the Assua, which drains the Chua and Lopor country.

(3) CLIMATE

The climate is tropical, save in the higher part of Toro and Ankole, where the average minimum temperature falls as low as 40° F. ($4\frac{1}{2}^{\circ}$ C.). In Buganda the average maximum temperature is 78° to 83° F. ($25\frac{1}{2}^{\circ}$ to $28\frac{1}{2}^{\circ}$ C.), and the average minimum is about 62° F. ($16\frac{1}{2}^{\circ}$ C.). The Nile Valley is considerably hotter and drier than Buganda, the average maximum at Nimule being 94° F. ($34\frac{1}{2}^{\circ}$ C.).

There are two rainy seasons, which are somewhat irregular in their occurrence. The heavy rains usually fall between March and May, and the lesser rains in November and December. The average annual rainfall is about 58 in. (1,470 mm.), but it is much less than this in the Nile Valley and in the north-east of the territory.

Winds are light and variable in Buganda and Bunyoro, though heavy squalls occur on Victoria Nyanza and Lake Albert. In the region of the White Nile and the north-eastern plains the winds are strong and continuous.

(4) SANITARY CONDITIONS

Plague, sleeping sickness, and small-pox are endemic in the Protectorate, Owing to drastic measures, the progress of sleeping sickness has been stopped, and the mortality from that source is now small. Plague has also diminished considerably, but it is still common in the eastern province.

Leprosy is common, especially in the districts east of Lake Kioga, and any general measure for segregation has not yet proved possible. Venereal diseases are very often met with in Buganda, and are on the increase among the natives of the eastern districts. Spirillum fever, ankylostomiasis, bilharzia, and other parasitic diseases are frequent. Guinea-worm is found chiefly in the Nile Valley and the Rudolf province.

Europeans suffer chiefly from malaria and black-water fever. Dysentery is common, and epidemics of enteric sometimes occur.

(5) RACE AND LANGUAGE

The Uganda Protectorate is divided ethnologically between the Bantu in the south-west and the Nilotic negroes in the north-east. On the whole, the Victoria Nile may be taken as the dividing-line between the two races, but the shore of Victoria Nyanza across the frontier of the East Africa Protectorate and the whole region west of Mount Elgon and south of Lake Kioga is racially very mixed.

In addition to these two great races, two other widely different stocks, the aboriginal-pygmy type and the Hamitic Bahima, are also found in the Protectorate.

(1) The forest-dwelling *Pygmies* are found in very small numbers in the Semliki Valley and in the forests in the extreme south-west corner of the Protectorate. Connected with these racially are several other tribes, such as the Buhiga of Ruhiga, who probably represent a mixture of Bantu negro and pygmy. The same name, Batwa, is given to the pygmies or semi-pygmies of the Mfumbiro forests and to a degraded race in Ruanda.

(2) The *Bahima* belong to a Hamitic stock which occupied the highlands east of Victoria Nyanza at least 400 years ago, and enslaved the Bantu population which they found there. They are still found as a ruling pastoral people in Ankole, Mpororo, and Karagwe. The other branch of the race, the *Batussi*, are still the dominant race in Ruanda and Urundi.

The Bahima speak the Bantu Nyoro tongue, or one of its dialects.

(3) The *Bantu*.—The most important of the Bantu peoples are the *Baganda*. Their language, Luganda, is much spoken in the Protectorate. The *Basoga* closely resemble the Baganda, and speak a similar language.

The *Banyoro*, with whom are allied the *Batoro*, are a much less civilised and intelligent race than the Baganda, although they possess a larger infusion of Bahima blood. Their language, Urunyoro, is spoken in various dialects throughout the Western Province, and across the frontier in Ruanda and Urundi.

The *Bairo* form the agricultural population of Ankole, and, like the *Bahutu* of Ruanda, occupy a semi-servile position under the Hamitic ruling race. They speak dialects of Urunyoro.

Three important Bantu tribes are found in the Bukedi district north of Busoga. The *Bagweri* are closely allied to the Basoga; their language is now being superseded by Luganda. The *Bunyuli* represent an intermediate type between the Bagishu and the Basoga. Their language is also tending to give way before a dialect of Luganda.

The *Bagishu* are the most important people of the Bukedi district. Among the sections of the tribe who

inhabit the slopes of Elgon, a short, long-armed, bearded type is found which probably represents an aboriginal strain. They speak a very archaic form of Bantu.

(4) The *Nilotic negroes* of the Protectorate are all characterized by great height and length of limb. The most important tribes are the very numerous *Bateso* or *Bakedi* round Lake Kioga, and the *Acholi* of the White Nile. The *Badama*, south of Lake Kioga, form a link between the Acholi and the Nilotic Kavirondo on Victoria Nyanza. The *Lango* and *Miro* are found between the Bateso and the Acholi.

Further to the north-east, the natives show signs of Hamitic blood. This is especially the case with the *Turkana*, who may be considered the most negroid member of the Hamitic negroid group. Their language is also spoken by the *Jiwe*, the *Dabossa*, and the *Karamojo*. It is allied to the Teso tongue, and shows considerable signs of Masai and Hamitic influence. The Acholi language, on the other hand, is a typical Nilotic tongue. The *Karamojo* tribe is said to be fundamentally of Bantu type, and to have been modified by Turkana influence.

The *Madi* stand apart from the other races of the Protectorate by reason of their peculiar language. Physically, they resemble the Acholi and other Nilotic peoples.

(6) POPULATION

Distribution

The total population of the Protectorate was estimated in March 1917 at 2,954,861. Of these 809 were Europeans (555 males and 254 females), and 3,548 Asiatics (over one-fourth females). The population of the Rudolf province and of the unadministered portions of the eastern province is calculated in this return to be 150,000, but the actual numbers are very doubtful.

In 1913 the population of the Buganda province was 698,573, of which 439,173 inhabited the district

of Mengo. Here the density of the population to the square mile was 43.59, while in the district of Entebbe, which includes many districts evacuated on account of sleeping sickness, it was only 8.29. In the same year the population of the administered portion (four districts) of the eastern province was 1,111,901. It was thin in Busoga ($19\frac{1}{2}$ to the square mile), but comparatively dense elsewhere ($86\frac{1}{2}$ in Bukedi, 67 in Teso, and 65 in Lango).

In the western part of the Protectorate, the district of Ankole had a population of 266,772 or $62\frac{1}{2}$ to the square mile; Bunyoro 131,032, or nearly 28 to the square mile; and Toro 115,116, or 20 to the square mile.

The population of the small Kigezi district in the south-west is dense, save in the great forests; while that of the West Nile and Gulu and Chua districts in the north is not large.

The climate of the Protectorate renders it unsuitable for European settlement, and the number of European planters is not large. Asiatic immigration is more important, and most of the trade of the Protectorate is in the hands of Indians, together with a few Arabs and Baluchis. There is also a considerable number of Swahili and Somali traders in the territory.

Towns and Villages

The Baganda, owing to their numbers and the strength of their government, always possessed large towns and villages. The native capital, Mengo, or, as it is now called, Kampala, was stated in 1902 to have a population of 77,000.

The administrative capital of Buganda, Entebbe, on Victoria Nyanza, has a considerable official population; its importance as a native centre has, however, decreased in consequence of the removal of the lake-side population on account of sleeping sickness.

The chief port of Victoria Nyanza is Jinja, which is the starting-point of the Busoga Railway and of the road to Mbala, the capital of the Bukedi district. Other places on the Nile route are Port Masindi.

Masindi, which lies on the road from Port Masindi to Butiaba on Lake Albert, and Wadelai on the White Nile.

In the eastern province, the towns are all of recent foundation, and are simply Government and missionary stations with a few Indian or Swahili traders..

To the west of Victoria Nyanza the principal settlements are Masaka and Kubendi in Buganda, and Fort Portal in Toro.

Movement

During the last 30 years, the population of the central and western districts seems to have considerably diminished.

Birth and death rate statistics are very incomplete. In the districts under closer administration, comprising nearly half of the whole territory, 33,100 births and 29,697 deaths were registered in 1914, amounting to a birth-rate of 23·4 per 1,000, and a death-rate of 20·5 per 1,000. This shows a decrease of 1·53 for the birth-rate, and 1·91 for the death-rate on the figures for the previous year. The birth-rate is lowest in Buganda, where it was 12·87 per 1,000 in 1913, and it seems that the Buganda population is rapidly decreasing.

ZANZIBAR

(1) POSITION AND EXTENT

The dominions of the Sultan of Zanzibar, when they were delimited in 1886, included not only Zanzibar and Pemba, but also Mafia Island, a coastal strip 10 miles wide extending from Tunghi Bay to Kipini, the islands of the Lamu Archipelago, and the northern towns of Kismayu, Brava, Merca, Mogadishu, and Warsheikh. With the exception of the first, these ports have passed by purchase to Italy, and the southern part of the coastal belt, along with the island of Mafia, was bought by Germany and incorporated in German East Africa. The rest of the continental possessions are leased by Britain and administered as part of the East

Africa Protectorate, although they are still, in fact, part of the Dominions of the Sultan of Zanzibar. The Zanzibar Protectorate is thus practically confined to Zanzibar and Pemba, with the adjacent smaller islands.

The islands of Zanzibar and Pemba lie some 20 to 30 miles from the mainland between Dar es-Salaam and the Uмба River. Pemba, the smaller island, is the more northerly of the two (Chaki Chaki $5^{\circ} 15' S.$, $39^{\circ} 46' E.$). Its extreme length is 38 miles, its breadth 13 miles; and its area covers about 380 square miles. The length of Zanzibar is about 50 miles; and its breadth about 20, while its area is roughly 640 square miles (Zanzibar Town $6^{\circ} 10' S.$, $39^{\circ} 11' 30'' E.$).

Pemba is separated from the mainland by an open channel, but Zanzibar lies rather closer in, facing a long concave curve of the coast line, and the channel, which is comparatively shallow, is so much encumbered with islets and coral reefs that the navigable fairway narrows in places to less than 4 miles.

(2) COAST, SURFACE, AND STREAMS

The east coasts of both islands are little indented, and afford no anchorages for large vessels. The west coast of Pemba is faced by irregular groups of islets and reefs, while Zanzibar is similarly indented on its western side, and fringed with reefs and small islands, of which the most considerable is Tumbatu. Among the western bays and behind the shelter of islets and reefs there are in Pemba as well as in Zanzibar several anchorages able to accommodate ocean-going vessels, and a larger number suitable for dhows.

The surface of Zanzibar is undulating, with a series of small hills running from north to south, the highest being Masingini (440 ft.). Much of the island consists of open park-like country; elsewhere there is a thick but low forest growth. The soil in general supports an abundant tropical vegetation.

In Pemba the surface, broken into many steep ridges and valleys, is mainly composed of a sandy clay reten-

tive of moisture. Palms and clove trees thrive on the higher ground; rice is cultivated in the swampy hollows.

None of the streams of either island are of any considerable size or length, but in wet weather many of them swell to torrents and flood the lower valleys, this being especially the case in Pemba.

(3) CLIMATE

In the islands, as on the coast, there are two rainy seasons. The greater rains usually occur between the middle of March and the end of May, the lesser in November and December, though sometimes not till January. The rainfall on Zanzibar island in average years ranges from 60 to 70 ins.; in Pemba it is usually somewhat higher. The rains in Pemba are generally a few weeks later than in Zanzibar.

The south-west monsoon begins in April or May and blows steadily till September; it is followed by a period of variable winds. The north-east monsoon begins in December, continuing till March, and is also succeeded by a similar period of varying winds. The prevalent winds are not violent.

The extreme range of temperatures in Zanzibar Island is from 60° to 98° F. (15½° to 36½° C.). In Zanzibar Town the absolute maximum and minimum temperatures in 1916 were 93° and 69° F. (34° and 20½° C.), while the means of maxima and of minima for the year were 85° and 76° F. (29½° and 24½° C.). The range of temperatures in Pemba averages a few degrees less than in Zanzibar. The hottest part of the year is from January to March, but November, December, and April are also trying months.

(4) SANTARY CONDITIONS

The climate of Zanzibar thirty years ago had an evil reputation. In recent years, however, the general health of the inhabitants has certainly improved, in

consequence, it may be presumed, of precautionary and remedial measures adopted by the authorities. But the prevalence of malaria and the risk of blackwater fever still render the climate unsuitable for the permanent residence of Europeans.

A few cases of plague still occur sporadically. Tetanus, beri-beri, cerebro-spinal meningitis, small-pox, enteric, and other infective diseases claim a few victims from year to year. Dysentery, venereal diseases and rheumatism are common, and more widespread still is tuberculosis.

Lepers, to the number of over 300, are segregated in settlements, three on Pemba, one on Zanzibar. Hospitals and dispensaries for natives are established in both islands, and there is a hospital for Europeans in Zanzibar.

(5) RACE AND LANGUAGE

The remarkable mixture of nationalities and fusion of races in Zanzibar is due to the position the island held for centuries as the chief entrepot for trade with the East and the slave market of East Africa, also to its existing trade connections with the mainland, with Arabia, and with India.

The bulk of the population is described as Swahili, and appears to be descended on one side from the dominant Arab race, and on the other from negroes belonging to tribes of the mainland.

The Wahadimu, who occupy the eastern side of the island, are of a more purely African type, and probably represent the negro tribes found on the island and subjugated or overawed by the Arab invaders. Akin to the Wahadimu are the Watumbatu, of Tumbatu Island, and the eastern side of Pemba is occupied by a cognate race, the Wapemba. The purely Arab population forms only about 5 per cent. of the whole, but is important as constituting the landed class who own most of the plantations. These Arabs came originally from Oman, and retain the courtesy and dignity of their race

The immigration of Indian traders into Zanzibar has been continuous for over a century, and the natives of India, or people of Indian origin, who are mostly engaged in commerce, now number about 15,000. There are also many Baluchis, Goanese, and Cingalese. In the floating population of Zanzibar a number of the mainland African tribes are represented—Wanyamwezi, Wamanyema, and others. Comoro Islanders have settled in some numbers, and there are Malagasies from Madagascar.

Of the white population of Zanzibar, estimated at about 250 before the war, half was British, and the other half comprised representatives of nine different nationalities.

There are a great many different languages spoken in the islands, but Swahili, which is a mixture of Bantu and Arabic, serves as the *lingua franca* of Zanzibar and the east coast of Africa generally.

(6) POPULATION

The census returns of 1910 gave the following figures:—

	Adults.		Children.	Total.
	Males.	Females.		
Zanzibar Island ..	43,416	49,230	21,423	114,069
Pemba Island. .	28,480	31,899	22,751	83,130
Total	71,896	81,129	44,174	197,199

The density of population per square mile was estimated at 175 in Zanzibar, 219 in Pemba.

It was supposed till recently that the population of the Protectorate was dwindling, but it is now believed that, if complete records were obtainable, they would show that in recent years births have outnumbered deaths.

Zanzibar is the only town of importance. Its population in 1910 was 35,262, of whom Arabs numbered 3,639, Swahili 20,285, Indians 7,720, Comoro Islanders 2,175, Goanese 440, the balance being made up by smaller numbers of many other races.

Most of the villages are situated on the coast-line, but some are found in the interior, on higher ground. The chief Arab and negro villages are at Dunga, Kokotoni, Chwaka, and Kizimkazi. The chief villages in Pemba are Chaki Chaki and Weti.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 1505 Portuguese conquest of East African coast and Zanzibar.
- 1698 Expulsion of Portuguese: Zanzibar under rulers of Muscat (Oman).
- 1832 Said, ruler of Oman, transfers his capital to Zanzibar.
- 1839 First Commercial Treaty with Great Britain.
- 1841 First English consul appointed at Zanzibar.
- 1845 Anti-Slave Trade Treaty.
- 1856 Death of Said.
- 1859 Commercial Treaty with Hanse Towns.
- 1861 Lord Canning's Award: Zanzibar separated from Muscat.
- 1862 Independence of Zanzibar recognised by Great Britain and France.
- Speke and Grant in Uganda.
- 1864 Universities' Mission established at Zanzibar.
- 1866-87 (Sir) John Kirk at Zanzibar.
- 1873 Sir Bartle Frere's Mission: Anti-Slave Trade Treaty.
- 1875 Stanley in Uganda.
- 1883 Joseph Thomson explores Mombasa-Uganda route.
- 1884-85 German expeditions to the Interior.
- 1885 Sultan acknowledges German Protectorate over Usagara and Witu.
- 1886 Anglo-German Agreement.
- 1887 Peters in Uganda.
- 1888 Imperial British East Africa Company's Charter.
- 1890 Second Anglo-German Agreement (Heligoland ceded).
Zanzibar a British Protectorate under the Foreign Office.
- 1891 Frontier of British East Africa with Italian Somaliland delimited.
- 1894 Uganda Protectorate established.
- 1895 Imperial British East Africa Company surrenders its Charter. East Africa Protectorate and Uganda under Foreign Office.
- 1896 Usurpation of Khalid at Zanzibar. Bombardment of Zanzibar.
- 1896-1903 Mombasa-Victoria Nyanza railway constructed.
- 1897 Abolition of legal status of slavery at Zanzibar.
- 1900-1 East Africa Protectorate enlarged.

- 1905 East Africa Protectorate and Uganda transferred to Colonial Office.
 1910-11 Boundary adjustments with German East Africa and Belgian Congo.
 1913 Zanzibar transferred to Colonial Office.

"Sultans" of Muscat with Zanzibar

- 1741-85 Ahmed bin Said.
 1785-1802 Said bin Ahmed and Sultan bin Ahmed jointly.
 1802-4 Sultan bin Ahmed (sole ruler).
 1804-21 Salim bin Sultan and Said bin Sultan jointly.
 1821-56 Said bin Sultan (sole ruler).

"Sultans" of Zanzibar

- 1856-70 Majid bin Said.
 1870-88 Bargash bin Said.
 1888-90 Khalifa bin Said.
 1890-94 Ali bin Said.
 1894-96 Hamed bin Thwain.
 1896-1902 Hamed bin Mohammed bin Said
 1902-11 Ali bin Hamed bin Mahommed.
 1911 Khalifa bin Harub.

EAST AFRICA PROTECTORATE AND UGANDA

(a) *Great Britain, Germany, and the British East Africa Company, 1885-1891*

OVER the territories in East Africa which, towards the end of the nineteenth century, were divided between Great Britain and Germany, the Sultan of

¹ The ruler's proper title is *Seyyid* (meaning "Lord"), first taken by the sons of Ahmed bin Said. The title *Imâm* (meaning "Leader of prayers") was for centuries that of the ruler of Muscat, but was not taken by Seyyid Said in 1804, and has never been adopted by any of his descendants at Zanzibar. The title *Sultan* is strictly a misnomer, the English who came to Muscat at the end of the seventeenth century mistaking the ruler's personal name for a title. The name has clung to the rulers of Zanzibar ever since, but the Arab chiefs never give this title to the Seyyid.

Zanzibar had for many years previously claimed sovereignty. It was in the year 1885 that the German pretensions to the mainland first obtained Government support.¹ In the beginning of this year, on February 12, the German Emperor granted a charter of protection to the Society for German Colonization in respect of acquisitions made by it in the East of Africa between the territory of the Sultan of Zanzibar and Lake Tanganyika.² The Sultan protested, but in vain; and Lord Granville wrote:

"The supposition that H.M.'s Government have no intention of opposing the German schemes of colonization in the neighbourhood of Zanzibar is absolutely correct. H.M.'s Government, on the contrary, view with favour these schemes, the realization of which will entail the civilization of large tracts, over which hitherto no European influence has been exercised, the co-operation of Germany with Great Britain in the work of the suppression of the slave gangs, and the encouragement of the efforts of the Sultan both in the extinction of the slave trade and in the commercial development of his dominions."³

At the same time British individual enterprise had no intention of leaving East Africa entirely to the Germans; and in the same letter Lord Granville referred to the plans of what afterwards became the Imperial British East Africa Company.

"You will explain," he added, "that some prominent capitalists have originated a plan for a British settlement in the country between the coast and the lakes, which are the sources of the White Nile, and for its connection with the coast by a railway. . . . H.M.'s Government have the scheme under their consideration, but they would not support it unless they were fully satisfied that every precaution were taken to ensure that it would in no way conflict with the interests of the territory that has been taken under German protectorate. . . . Their wish would be to avoid any clashing of interests such as might have taken place, had it not been averted, on the Gulf of Guinea."

¹ For the whole history of Zanzibar and of German activity up to 1885, see below, pp. 40-51.

² Africa, No. 1 (1886) [Cd. 4609], p. 4.

³ *Ibid.*, May 25, 1885, p. 17.

With regard to this Lord Granville was requested to "defer" his decision until the German Government had been able to consult maps of the protected territory.¹

On June 2 Bismarck affirmed: "We have no intention . . . to demand any surrender of territories which are indubitably his" (belonging to the Sultan of Zanzibar).² On September 3 Sir E. Malet reported that Bismarck had explained to him that what the German Government wanted was not a naval port, but that their vessels should have free access to and the use of the Sultan's ports. Nevertheless, in August, the German Government asked the Sultan "for a station on the coast of the mainland to be used as a German port, and as a base for the undertakings likely to follow upon her recent annexations in the interior";³ and, as the result of the German Commodore's report, Dar es-Salaam was, in September 1885, selected as a naval depot.⁴

The Anglo-German Agreement of October/November 1886⁵ finally left to Zanzibar only a continuous strip of territory on the coast from Tunghi Bay, on the south, to Kipini at the mouth of the Tana River, on the north, and certain stations, Kismayu, Brava, Merca, Mogadishu, and Warsheikh, on the Benadir coast beyond. The vast hinterland, with the Umba River as boundary, was divided between the German Commercial Company (to the south) and the British East Africa Company (to the north). The British Company, the work of the "prominent capitalists" alluded to in Lord Granville's letter quoted above, chief among them Sir William Mackinnon, obtained in May 1887 from the Sultan of Zanzibar a 50 years' lease of the strip of coast from the Umba River as far as

¹ *Ibid.*, pp. 26-7.

² *Ibid.*, p. 25.

³ *Ibid.*, p. 66.

⁴ *Ibid.*, p. 78.

⁵ See below, Appendix I, p. 97

Kipini,¹ and concluded also a number of agreements with native chiefs in the interior, giving the company sovereign rights for a distance of some 200 miles from the coast. It then applied for a charter, and on September 3, 1888, was incorporated as the Imperial British East Africa Company. On March 4, 1890, it received from the Sultan a concession of the coast between Kipini and Mruti, and the islands and places on the Benadir coast belonging to him.²

In the spring of 1888, under a concession from the Sultan, the German East Africa Company took over the administration of the coast-line and customs in the German sphere of influence; and its high-handed and drastic methods led, in the summer, to disturbances at Pangani and Bagamoyo which, but for the tact and discretion of the British agent, Col. Euan-Smith, might have developed into a serious rising against all Europeans.³ Col. Euan-Smith explained to his German colleague that

"It was my intention to discourage to the utmost, on the part of the British East Africa Company, any attempt to interfere for some time to come, save in such small details as were absolutely necessary, with the daily life and customs of the people. . . . I would advise them to displace none of the old and well-known local authorities, and to introduce no new and unintelligible regulations. Lastly, I would discountenance any attempt (even if such were contemplated, which was unlikely) to interfere with the Sultan's flag."⁴ "This flag question," he insisted, "has really been at the bottom of all these troubles."⁵

At all places on the coast, save only at Bagamoyo and Dar es-Salaam, the Sultan's authority was in abeyance; and at these places the German officials only held their ground owing to the presence of German men-of-war. The hatred of the Germans was very great and bitter all along the coast, and showed no

¹ Hertslet, *Map of Africa by Treaty*, p. 339.

² Hertslet, *Map of Africa by Treaty*, pp. 362-365.

³ *Africa*, No. 10 (1888) [Cd. 5603], *passim*.

⁴ *Ibid.*, pp. 67-8.

⁵ *Ibid.*, p. 95.

signs of diminution; while there was a marked and very noticeable absence of any sort of hostile feeling or demonstration against the British. The outbreak was directed solely against the German Company.

The loyal assistance given by the British Government and its officials to Germany in her dealings with the Sultan of Zanzibar was recognized by the German authorities. At the same time a new field of possible friction was opening out. Under the agreement with regard to the respective spheres of influence concluded in October/November 1886,¹ not only was the country north of the River Tana left free to German enterprise but also the country to the north-west of the British sphere, including Uganda, "so that England might have been entirely shut out from the Interior."² The Germans were under the impression that the British Company was intending to work behind their sphere of influence on the west; and Baron von Plessen explained that, although it was true that no special geographical line had been expressly fixed by agreement for the delimitation on the west, the Imperial Government had started from the idea that Great Britain would leave to Germany a free hand in the territories south of the Victoria Nyanza, and, avoiding the territory lying to the east of Lakes Tanganyika and Nyasa at the back of the German Protectorate, would confine herself to opening up the territory lying to the north of the agreed line. An agreement was accordingly made in July 1887 between Great Britain and Germany respecting the discouragement of annexations in the rear of their respective spheres of influence.³

Germany had annexed Witu at the mouth of the Tana River; and from this starting-point, notwithstanding the agreement of July 1887, the notorious Dr. Peters set out to secure concessions which should

¹ See Appendix I.

² Scott Keltie, *Partition of Africa*, p. 345.

³ Hertslet, *Map of Africa by Treaty*, p. 888.

shut out the British Company from the interior. He succeeded in reaching Uganda, where he obtained concessions from King Mwanga. Fortunately the Anglo-German agreement of July 1, 1890, put an end to his activities. Under this agreement Germany withdrew in favour of Great Britain her Protectorate over Witu, and her Protectorate over the adjoining coast up to Kismayu; she also surrendered her claims to all other territories on the mainland north of the Tana, and to the islands of Patta and Manda. She further agreed to recognise a British Protectorate over the remaining dominions of the Sultan of Zanzibar; and a western boundary to the two spheres of influence was defined by this and subsequent agreements.

The consideration for this was the cession of Heligoland to Germany.¹

The Anglo-German Agreement of July 1, 1890, settled the outstanding questions at issue in East Africa between Great Britain and Germany.

The delimitation of the Anglo-German boundaries was carried out by various protocols and agreements ranging from 1892 to 1910.

In 1889 the British East Africa Company had transferred its lease of the Benadir ports to Italy, and these were definitely granted to Italy on August 12, 1892, by the Sultan of Zanzibar.² On March 24, 1891, an Anglo-Italian Protocol settled the boundary between British East Africa and Italian Somaliland. The mid-channel of the Juba River was taken as the boundary up to the 6th degree of north latitude; it followed that parallel to its intersection with the meridian of longitude 35 degrees east of Greenwich, and that meridian to the Blue Nile. Kismayu remained in British possession.³

Thus freed from foreign complications, the Imperial British East Africa Company could turn its undivided

¹ See Appendix II, p. 98

² Hertslet, *Map of Africa by Treaty*, p. 1094.

³ *Ibid.*, p. 948.

attention to the problems of the administration of its possessions from the sea to Victoria Nyanza.

(b) *The East Africa Protectorate and Uganda since 1891*

Nominally the company possessed Uganda; but there were special difficulties in the way of the development of this country.

Uganda had been first made known to Europe by the Speke and Grant Expedition of 1862. It was visited by Stanley in 1875; and, in response to an appeal from King Mtesa, British missionaries were sent thither in the following year. In 1883 Joseph Thomson explored the route from Mombasa to the Victoria Nyanza now followed by the Uganda Railway. In 1892 the native Government was in the throes of a civil war between Roman Catholics, Protestants, and Mohammedans. Circumstances obliged Captain Lugard, the agent of the Company, to intervene in this war, which was bringing the country to utter ruin. For this purpose he engaged the Sudanese soldiers, formerly employed by Emin Pasha in the Equatorial Province.

In these circumstances it was no wonder that the Company soon realized that it had undertaken a task above its capacities; and notice was given to the Imperial Government of its inability to carry out a work involving such grave responsibility and expenditure.¹ Sir Gerald Portal was commissioned to report on the whole situation, and he visited Uganda and reported in 1893. He recognised that

"As a political corporation, with powers of government, whether over British subjects or natives of Africa, the work of the Imperial East Africa Company may now be looked upon as ended. . . . The experiment of combining administration and trade in the same hands has proved a failure."

Colonel Rhodes wrote:

"From what one saw on the road I should say that the endeavour of the British East Africa Company to develop the interior of East Africa has been a failure from want of funds."²

¹ Africa, No. 7 (1901), Sir H. Johnston's Report [Cd. 671].

² *Ibid.*, No. 2 (1894) [Cd. 7303].

At the same time, according to Sir G. Portal,

“ An evacuation of Uganda means practically the renunciation of the whole of that vast territory reserved by the Anglo-German convention for the sphere of British influence. The country lying between Lake Victoria and the east coast is chiefly valuable as being the road to Uganda, and the evacuation of the latter would soon be recognized as being equivalent to the restriction of British influence and British commerce to the coast line.”¹

On May 29, 1893, Sir G. Portal had concluded a provisional agreement with Mwanga, the King of Uganda, binding him to make no treaty or agreement of any kind with any European without the consent and approval of the British; and a Protectorate over the kingdom of Uganda was declared on June 18, 1894. In 1895 the Imperial British East Africa Company, being bought out by the Government, surrendered their charter, and a British Protectorate was proclaimed over the territories in East Africa (June 15, 1895). The name “ East Africa Protectorate ” was officially given to it (Aug. 31, 1896). In 1896 the Uganda Protectorate was extended over Unyoro, and in 1900 and 1901, by agreements with native kabakas or chieftains, its area was further enlarged. Some 800 miles of difficult country separated the kingdom of Uganda from the nearest port, Mombasa; whilst in 1894 the route to Khartum and Egypt, by the Nile, was completely closed. It became manifest, therefore, that, if Uganda was to be held with any certainty against a native uprising or an invasion from the Sudan or Abyssinia, a railway must be constructed from Mombasa to the east coast of the Victoria Nyanza. The railway was begun in 1896 and was completed in 1903.

Sir H. Johnston says that “ the railway, telegraph, and steamers had entirely altered the conditions of European life in Uganda, and had made the country relatively easy to administer.”² Since the end of last

¹ Africa, No. 2 (1894) [C. 7303].

² Africa, No. 7 (1901), Sir H. Johnston's Report [Cd. 671], p. 6.

century there has been no history to record of Uganda, in the sense of wars or native troubles. Great loss of life was caused some years ago by sleeping sickness, but it has been latterly much more under control; while, in spite of a climate not healthy for Europeans, planting industries have made much progress.

The success of British administration has been shown by the fact that the outbreak of war in Europe was followed by widespread expressions of loyalty to the British Government and by offers of service and assistance from the chiefs and people. Valuable help has been rendered to the military authorities, and praiseworthy activity evinced in the mobilization of a force of native levies, and the collection of recruits and transport carriers. Carriers from Buangoro behaved splendidly while employed on military operations in the adjoining Protectorate and in German East Africa, and showed courage and steadiness under fire.¹

As was the case with Uganda, so the history of the British East Africa Protectorate in this century has been one of steady development, in spite of all the various obstacles which arise in a large area where there are white settlers and native races of different kinds. The presence of European immigrants has, almost inevitably, led to difficulties for the Government, measures taken in the interests of the natives seeming to conflict with the development of the country. The problem has been in part solved by the creation of reserves for certain native tribes. It may be noted that, so far as the highlands of East Africa are concerned, Sir C. Eliot differs from Sir H. Johnston's view that East Africa should be the America of the Hindu.²

The general prosperity of the Protectorate has been well maintained in the exceptional circumstances

¹ [Cd. 7622, 64], Annual Report, 1914-15.

² Sir C. Eliot, *The East Africa Protectorate*, p. 305. Other observers appear to be less confident with regard to the future of East Africa as a *permanent white man's land*.

caused by the war, and the native tribes have, without exception, proved loyal.¹

The latest adjustments of the boundary with German East Africa and the Belgian Congo were made in 1910 and 1911.

ZANZIBAR

(a) *To the Close of the Portuguese Domination*

In the early years of the sixteenth century the Portuguese made themselves masters of the coast of East Africa, including the islands of Zanzibar and Pemba.

On their arrival they found many flourishing cities, which owned a doubtful allegiance to the Sultanate of Kilwa (200 miles south of Zanzibar), itself founded A.D. 975 by Ali ibn Hasan, a Persian prince from Shiraz. To this so-called "Zenj Empire" Zanzibar belonged. But the cities were practically independent. The Arab influence predominated in all, and a flourishing trade was carried on with India and the Persian Gulf.

(b) *Zanzibar under Oman (A.D. 1698–1861)*

In A.D. 1698 the then Imâm of Muscat (Oman). Saif bin Sultan, sent a naval force which expelled the Portuguese and took Zanzibar, Pemba, Mombasa, and Kilwa. These now became dependencies of Muscat. The governors (valis) were, however, in practice largely independent of the Imâm, and at times openly defied him (e.g., the Mazrui, in 1746). In 1788 the Imâm, Sultan bin Ahmed, retook Zanzibar (Pemba remained in the hands of the Mazrui till 1822). In 1832 the most famous of the rulers of Oman, Said bin Sultan (born 1790, joint ruler of Oman with his brother from 1804; sole ruler from 1821), transferred the capital of all his dominions from Muscat to Zanzibar, and the most prosperous chapter in the island's history begins.

¹ [Cd. 8434. 8], Annual Report for 1915-16.

On the collapse of the Portuguese power an anarchic period of piracy had ensued in the Indian Ocean. Said—warrior, shipbuilder, merchant, and cultivator, “probably as enlightened a prince as Arabia ever produced”—co-operated with the naval forces of the East India Company to restore order on the seas.

From Zanzibar, which he purchased from the Swahili chief then in possession of it, Said extended his rule, by conquest and diplomacy, till it stretched from Mogadishu on the north ($2^{\circ} 10' N.$) to Cape Delgado on the south ($10^{\circ} 42' S.$). Indian and European traders were attracted to Zanzibar in ever-increasing numbers. A commercial treaty with the United States was concluded in 1833, and a United States consulate established in 1837. France secured a similar treaty, and established her consulate in 1844. By this time the British were on the scene. Since the visit of the first Englishman to Zanzibar in 1591 no British vessel is recorded as having paid the island a visit until 1799, the time of the first treaties of the East India Company with Muscat (in 1798 and 1800). It was not, however, until 1841 that the first British consul and East India Company agent was appointed to Zanzibar, though a commercial treaty with Great Britain had been concluded two years previously. Throughout his rule, however, Said was a firm friend of the British, who alone had actively aided him to establish his authority.

After a noteworthy reign of fifty-two years, Said died, late in 1856, leaving instructions for the division of his territories between the eldest of his thirteen surviving sons, Thuwainy, and the fourth son, Majid (born 1835). To the former he bequeathed his possessions in Oman, Arabia, and the Persian Gulf; to the latter the whole of his African dominions. Thuwainy, discontented with this arrangement, threatened to invade Zanzibar, but was checked by the fear of British cruisers. The two princes finally agreed to submit their dispute to the arbitration of Lord Canning, Governor-General of India.

• Burton.

(c) *Zanzibar an Independent Sultanate* (1861-1890)

The Canning Award (April 2, 1861) ratified the division of Said's dominions, but directed the ruler of Zanzibar to pay henceforth to the ruler of Muscat an annual subsidy of 40,000 crowns (£8,500). This subsidy was not to be considered as implying the dependence of Zanzibar on Muscat, but as a compensation to the latter for the abandonment of all claims on the territory of the former, and as adjusting the inequality between the two inheritances. Neither was it personal to the two then rulers, but it was intended to be a final and permanent arrangement of the relations between the two powers.

The Award was accepted by both Thuwainy and Majid, and the latter paid the subsidy regularly until his brother was murdered by Salim, his son. He then promptly discontinued payment, in spite of protests from the Indian Government. The claim was still outstanding on his death (October, 1870). His successor, Bargash bin Said, fifth son of Said, still declined to pay the subsidy, even when next year another brother, Toorkee, became Sultan of Muscat. In 1873 Toorkee, as a reward for his prompt acceptance of an Anti-slave Trade Treaty presented to him by Sir Bartle Frere in April of that year, received the Zanzibar subsidy (with arrears from 1871) from the Political Agent at Muscat, with the sanction of the Viceroy of India. From that date the charge has never been borne by the Zanzibar Treasury.

Under Sultan Bargash (1870-1888) in other respects also the prosperity of Zanzibar continued for many years to increase, in spite of sore damage caused to the island by a cyclone in 1872, which left only one tree standing. His personal authority was great, and his friendship for Great Britain sincere. Both prosperity and friendship were due mainly to the extraordinary influence with the Sultan of the British representative at Zanzibar, Dr. (later Sir) John Kirk. In 1866 Kirk had been appointed surgeon to the Political

Agency at Zanzibar. In 1868 he became Assistant Political Agent, and in 1873 he was raised to the rank of Consul-General. Thanks to him, up to the time of Germany's intervention in 1884-5, British influence was paramount at Zanzibar. Under Bargash Zanzibar maintained its position as the capital of Negro Africa and became the gate of civilization for Eastern Equatorial Africa, and the focus for all exploring and missionary work in the interior. Its language, Swahili, became the language of Central African trade, and penetrated everywhere on the lines of the trade routes, which radiated from and converged upon Zanzibar. A lively interest came to be taken in the island and its Sultan by both the British and the Indian Governments. Towards the end of the period a more ominous cause of such interest made its appearance in the shape of German ambitions. The determining factors in the relations of Great Britain with Zanzibar may now be briefly described.

(1) *Trade*.—Direct British trade with the dominions of the Sultan was never very lively, and was exceeded in amount by German, American, and French together. The Germans, too, were the first to send steamers direct to the East African coast. But all European trade, even when stimulated by the opening of the Suez Canal in 1869, was of infinitesimal proportion compared with that of the Indian merchants, both Hindu and Mohammedan, known comprehensively as "Banians." For the forty years before Sir Bartle Frère's Mission in 1873 Indian immigration had gone on at a constantly increasing rate. "Their silent occupation of the coast from Sokotra to Cape Colony," wrote Frère, "is one of the most curious things I know." Their monopoly of trade on Zanzibar was practically complete. All European merchants employed them as agents and intermediaries. In 1870 their numbers on Zanzibar alone were reckoned as 3,710, and the amount of British-Indian capital invested there was over a million and a half pounds. It was only the trade with the interior which remained in Arab and

Swahili hands, and this was largely financed by Indians. Besides trading themselves, the Indians on Zanzibar had acquired exclusive control of banking and mercantile business. The Arabs, who had sunk to the position of feudal landowners, were in a financial sense completely subject to them. Hardly an Arab estate but was encumbered by mortgages to Indian capitalists, and a large proportion were so deeply mortgaged as virtually to belong to the Indian mortgagee. The customs dues were farmed by an Indian house. India's interest in Zanzibar was, and still to some extent remains, vital, her traders always expecting the support and protection of the Government.

(2) *Slavery*.—The growth of the East African slave trade to the great proportions attained by it in the nineteenth century was due in part to the security of the seas achieved by Said. Zanzibar rapidly became the chief centre and clearing-house for the traffic, to the great financial advantage of its ruler, who, c.g., in 1873 derived 40,000 dollars from customs dues levied on slaves.

But the policy of the British Government was unswervingly directed first to the limitation, and finally to the entire abolition, of slavery in all its forms. There were many difficulties hampering this crusade at Zanzibar. The Sultan was far from being master in his own house, and the Arab chiefs, on whose support he, but a *primus inter pares*, relied, were bitterly hostile to it. He himself sympathised with their views. The very Indians, subjects of the crusading power, if refraining from the actual traffic itself (when it became too risky), undoubtedly provided the capital on which its operations depended. But British pressure and naval activity triumphed in the end. The stages of its victory were three in number. The slave trade by sea and the sale of slaves in Zanzibar market were the subject of treaties concluded with Sultans Said in 1845, Majid in 1868, and finally with Bargash in 1873. This last treaty, which put an end to the sea-borne traffic, was wrung with great difficulty from the Sultan, who refused it

when proffered by Sir Bartle Frere in his Mission of January to March, but eventually gave way in June to a threat of naval action and Sir John Kirk's influence.

The slave traffic by land was prohibited by the Sultan in 1876. There still remained the hardest problem of all, that of domestic slavery. An institution so rooted in all Mohammedan life could not, either in Zanzibar or any other Moslem country be abolished by a stroke of the pen. Decrees of Sultan Khalifa in 1889 and Ali in 1890 tended to check the system, as did the diminution of supply. But domestic slavery survived the independence of the country.

(3) *Zanzibar, Great Britain, and Germany.*—In East Africa, as in South-west Africa, Germany in due course seized territories previously refused by Great Britain. For many years the British Government declined to exercise any direct control over Zanzibar. In March, 1862, both Great Britain and France engaged definitely to respect its independence. Accordingly, when Bargash in 1873 offered France the Protectorate of his dominions, the proposal fell through. In 1877, the Sultan offered a seventy-year lease of the customs and administration of all his mainland possessions to Mr. (afterwards Sir) William Mackinnon, who for some years past had practically controlled and developed all British commerce between India, the Persian Gulf, and the East African coast. In 1872 Mackinnon had established a mail service between Aden and Zanzibar, and he had gained the Sultan's entire confidence. But when the offer of 1877 was referred to the British Government the latter refused to sanction the concession or to declare a British Protectorate over Zanzibar. Lord Beaconsfield also ignored a declaration which Bargash had given to the British Consul binding himself not to cede territory to any Power other than Great Britain. The fruit was long since ripe, but it was left to Germany first definitely to attempt to pluck it.

German trade with Zanzibar dated back to the middle of the century. A German firm was established there in 1844. In 1859 the Hanseatic Consul concluded

a commercial treaty with the Sultan. But German trade, like other European trade, was conducted through the medium of the Banians, and the German flag was much more rarely hoisted by native vessels (endeavouring to elude British naval vigilance) than was the French. In 1874 the Sultan made overtures to Germany, which Bismarck refused. But next year German political aspirations first took shape.

In 1875 Vice-Admiral Livonius wrote a memorandum urging a German Protectorate over Zanzibar and East Africa. Bismarck prevented its publication. Similar German schemes were promulgated in 1879 and 1882. Towards the end of 1884 the new German Consul, Rohlfs, was sent to Zanzibar in a man-of-war, and the British Government became uneasy. But Bismarck, in answer to enquiries, assured it that Germany was not endeavouring to obtain a Protectorate over Zanzibar. In a few months the German intention to appropriate the mainland possessions of the Sultan became manifest. Count Münster, in a Note to Lord Granville (Feb. 6, 1885) stated that he was "unacquainted with the amount of direct influence which the United Kingdom and the Indian Governments have exercised over Zanzibar during the present century." And the German Government claimed precisely the same rights in Zanzibar as were exercised by Great Britain.

Finding the attitude of the British Government sympathetic, Germany proceeded to apply the doctrine of "effective occupation" (as enunciated in the Berlin Act of Feb. 24, 1885) to the Sultan's mainland possessions, and with great success. That Zanzibar was not a signatory to the Act made little difference. The Sultan's pretensions to sovereignty reached as far as Tanganyika. His actual authority hardly reached beyond a coastal strip, and, at least in the northern section, was not continuous even there. The German penetration of the interior, actively pursued in 1884 and 1885, reaped its reward when the German East Africa Company, founded by Dr. Peters, obtained, on Feb. 12, 1885, a *Schutzbrief* from the Emperor, who placed

under his Imperial protection some 60,000 square miles of territory claimed by the Sultan of Zanzibar as part of his inherited dominions. Protests and military expeditions despatched by Bargash were alike vain. On Aug. 14, 1885, he yielded to the inevitable (in the shape of a German squadron) so far as to acknowledge German Protectorates over Usagara, &c., and Witu.¹ In October, 1885, three commissioners (a British, French, and German) were appointed to ascertain the precise limits of the Sultan's claims to sovereignty on the East Coast of Africa. A resulting Agreement (Oct. 29-Nov. 1, 1886) between the German and British Governments was accepted by Bargash on Dec. 4, 1886, and ended the competition for the mainland so far as he was concerned. France also accepted it. Germany then gave her adhesion to the Anglo-French Agreement of 1862 respecting the independence of Zanzibar.

This Agreement of 1886 gave to the Sultan of Zanzibar the islands of Zanzibar, Pemba, Lamu, Mafia, and a number of other smaller islands. On the mainland he was awarded nothing but a continuous strip of territory, ten sea-miles in depth, from the south bank of the Minengani River in the centre of Tunghi Bay² to Kipini at the mouth of the Tana River, a distance of some 600 miles. North of Kipini, on the Benadir coast, he retained the stations of Kismayu, Brava, Merca, and Mogadishu, with radii landwards of 10 sea-miles, and Warsheikh, with a radius of 5 sea-miles. He was further allowed to lease to the German East Africa Company the custom dues of Dar es-Salaam and Pangani in return for an annual payment.

In the next few years the Sultans of Zanzibar disposed of the whole of these coastal possessions by lease or by sale.

In May, 1887, Sultan Bargash gave a fifty years'

¹ A German Protectorate over the East Coast of Africa from Witu to Kismayu was officially notified on October 22, 1889.

² Portuguese action subsequently substituted the Rovuma River.

lease of his strip of coast from the Umba River as far as Kipini to Sir William Mackinnon, a grant which led to the formation of the Imperial British East Africa Company (Charter, Sept. 3, 1888).

On April 28, 1888, Sultan Khalifa (who succeeded his brother Bargash on the latter's death on March 26) gave a fifty years' lease of his strip of coast-line lying between the German sphere and the sea (i.e., all that was left of Zanzibar's coastal territory south of that granted to Sir W. Mackinnon), together with Mafia Island, to the Imperial German East African Association (Charter, March, 1887). The Germans took over the administration on Aug. 16, hoisted their flag at the chief ports, and at once provoked a native and Arab rising, which was quelled only in 1890.

In 1889 the British East Africa Company transferred the Benadir ports to Italy, and Sultan Ali (who succeeded his brother Khalifa in February, 1890) agreed to lease them to Italy for fifty years in 1892. Italy bought these ports outright in January, 1905, for £144,000, and on Jan. 13, 1905, granted Great Britain the right of pre-emption over them.

In 1890 Germany bought outright for four million marks (£200,000) the territory leased in 1888. Finally, to complete the history of Zanzibar's coastal possessions, an agreement was concluded on Dec. 14, 1895, between Great Britain and Zanzibar, whereby the administration of the Sultan's possessions on the mainland and adjacent islands, exclusive of Zanzibar and Pemba, was entrusted to officers appointed by the British Government in return for an annual payment of £11,000. Further, the sum of £200,000 recently paid the Sultan by Germany was lent to the British Government to buy out the rights of the Imperial British East Africa Company, and British East Africa now came under direct administration by the Foreign Office. £6,000 interest on this loan is annually paid to the Sultan, who retains his sovereignty over these districts. This agreement was declared terminable at six months' notice given to him by the British Government.

Five years before this agreement the Sultan's remaining dominions had passed under the direct control of Great Britain.

(d) *Zanzibar a British Protectorate (1890–1918)*

On July 1, 1890, an agreement was concluded between Great Britain and Germany of the most comprehensive character, defining their spheres of influence in East, West, and South-west Africa.¹

In East Africa Germany recognised a Protectorate by Great Britain over the dominions of the Sultan of Zanzibar, excluding the territory leased to Germany two years' previously (and subsequently sold to her outright). She withdrew her own Protectorate over Witu and the adjoining coast up to Kismayu and other claims north of the River Tana in favour of Great Britain. In return Great Britain ceded Heligoland to Germany.

On August 5, 1890, Great Britain recognised the Protectorate by France over Madagascar and French influence in the whole of the Central Sahara in return for the French recognition of the British Protectorate over Zanzibar and Pemba (as soon as notified), agreed to on the same day by a separate Declaration.

On November 4, 1890, the British Protectorate over Zanzibar was formally proclaimed.

In October 1891 the system of government was framed. A British representative became first Minister. Responsible officers were placed in charge of regular departments. A budget was drawn up, and no unauthorised expenditure could be incurred without the sanction of the First Minister and of Her Majesty's Agent and Consul-General. This form of Government remained unchanged until 1906, when the Imperial Government assumed more control over both internal

¹ See Appendix II.

and external affairs of the Protectorate, and new officials and a Council were created. On July 1, 1913, the control of the Protectorate was transferred to the Colonial Office, with legal effect from 1914, and a Zanzibar Order in Council (January 21, 1914) determined the existing system of administration (see below).

On February 1, 1892, Zanzibar was declared a free port, but this worked badly, and a 5 per cent. duty on imports was reimposed in 1899, and raised to 7½ per cent. 10 years later.

In March 1894 Sultan Ali died, and was succeeded by his grand-nephew, Hamed bin Thwain. On the latter's death on August 25, 1896, his cousin Khalid usurped the power and defied the British representative. His palace was bombarded two days later. Khalid fled to the German Consulate, whence he was removed to the mainland, and Hamed bin Mohammed, brother of the dead Sultan, was installed in his stead.

The institution of domestic slavery now received final attention. In April 1907 the legal status of slavery was abolished in the Protectorate, and all slaves could henceforth claim their freedom if and when they liked. A more direct and instant abolition of all slavery would certainly have entailed consequences disastrous to the peace and economic stability of the Protectorate. As it is, emancipation has proceeded gradually and smoothly, without exciting resentment among the Arabs or seriously disturbing economic conditions. Those who voluntarily remained slaves enjoyed all the better treatment at the hands of masters who knew that otherwise they could not hope to retain the slaves' services. Up to the end of 1907, however, 11,000 slaves had claimed their freedom, and 6,000 had been liberated voluntarily by their masters.

Hamed bin Mohammed died in July 1902, and was succeeded by Ali bin Hamed. In 1907 the local army was disbanded, and two companies of the King's African Rifles garrisoned Zanzibar in its stead. In this year also the consular jurisdiction exercised by other European Powers was abolished. In 1910 direct

steamship communication with London was established. Ali abdicated in December 1911, and was succeeded by his brother-in-law, Khalifa bin Harub, the present Sultan.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

(a) *East Africa Protectorate*

MOHAMMEDANISM is reported to have made much progress on the coast, but not in the interior; in other words, it accompanies the Arab. The very large majority of the population of the Protectorate are pagans, among whom many Christian missions are at work—Protestant and Roman Catholic, British, American, French, Italian, and Swedish.

(b) *Uganda*

The population of the Protectorate is stated to consist of nearly 2,000,000 pagans, 73,000 Mohammedans, 200,000 Protestants, and 230,000 Roman Catholics. It has been a great field of missionary effort, and Christianity has been much more potent than Mohammedanism. There are three missionary societies at work—the Church Missionary Society and two Roman Catholic bodies, the White Fathers of Algeria, and the Mill Hill Mission.

(c) *Zanzibar*

The majority of the natives are Mohammedans (Sunnis of the Shafi school). The Swahili combine much superstition with their Mohammedanism. The Sultan and his relatives belong by long family tradition to the Ibadhi (or I-badiyah) sect of Islam (founded by Abdallah bin I-bâdh in A.D. 744 in Oman, and always counting the Imâms of that country among its adherents). This divergence of creed seems never to have

affected the Sultan's relations with the orthodox at Zanzibar, and the sect for its part has always been tolerant and merciful.

The Government pays much attention to the repair and upkeep of mosques.

There are three Christian Missions in the Protectorate :

- (1) The Universities' Mission to Central Africa (Church of England), established at Zanzibar town in 1864, with a hospital and a cathedral (opened in 1879). This also carries on work in Pemba. Conversion of the natives on any large scale is not rapid, but the Zanzibar station is invaluable as a base of operations for mission work on the mainland.
- (2) The Congrégation des Pères du Saint-Esprit (Roman Catholic), already at Zanzibar town in 1856.
- (3) The Friends' Industrial Mission, established at Banani on Pemba in 1897.

The educational work of all three missions has been valuable, though not as popular with the natives as could be wished.

In general, Christian missions in the Protectorate have presented to the Civil Administration none of the political difficulties familiar in countries where Islam is of a more fanatical type.

(2) POLITICAL

(a) *East Africa Protectorate*

In 1905 the East Africa and Uganda Protectorates were removed from the control of the Foreign Office to that of the Colonial Office. Prior to 1906 the Protectorate was administered under the East Africa Order in Council, 1902, which placed administrative and legislative powers in the hands of a Commissioner. In 1906, by an Order in Council of October 22, a Governor was substituted for a Commissioner, and an Executive and a Legislative Council were set on foot. The

Legislative Council was to consist of the Governor and such persons, not being less than two, as might be appointed during His Majesty's pleasure. It should be noted that the Governor of British East Africa acts also as High Commissioner for Zanzibar. By the 1902 Order in Council a High Court of East Africa was created, and by another Order in Council, passed at the same time, a Court of Appeal was established for the East Africa, Uganda, and Nyasaland Protectorates.

(b) *Uganda*

The Uganda Protectorate, after being taken over by the Government from the Chartered Company, was under the control of the Foreign Office till 1905, when, together with East Africa, Nyasaland, and Somaliland, it was transferred to the charge of the Colonial Office. The Protectorate includes provinces which are not all on precisely the same footing; Uganda proper, for instance, is a native kingdom, whose king is fully recognized by the British Government. But both the administrative and the legislative authority on the spot are, under the Uganda Order in Council of 1902, vested in the principal British officer, at first known as Commissioner, now as Governor. The courts of justice and the judicial procedure are regulated by this Order in Council, as amended by a later Order in Council of 1911.

The system of administration by means of native chiefs has given excellent results. Under the Land Settlement, introduced by Sir H. Johnston, the ruler of the kingdom and his chiefs were paid fixed allowances and received definite estates. Sir C. Eliot writes of the Uganda Protectorate:—

“ In few parts of the world inhabited by dark races will the missionary, schoolmaster, and engineer find so good a reception, for it has a large and unusually intelligent native population, who show a striking readiness to adopt European ideas and inventions. For the same reason it offers an extensive market for European goods, and the prospects of creating a considerable trade are encouraging. Though it is not as un-

healthy as the west coast of the continent, it contains few, if any, localities which in their present condition are suited to the permanent residence or long sojourn of Europeans, and it is likely to become a native State placed under European supervision and guidance."

The provinces of the Protectorate of Uganda are as follows: (1) Buganda, (2) Eastern, (3) Northern, (4) Western, and (5) Rudolf. Some new territory on the west bank of the Nile came under the administration of the Protectorate in the latter part of 1913-14. The Busoga railway, 62 miles in length, connects Lake Victoria with the navigable waters of the Nile and Lake Kioga.

(c) Zanzibar

The Sultan receives a fixed sum annually and retains his private estates. But the public revenues are wholly administered by British officers. In 1902 the Sultan, on the advice of the British Government, first appointed a financial adviser, to the great benefit of his finances.

The Government of the Protectorate is administered by a High Commissioner and a British Resident, who are appointed by Commissioners under His Majesty's Sign Manual and Signet, and exercise their functions under the Zanzibar Order in Council (1914). The office of High Commissioner is held by the Governor of British East Africa.

Legislation consists of certain British and Indian Statutes, and also of Decrees of the Sultan, which latter are binding on all persons when countersigned by the British Resident. They are notified to the Secretary of State, and if the Resident revokes his signature to any Decree it ceases to be binding. There is a Council, with advisory and consultative functions, consisting of the Sultan as President, the British Resident as Vice-President, and six members (three official and three non-official).

The Civil Service is composed mainly of European, with a few Indian, officials. There are some eighteen

Departments of Administration. Natives are not yet employed in the Central Administration, though their use is regarded as an ideal to be attained when possible. There are Arab governors, however, in the towns, and in the Wahadimu and Wapemba villages the *masheba* (headmen) collect the hut tax and assist the authorities, though unpaid by Government.

In Pemba the chief official is a collector at Chaki Chaki. The island is kept in close touch with the Zanzibar Administration by a weekly steamer service and wireless telegraphy.

The Indian Penal Code and Codes of Civil and Criminal Procedure are applicable in the Protectorate, due regard being paid to the general principles of Mohammedan law, and to any native law or custom not repugnant to justice or morality. The fundamental law in civil matters is that of Islam.

In jurisdiction, His Britannic Majesty's Court, consisting of one judge and one or more assistant judges, deals with all actions, civil or criminal, to which a British or British-protected person or the subject of a foreign Power is a party. It has also certain Admiralty jurisdiction. The Sultan's local courts deal with cases where the subjects of the Sultan alone are concerned. They are under the general supervision of His Majesty's Judge. In the town of Zanzibar these courts are composed of two European magistrates, assisted by Arab kadis. In the country districts and in Pemba cases are tried by a magistrate or a district or assistant district commissioner. The final appeal in all cases lies to the British Judge, sitting as Sultan's Judge.

Appeal from His Britannic Majesty's Court in certain criminal and civil cases lies to His Majesty's Court of Appeal for Eastern Africa. Up to 1914 such appeal lay to the High Court of Bombay.

(3) EDUCATIONAL.

(a) *East Africa Protectorate*

The missions have done sound educational work, including industrial training. There are in addition some half-dozen Government schools, including three schools for Europeans, one for East Indians, and one for Arabs.

(b) *Uganda*

The schools are all mission schools, which receive grants-in-aid from the Government. A large number of natives are educated at these schools, in which agricultural and technical education is not overlooked. The natives are said to avail themselves eagerly of the opportunities offered, and to have shown that they appreciate the value of elementary education.¹

(c) *Zanzibar*

The schools in the Protectorate are of four kinds : (1) Government, (2) Mission, (3) Indian, (4) Private.

- (1) The Government schools comprise (i) the Central School at Zanzibar town, divided into three sections, viz., elementary, primary, and industrial. In the industrial section carpentry, printing, and tailoring are taught. To the first two sections (only) a limited number of Indians are admitted. Instruction in the primary section is given in English. (ii) District schools, *Kut-tabs*, mainly for Moslems. The whole course of instruction is intended to last seven years, during the first three of which instruction is given in Swahili, and during the last four in English or Arabic. Education in Government schools is voluntary and free. It is for boys only.

¹ [Cd. 8434. 1], Annual Report, 1915-16, p. 16.

- (2) All three missions maintain schools for both boys and girls. The Universities' Mission has a Teachers' Training College and a High School in Zanzibar town, besides schools in villages. Industrial education receives most attention from the Friends' Mission on Pemba.
- (3) There are five Indian schools, assisted by voluntary contributions or annual grants by communities, for both boys and girls. The Government has no kind of control over these, and does not inspect them.
- (4) There are three private schools for Indians, and an indefinite number of private Moslem schools in the hands of local teachers, where little but an unintelligent repetition of the Koran is taught.

The total number of pupils receiving instruction in all the schools together (exclusive of the Koran schools, for which no figures exist) was 1985 in 1913 (1526 boys, 459 girls), made up as follows :—

Government schools, 632 (488 Africans, 144 Indians).
Mission schools, 419.

Indian (including private Indian) schools, 934.

Education being voluntary, the bulk of the children, at least of the native Swahili population, remains uneducated, save for the Koran schools. Attendance of those enrolled is irregular, especially in the clove-picking season. In spite of official and missionary encouragement, regrettable indifference to educational facilities is shown by the inhabitants of the Protectorate. This is the more to be deplored as the employment, whether of Arabs, of Swahili, or of Indians, in Government service must depend on educational progress.

IV. ECONOMIC CONDITIONS

EAST AFRICA PROTECTORATE AND UGANDA¹

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) *Roads and Paths*

IN the Arab trading days of last century certain clearly defined routes led from the ports of Eastern Africa into the heart of the continent, and were usually followed by the Arab and Swahili expeditions in quest of slaves and ivory. Such caravan routes were never more than mere tracks, sufficient for the passage of porters and traders marching in single file. One of them led north-west from Mombasa, and pointed the way for the railway which has superseded it. In the central and northern portions of the East Africa Protectorate the trade routes are still for the most part caravan tracks, but roads are now being pushed out to connect the chief Government stations. Further south the tendency is to throw out new roads from the railway into the districts which are being settled and developed. As traffic increases, the necessity arises to give the road a metalled surface; eventually the growing trade of a particular district warrants the construction of a branch railway. Further from the railway the roads are sometimes engineered and surfaced, but are generally of the nature of paths and tracks. Of roads

¹ For the sake of convenience, the economic conditions of the two contiguous mainland Protectorates are discussed together, while the Zanzibar Protectorate receives separate treatment.

fit for motor traffic at most seasons of the year there are approximately 800 miles in the East Africa Protectorate.

In Uganda the main roads again are intimately connected with the railway. Designed to bring the produce of the country districts and of the Belgian Congo across to Victoria Nyanza, and thence to the railway, the chief routes and best roads radiate from Kampala south-west to Mbarara, west to Fort Portal and the Ruwenzori region, north-west to Hoima and Butiaba, and east to Jinja. Another important trade route is the motor road from Port Masindi, extended recently almost to Butiaba, and serving to connect Lake Albert and the Nile Basin with Lakes Kioga and Victoria.

There are now in Uganda 400 miles of good motor roads, about 800 miles suitable for light motor traffic in dry weather, and a very large mileage of cleared tracks forming minor channels of communication all over the country.

(b) Waterways

The navigable waterways of Uganda, like the road system, serve to feed the railway. While most of the lakes and rivers of the Protectorate offer small facilities for trading, there are two notable exceptions. The Nile is navigable from Nimule southward to Lake Albert, and thence eastward to Fajao; across the lake and along the Nile a traffic, to which the war has given an impetus, is carried on by the small vessels of the Albert flotilla. Further south, between Port Masindi and Namasagali, there occurs a second navigable section, where the Nile expands in its course and forms two lakes, Kwania and Kioga. From the many widespread branches of these lakes a considerable and rapidly increasing volume of cotton and other native products is brought to the head of the Busoga Railway by the three sternwheelers of the Kioga flotilla. The river traffic of the Nile, however, is dwarfed by comparison with the work of the Lake Victoria Marine, which transmits to and from the Uganda Railway terminus at Kisumu

nearly all the export and import trade of the Protectorate. The lake flotilla consists of six steamers, of 700 to 1,200 tons displacement, five smaller steamers and tugs, and a number of lighters and small boats. For such vessels the lake is navigable over its whole area of 26,828 square miles, and the Uganda steamers can visit 17 ports, four of which lie within what was German East Africa. In 1913-14 the mileage run was 95,338, and the traffic handled amounted to 59,759 tons.

In the East Africa Protectorate the only possible waterways are the Rivers Juba and Tana, which have both been navigated by light-draught steamers for a distance of 400 miles. Two small river steamers are engaged in trading on the Juba River, but the Tana presents obstacles and difficulties which have hitherto precluded any regular service.

(c) Railways

The System in General.—The Uganda Railway has in the last two decades been the dominant material factor in the political and economic development of East Africa. In this brief time it has fully realized the aims and hopes of its promoters. The slave trade has been exterminated and the safety of Uganda Christians ensured; mechanical traction, with infinitely greater carrying capacity, has superseded human portage over the main trade routes; British authority has been firmly and quietly established; the country has been pacified and partly colonized, and is now assured of financial independence and economic prosperity. Incidentally the railway has conditioned almost the whole system of subsidiary communications, which by roads and paths, rivers and lake routes, posts and telegraphs, now spreads over most of Uganda and over the southern and more fertile portion of the East Africa Protectorate.

The term Uganda Railway is, in a sense, a misnomer; for, although the traffic of Uganda passes over it, the line itself, with a length of 587 miles between its termini at Mombasa and the Victoria Nyanza, lies wholly

within the East Africa Protectorate. On the map the existing railway system resembles the skeleton of a gigantic dinosaur lying in a north-westerly direction between ocean and lake, with legs stretching westward to Kilimanjaro and Lake Magadi, and an upper jaw planned to arch over the north-east end of Lake Victoria. The Kilimanjaro branch, extending a hundred miles from Voi (mile 104), has recently been linked up by the military authorities with the German line from Tanga and the Usambara highlands. Further north, at m. 287, the Magadi Railway branches off, running 91 miles down steep gradients to serve the soda deposits of Lake Magadi. Nairobi (m. 330) is the starting-point of a short line which reaches out to Thika, 32 miles north, and which may in the future be carried on through the agricultural district of Fort Hall towards the wooded slopes of Mount Kenya. From Nakuru (m. 452) the projected extension, for which the preliminary surveys have been completed and the necessary grants voted, will run out in a north-westerly curve towards Mumias. This, the Uasin Gishu (Gwas Ngishu) Railway, will open up an agricultural district, and may in the future be carried westward to Uganda and the Congo, so as to offer an easier and continuous passage for the traffic from these regions. A proposal has recently been mooted for the construction of another line, to run south from the neighbourhood of Lumbwa (m. 521) for about 150 miles to Ikoma, in what was German East Africa, traversing a district said to be well watered, suitable for agriculture and cattle-raising, and healthy for Europeans.

Two offshoots of the Uganda Railway are found in the Uganda Protectorate. The Busoga Railway, 61 miles long, connects Lake Victoria with Lakes Kioga and Kwania. The embryo line, six miles long, which now links Port Bell and Kampala, seems destined in course of time to extend westward to the Congo border. These two railways convey a large proportion of the traffic of Uganda and Eastern Congo down to Lake Victoria, whence it is shipped across to the Uganda Railway for transmission to distant markets.

Particulars of Construction.—All the railways of the two Protectorates belong to a single administrative system, and are uniform in gauge and in method of traction. There is in every case a single line of one-metre gauge, laid with 50-lb. rails. The tractive power is supplied by locomotive steam engines of various classes, using as fuel either coal or wood. The best engines appear to be those of the Mastodon type (Class "G"), which might well be adopted, with little modification, as the standard type for the future, to replace the large number of inferior and outworn engines that have been in use since 1900.

The average speed of goods trains is 13 miles per hour, of mail trains 16 miles. This low speed is due partly to the limitations of the rolling-stock and the narrow gauge, partly to the curves and gradients of the line. The longitudinal section of the railway shows that from sea-level the line ascends in three great steps to a height of 7,800 feet, falls to 6,000, climbs again to 8,330 at Mau Summit, and thence drops to the lake level of 3,750 feet. Over this varied contour, with ascents totalling 15,000 feet between ocean and lake, the maximum gradient of 1 in 33 is encountered on stretches amounting to less than three miles in all; grades of 1 in 33-50 occur on a total of 90 miles; 219 miles range between 1 in 50 and 1 in 100; while the remaining mileage varies from 1 in 100 to level. The gradients of the projected Uasin Gishu Railway will not exceed 1 in 66, which is also the ruling grade of the Busoga Railway in Uganda.

The longest bridge on the main line is the Salisbury Bridge, which connects Mombasa Island with the mainland and is composed of five 12-ft. spans and twenty-one spans of 60-ft. girders carried on iron screw piles. The Tsavo and Stov Athi bridges have each four spans, with 60-ft. girders, while the Athi River and Morendat bridges have centre girders of 100 ft., flanked in each case by smaller spans. The deep ravines of the Kikuyu escarpment and the many channels cutting the downward slope from Mau to Kisumu are

crossed by viaducts of an aggregate length of over 2½ miles. There are 68 smaller viaducts, 326 small culverts, and one tunnel, 200 yards long.

Railways in tropical and semi-tropical zones are subject to special difficulties of water supply. The Uganda Railway has some 20 watering stations between coast and lake, but in at least half of these the supply is either scanty and uncertain in amount or defective in quality. In most instances recourse has to be had to pumping, a gravity supply not being practicable.

The full load of an average train is 100 tons; the average load carried has increased in the last six years from 52 to 71 tons. An average passenger train can carry 400 third-class passengers. There is a daily service between Mombasa and the lake; it would be possible to run two trains daily each way. The journey from Mombasa to Kisumu takes 43 hours.

Finance.—The railways, with their subsidiary marine systems, are owned by the Protectorate Governments, and their profits or losses swell or diminish the Protectorates' revenues. The Magadi Railway was built by the Magadi Soda Company, and is now worked by the Uganda Railway Administration, which by agreement is to receive half of any profits, but take entire responsibility for any losses that may occur. For the year 1916-1917 the loss on working amounted to £7,491.

The capital outlay upon the railways and steamship services to March 1917 was £6,497,279. No interest is payable on the greater part of this total, as an amount of £5,692,009 represents grants made by the Imperial Government for the construction of the main line and the Magadi branch line. An item of £376,302 consists of sums already charged against the ordinary revenues of the Protectorates; while the remainder, a total of £428,968, is composed of the payments made to March 1917 against four loans sanctioned by the Imperial Parliament for the Thika Railway (£250,000), the Kilindini Pier (£250,000), and railway extensions (£375,000 and £1,868,000). On these capital pay-

ments annual interest charges, amounting to more than £21,000, are met not from railway receipts but from the general revenue of the country, which, on the other hand, receives the whole of the net earnings of the railway.

Tables I and II (Appendix, pp. 106-7) show that for the six years ending March 1917 the average annual profits have been in excess of £228,000; during three years of war the figures had risen to £273,000 from £184,000, the average for the preceding triennium. While the returns for the last three years are abnormal, and influenced largely by special war conditions, the net earnings have risen since 1905 proportionately faster than either revenue or expenditure, increasing from a ratio of three-tenths to one of four-tenths of the revenue, and from two-fifths to more than two-thirds of expenditure. At the same time the earnings of the tonnage carried have fallen from £134 to £107 per 100 tons, a drop due in part to a decrease in the average distance of carriage, but very largely to the concessions made for certain classes of freight, whose import or export is economically advantageous to the country.

The railway tariffs are fixed on a sliding scale on the principle that the cheapest rates are allowed for articles of prime importance for the development of agriculture and industries within the Protectorates, while the heavier charges are imposed for the carriage of articles of luxury. Thus, over the 330 miles between Mombasa and Nairobi, agricultural implements are conveyed for 1s. 3d. (93 cents) per 100-lb. weight; china, glass, and electric goods for 4s. 5d. (330 cents); and ivory, perfumery, and champagne for 24s. 2d. (1,815 cents).

To encourage export trade, very light rates are charged on country produce such as potatoes, beans, peas, grain of various sorts, and wattle-bark, when these are forwarded to the coast in bulk for export; the relatively valuable consignments of fibre, flax or hemp, and of cocoa and coffee-beans bear slightly heavier charges. Over the same distance of 330 miles the rates for the former varieties of produce are only 6d. (37 to

40 cents) per 100 lb., whereas the latter classes are charged 1s. (74 cents) and 1s. 10d. (135 cents) respectively. These charges are equivalent to about 2½, 5, and 9 cents (or 0·4d., 0·8d., and 1·5d.) per ton per mile.

Passenger fares are approximately as follows:—First class: single 3d., return 4½d. per mile; second class: single 1½d., return 2¼d.; intermediate class: single 1d., return 1½d.; third class, single: short distances 4d., longest distances 3d. Similar fares obtain on the marine services of Lakes Victoria and Kioga, but the rate for third-class passengers is only 25d.

Adequacy to Economic Needs; Possibilities of Expansion.—The influence which the Uganda Railway, in the sixteen years since it reached Lake Victoria, has exercised upon the development of British East Africa is comparable to the influence of the Canadian Pacific Railway upon Western Canada. Whether the railway is equal to the requirements of the Protectorates is a matter on which a difference of opinion has existed between the railway authorities and the settlers and business men, the latter complaining of the congestion of traffic even under peace conditions. All are agreed, however, that the question of railway expansion is of the utmost importance for the future of the country, and demands the most careful study.

The traffic and financial returns for the last three years have, of course, been affected by the special conditions of the war. Expenditure has been reduced to the lowest possible limit, and revenue has perhaps gained as much by the military use of the line as it has lost by interruptions of commercial traffic. Even so, the advance in net earnings has not been exceptional, and the rise in tonnage carried has not exceeded the rate of increase of previous years. Since 1904, each seventh year hitherto has seen the tonnage tripled and profits at least doubled. It is impossible to predict when this rate of progress will be checked by the economic saturation of the territory served, but a continuous and rapid increase of traffic for a number of years may safely be anticipated. New roads are opening up new districts and bringing in more produce. The traffic from tribu-

tary lines, constructed or projected, will help to fill the main channel of trade. The native population is realizing the advantages of the comforts and conveniences of civilization, desiring them more and working for them, and thus increasing the labour power. The immigration of settlers is constantly introducing more capital and developing the country's resources. Agriculture and industries are progressing, not merely steadily but rapidly; sisal plantations and flax areas promise a largely increased output year by year; soda will prove a valuable export; cotton, coffee, cocoa, hides and skins, grain, pulse, copra, and rubber should all show greatly enhanced returns.

To these special considerations, which seem to favour a bold policy of railway expansion, others of a more general character may be added. In a new country a railway serves political and social, as well as commercial, ends. It is a more effective instrument of pacification than military expeditions. In periods of partial drought or famine or economic distress it tends to stabilize the country and to maintain its own financial position; it transports the necessities of life to famine districts; and, not being wholly dependent on any single province or industry, is not unduly disturbed by local fluctuations. For the white settler it is a prime necessity; it brings himself and his stores, his live-stock and implements, to the farm he proposes to occupy, and it carries to market the products of his industry.

In East Africa railway extensions would open up for settlement large districts, such as Nakuru to Mumias, Lumbwa to Ikoma, and Nairobi to Fort Hall, suitable for European occupation and development. It is true that new branch lines run out to such districts would increase the chances of congestion on the main line, and might raise the question of doubling the existing line or constructing an alternative railway to the coast. Hitherto railway development has neglected the central and northern portions of the East Africa Protectorate, where the opportunities for agricultural or mineral industries are not known to be favourable; and

although railways elsewhere have frequently induced the desert to blossom and bear, any ambitious schemes for a central or northern system are for the present effectively barred by the prohibitive cost, the lack of capital, and the absence of a first-class harbour north of Mombasa. It therefore seems probable that expansion will proceed from the existing railway system, and that congestion will be avoided by the provision of a large number of new and powerful engines and of freight and passenger vehicles, by additional crossing stations, and by the development of the terminus port of Kilindini (see pp. 69, 71).

(d) Posts, Telegraphs, Telephones

The post and telegraph services of the two Protectorates include 111 telegraph offices and 127 post offices and agencies, of which 40 are also money order offices. The postal system not only embraces all railway, steamer, and motor routes, but also reaches out by relays of runners to the more remote district stations. Telegraph lines similarly escort and outstrip the railway. In Uganda in 1915 there were 1,045 miles of telegraph line, and in East Africa 3,043 miles. Telephone exchanges are established at Nairobi, Mombasa, Kisumu, Entebbe, Kampala, and Jinja, with over 750 miles of wire.

(2) EXTERNAL

(a) Ports

Accommodation, &c.—The barrier of reefs and narrow islands which extends along the coast of the East Africa Protectorate is cut at many points by gaps opening into sheltered bays and creeks, where the smaller coasting vessels may lie in safety. There are some 34 recorded anchorages; but these, with few exceptions, are unsuitable for ocean-going ships, and incapable of large development. Kismayu Bay, the port of the Juba River, which enters the sea a few miles further north, is accessible at all seasons, is provided with an iron-work pier 325 ft. long, and has anchorage in 3½

fathoms. Manda Bay, between Manda and Patta Islands, has deep-water approaches and capacious anchorage in 6 fathoms, but offers little prospect of extensive trade; whereas the narrow and shoal-encumbered harbour of Lamu owes a considerable coasting traffic to the proximity of the provincial capital. Further south, the Tana River, diverted by the Belaso Canal, finds an outlet by way of the Ozi River, and delivers the produce of the Tana Valley to dhows in the anchorage behind Ozi Reefs. Malindi Road, with anchorage in six fathoms over sand and coral, is the harbour of the most productive district on the coast. Kilifi River and Wasin Channel are the only other anchorages calling for mention, with the exception of the important harbours of Mombasa.

While the other islands along the coast lie well off the shore, Mombasa is close to the mainland, which it faces on three sides across narrow channels. Those east, north, and west of the island constitute the harbours of Port Mombasa, Port Tudor, and Port Kilindini respectively. A large creek opening out westward from the northern extremity of the Kilindini Channel forms a fourth harbour, called Port Reitz, with extensive anchorage in depths ranging from 3 to 15 fathoms.

Port Mombasa and Port Tudor have narrow channels, with anchorage in 7 to 12 fathoms. Port Mombasa is still frequented by all kinds of smaller vessels; it is provided with two iron piers, and offers facilities for coaling by lighters, though at present the provision for towing, as at Kilindini, is quite inadequate. The larger ocean-going vessels prefer Port Kilindini, a harbour over two miles long, a quarter of a mile wide, and 8 to 25 fathoms deep. This is the finest natural harbour on the coast, and has already displaced Port Mombasa as the chief terminus port of the Uganda Railway. It has a railway wharf, 550 ft. long, with considerable warehouse accommodation, and cranes capable of dealing with weights up to 20 tons.

Ten miles off the shore of East Africa the current runs towards the north-east at 1 to 2 knots in the north.

east monsoon, and at 2 to 4 knots in the south-west. The north-east monsoon commences about the middle of December, and ends at the end of February. The south-west monsoon lasts from May to October. Between these periods light variable winds occur, with occasional showers and sharp squalls.

Spring tides along the coast rise between 10 and 13 ft., while neaps rise 6 to 9 ft. On either side of Mombasa Island, where the rise of spring tides is 12 ft. and of neap tides 8 ft., the tidal streams, running sometimes 4 knots, render mooring advisable, and at spring tides necessitate careful navigation at the point where they meet off Ras Serani.

Tonnage.—As the Uganda Railway, the main artery of East Africa trade, starts from Mombasa Island, practically the whole volume of imports and exports passes through the two harbours of Mombasa and Kilindini. The tonnage handled at Kilindini since the pier was opened was 95,183 in 1912-13, followed in successive years by 100,586, 80,850, 124,434, and 210,278. These figures show the disturbing influence of the war and of the military occupation of railway and harbour between November 1915 and November 1917. The tonnage of shipping entering the two ports amounted before the war to about a million and a quarter per annum. In 1913-14 there were 287 entries of steamships, of a gross tonnage of 1,311,906, which landed cargoes of 150,433 tons and shipped 67,628 tons. The vessels of the Deutsche Ost-Afrika Linie, which called at Kilindini, recorded 112 visits and a gross tonnage of 607,263 tons, and landed and cleared respectively 49,868 and 29,325 tons. The German line thus owned 45 per cent. of the visiting ships and carried 35 per cent. of the foreign trade of British East Africa, to which German East Africa contributed 30 per cent. of the value of produce exported.

Harbour Development.—The foreign trade has expanded so rapidly in recent years that not only railway but harbour facilities, which were sufficient ten years ago, are inadequate for present requirements. The pressing need of better conveniences is fully realized by

the Protectorate Government, which, after careful investigation, has authorized a scheme of improvements for Port Kilindini to enable it to deal easily and quickly with all the traffic that offers. The scheme, which is temporarily suspended owing to the war, contemplates the provision of deep-water piers, at which over a dozen of the largest ships may lie simultaneously and discharge or load cargo to or from the railway trucks, and of all the necessary sheds, cranes, sidings, shunting yards, offices, and appliances that are the indispensable equipment of an up-to-date harbour. It further includes the erection of a roomy Customs House, the arrangement and development of godown plots and sidings, and the construction of all necessary roads and approaches to the harbour.

(b) Shipping Lines

The shipping lines which served British East Africa in peace time were the Union Castle, British India, Messageries Maritimes, and the Marittima Italiana, each of which supplied a regular monthly service of mail steamers, while the vessels of the Deutsche Ost-Afrika Linie called twice a month. The Clan-Ellerman-Harrison Joint Line provided cargo steamers calling once a month. With India trade was carried on by the fortnightly services of the Deutsche Ost-Afrika Linie and the British India Line. Coast traffic was conducted by the small steamers belonging to Messrs. Cowasji, Dinshaw Brothers and Messrs. Esmailji, Jivanji and Co. Since the outbreak of war a monthly service of cargo steamers with timber and building materials from Norway and Sweden has been initiated by the Scandinavia—East Africa Line.

(c) Telegraphic Communications

The Eastern Telegraph Company has cable lines connecting Mombasa with Zanzibar, and thence with the coast ports of East and South Africa; with Aden, Egypt, and Europe; with Aden, India, China, and

Australia; and with the Seychelles, Mauritius, Cocos, Java, Australia, and New Zealand.

In 1914 a proposal had been made for the erection in British East Africa of a large wireless station capable of exchanging messages with Egypt, South Africa, and India, and with the existing stations on Zanzibar and Pemba. The war has not prevented the execution of this project, and British East Africa has now two wireless stations—one at Nairobi, the second at Mombasa.

(B) INDUSTRY

(1) LABOUR

Supply of Labour.—The labour supply presents some difficulty everywhere in East Africa. The primitive native dislikes work in the sense of long periods of full labouring days; in a land of plenty his wants are satisfied by occasional spells of hoeing or by the unexacting pastime of cattle-herding, supplemented by the real exertions of his women folk. In the poll-tax he sees, not his reasonable contribution to the expense of settled government, but a measure of coercion to work, and, if he were given the chance of repudiating the new system of European order and security, he would likely enough prefer the old conditions of bloodshed, slave raids, and insecurity of life and property. As time goes on, however, the native adapts himself to his new environment, and even the more recalcitrant tribes feel the effect of civilizing influences. The Masai are now beginning to trade, the more enterprising tribes sell and buy freely, and the supply of voluntary labour automatically increases. By the extension of internal commerce, in which Indian traders take an active part, the natives are gradually familiarized with European products, and are led to work, of their own free will, in order to find means to purchase such luxuries and conveniences. Many tribes of Uganda provide a large volume of labour, more especially for the cotton and grain fields of native chiefs and owners, but also for the coffee and cacao plantations managed by Europeans. The more

remote districts offer the best chances of new labour recruits, though these have, of course, to be trained to their work. Up till now the labour question has been less pressing in Uganda than in the areas of the East Africa Protectorate which are occupied by the farms and plantations of European settlers.

Perhaps the most satisfactory agricultural labourer is the Kikuyu, who is moderately intelligent and has a natural aptitude for machinery. The Kavirondo and Wakamba also provide labour for general farm work. The Somali or Swahili is useful as houseboy or as caravan-leader. The Wanyamwezi are said to be the best porters. The Nandi and Masai are good cattle-herds, and can be trained as grooms for horses. Indians are employed for house-building, carpentry, and artisan work. Near the coast the plantations are mainly worked by Teita and Swahili labour.

The quality of the labour available varies greatly. The raw native has usually to be trained in the simplest forms of work, and to be kept under careful supervision afterwards. But it is generally admitted that the East African native is adaptable and quick to pick up details of work. For instance, the general manager of the Uganda Railway, in the Administration Report for 1916-17, records his opinion that natives can, by training and experience, become skilled and useful workmen, and are already proving of great service in the railway and other industries of the Protectorate.

The general conclusions, therefore, which can be fairly drawn are that, although native labourers almost always require training and supervision, and although in certain localities and for certain classes of work the demand for labour at present exceeds the supply, the natural aptitude of the East African native for both agricultural and industrial work is above the average, and is capable of considerable development: while the supply of labour available will grow with the natural increase of the population under good government, with the opening up of remoter districts, and with the growing appreciation by the natives of the conveniences and refinements of civilization.

Wages show a tendency to rise, but the usual rate for unskilled labourers in the highlands has hitherto been from 6 to 8 rupees per month, with rations costing about 2 rupees included for men sleeping on the farm. In the Kavirondo country 3 to 5 rupees has been the customary rate. Near the coast unskilled labourers are paid between 8 and 12 rupees, overseers between 15 and 25. House servants are more expensive; their wages range between 15 and 60 rupees per month, the latter sum being the cost of a good Goanese cook.

Labour Conditions.—Labour conditions in East Africa present no such complicated and serious problems as those of European countries. Forced labour is forbidden, and provision is made that every native employed knows the character of the work, the period of service, and the rate of pay at which he undertakes to serve.

(2) AGRICULTURE

Products of Commercial Value.—The coast belt, highlands, and inland lake districts of East Africa provide three main types of agricultural conditions, with a very wide range of products. In Uganda there are 120,000 acres under cotton; smaller areas are cultivated in the sister Protectorate, near Lake Victoria, and also near the coast and along the Juba and Tana Rivers. Another leading industry which is expanding rapidly in both Protectorates is coffee-growing. Cacao is being cultivated on a large scale in Uganda, and tea-planting might succeed in the highlands of East Africa, were labour conditions more favourable. Flax-growing in East Africa is a nascent industry of exceptional promise. The staple food of many Uganda tribes is provided by the plantain and banana trees, which occupy approximately three-quarters of a million acres. The other native foods, such as millet, maize, rice, pulse, sesame, sweet potatoes, ground-nuts, and cassava, are produced extensively in both Protectorates; of millet, maize, sesame, ground-nuts, and pulse there is a surplus available for export. Wheat is grown mainly

in the highlands of the East Africa Protectorate, but also in the higher and cooler portions of Uganda. Potatoes are prolific and of excellent quality. The tobacco grown satisfies native taste, but is not yet of a quality suitable for the European market. There appears to be an opening for sugar-cane, which can be grown freely in both Protectorates. A rapidly extending industry is the cultivation of sisal, which promises satisfactory profits for co-operative enterprise. Raphia fibre provides useful material for tying and for basket-making. Bark for tanning is stripped from the mangroves which grow wild along the coast, and from the black-wattle plantations established in recent years in the highlands. The value of wild rubber has fallen below the point at which profit is possible, and that of Ceará rubber shows a like tendency; but the Pará rubber plantations of both Protectorates have reasonable prospects of success. Coconut plantations are receiving attention in the coastal belt. The highlands are specially suitable for all sorts of European vegetables, and almost all European fruits; tropical fruits grow freely near the coast. Citrus fruits, especially limes and lemons, are attracting special attention.

The native varieties of horned cattle and of sheep and goats, which thrive everywhere in the inland districts, are specially useful to European settlers as providing low-priced stock for breeding up by crosses with imported animals. The numbers of cattle, sheep, and goats in the two colonies at the beginning of 1917 were approximately one and a quarter, five and a quarter, and four millions respectively. Donkeys, mules, and even horses can be kept in health on the highlands and the Gwas Ngishu plateau. The Turkana, Rendile, Borana, and other northern tribes own large numbers of camels. Pigs thrive in the highlands, and a bacon-curing factory is established near Nairobi. Ostrich-farming has made little progress latterly, owing to the fall in the price of feathers. Poultry of European origin are widely distributed and thrive well.

Government exercises a measure of supervision over the agricultural industries of both Protectorates. In Uganda it controls the issue of cottonseed to the native growers, so as to ensure crops of uniform high quality, and through native instructors trains the native in correct methods of cultivation. Regulations are issued for the dipping of live-stock and for other measures for combating stock diseases. The Government farms breed and sell useful varieties of cattle and sheep, conduct experiments to find improved varieties of known plants, and introduce or advertise others which give promise of profitable culture.

The abundant big game of East Africa is an asset of undoubted value, as it attracts from all parts of the world a large number of sportsmen, some of whom eventually decide to settle in the country. The species of game to be found in the Protectorates include the lion, cheetah, elephant, rhinoceros, hippopotamus, buffalo, giraffe, zebra, eland, kudu, water-buck, hartebeest, and many other antelopes and gazelles. Two immense tracts of country, one lying between the railway and the southern boundary of British East Africa, the other north of the upper reaches of the (northern) Gwaso Nyiro river, constitute the two game reserves. Sportsmen's yearly licences, residents' yearly, residents' fortnightly, and travellers' monthly licences cost £50, £10, £2, and £1 respectively, and authorize the shooting or capture of various numbers of specified sorts of game. Elephants and giraffes are protected by special licences. Bird licences cost 5 rupees per annum.

Methods of Cultivation; Irrigation.—Native methods of cultivation are simple. The hoe is the universal implement of agriculture. The Government Departments of Agriculture take pains to educate the natives in correct ways of growing and marketing cotton, coffee, and cocoa. European settlers introduce modern methods of ploughing and cultivating, and of harvesting their crops of grain, sisal, potatoes, coffee, and other products.

The method of irrigation employed in the cultivation of rice in India, China, and Japan is unknown in East

Africa, and except for a modest canal system at Kibwezi, irrigation is employed only in the water furrows constructed by individual settlers. There are, however, said to be possibilities for irrigation works on the Juba and Tana Rivers, whereby extensive tracts of black soil, now unproductive, might be brought under cotton cultivation.

Forestry.—The forest areas of the East Africa Protectorate cover about 3,000 square miles; those of Uganda nearly 1,000 square miles. Useful timber for house-building is furnished by yellow-wood trees from Tero forest and nsambya from the Mabira forest. Mvuli is a hard and prettily marked wood, good for furniture. Besides mvuli, African ebony, mahogany, cedar, bamboo, and rattan canes are found in the forests of Uganda. In East Africa the chief forest tracts are those of the Mau escarpment and Aberdare Range, and the girdle forests of Mount Elgon and Mount Kenya. On Mount Kenya a wide range of valuable woods is found, including cedar, yellow-wood, camphor, jarrah, cork, ironwood, pillarwood, and olive. M'hugu, or sandalwood, grows near the coast.

All forests are under Government control, and the conservation and development of forest resources is the care of the Forestry Departments. The exotic trees now planted in reafforestation areas include varieties of eucalyptus, cypress, and pines. Teak, mahogany, and other hardwood trees have been planted in the coast belt.

(3) FISHERIES

The natives of the coast are largely occupied with sea-fishing, and in Mombasa and other coast towns fish is cheap and good. The marine mammals, nguvas, or dugongs, are a greatly prized delicacy. In Lake Victoria there is good fishing, and with the advent of a cold-storage installation a small fresh-fish industry has been established. The European angler may enjoy good sport among the large fish of the lake and Ripon Falls, or try for the trout that are now acclimatized in a number of the highland streams of both Protectorates.

(4) MINERALS

The mineral resources of British East Africa include deposits of gold, iron, coal-shale, marble, graphite, manganese, opals, and alum, all of small value. There are indications of silver, copper, and tin. Salt is found in many places, and large quantities of diatomite occur in the Rift valley and near Lake Magadi. Limestone is quarried in various localities for building purposes. Mica has been mined experimentally. By far the most valuable mineral so far discovered is the carbonate of soda found in Lake Magadi, where the supply is fed by springs, and is apparently inexhaustible. An annual output of 50,000 tons is expected when normal conditions are re-established; trial and sample exports in 1914-15 and 1915-16 were 256 and 77 tons respectively.

The Governments issue prospecting licences, and, at a later stage, mining and mineral leases, and, further, levy royalties on any gold, silver, diamonds, coal or other valuable ore or mineral that may be extracted.

(5) MANUFACTURES

Pottery, iron spear-blades, hatchets, knives and hoes, barkcloth, mats and basketwork are the commonest products of native workmanship. The natives construct and thatch their own huts. A number of Indians are employed in house- and boat-building, smithy work, furniture- and waggon-making. The cotton ginneries, dairies, flour-mills, bacon-curing establishments, sisal decorticators, and sawmills are run mainly by native labour under European supervision. Possibilities of the future are factories for matches, for jam and preserved vegetables, for paper, and for extract of tannin.

(6) POWER

The water power of East Africa has not yet been harnessed for industrial uses. Potential sources of great power exist in the Ripon Falls and Murchison Falls on the Nile.

(C) COMMERCE

(1) DOMESTIC

Principal Branches of Trade.—In Mombasa and Nairobi there are shops and stores under European management; these deal in groceries, confectionery, wine and spirits, clothing and tailoring, boots and shoes, safari outfits, arms and ammunition, motors, cycles, agricultural machinery, farm requisites, and building materials. In the same towns and in all centres where they are allowed to set up business Indian shopkeepers conduct bazaar operations on a less ambitious scale. They are the usual intermediaries between the natives and the big firms, and not only sell imported goods such as cotton piece-goods, brass and copper wire, beads, provisions, soap, sugar, and tobacco, but also purchase for export the native products of cotton, hides and skins, grain and oil seeds. Near the coast a portion of the trade passes through the hands of Arabs, and in the northern districts Somalis and Swahilis trade in sheep and cattle.

Towns, Markets, Fairs.—The larger towns, Nairobi, Mombasa, and Kampala, are the more important centres of domestic trade, but a considerable business is conducted in the native produce market at Kisumu and in a number of markets and bazaars elsewhere. Trading posts are established here and there throughout the country, and under safeguards Government allows traders to set up stores at selected sites, even in native reserves. It is hoped that the more backward tribes, such as the Masai, may thus have opportunities of economic and commercial development, and may in time take the same active part in the barter of commodities as is now taken by the enterprising Kavirondo and Baganda.

Organizations to promote Trade and Commerce.—The Chambers of Commerce of Mombasa and Nairobi and the Uganda Chamber of Commerce at Kampala represent the leading business activities of the Protectorates, discuss the commercial problems, and take

action to promote trade, internal and foreign. Domestic trade, though not the primary concern of the settlers' societies, is nevertheless fostered by the Farmers' Associations of Naivasha, Lumbwa, Limoru, Kyambu, Ruiru, Ulu, and Gwas Ngishu (Uasin Gishu); the Planters' Associations of Busoga, Singo District, and Uganda; and the Associations of Coffee Planters, Coast Planters, Sisal Growers, Maize Growers, Beekeepers, and Pigbreeders.

Foreign Firms and Companies.—The capital invested in the banks, the lands and townships companies, the plantations, the hotels, engineering works and motor garages, trading syndicates, trust associations, insurance companies, and shipping and forwarding firms was found partly in India and other British possessions, but mainly in Great Britain. French, Portuguese, and Italian interests are not extensive. The German firms before the war, though comparatively few in number, had powerful backing and influential connexions: Hansing and Co., who acted as agents for the Chartered Bank of India, Australia, and China, and O'swald & Co. were specially remarkable for the extent of their business throughout all East Africa.

Methods of Economic Penetration.—The most effective method of commercial penetration of a distant country like British East Africa is to secure a monopoly of the shipping lines serving it, and thus bar, or at least penalize, the import of goods of foreign manufacture. Such a monopoly existed before the war in German East Africa; for British lines serving that country had, under pressure of a politico-commercial character, been forced to withdraw from German ports. The method, however, found no favour in British East Africa, which, true to the principle of unrestricted trade, welcomed the Deutsche Ost-Afrika Linie, and gave equal facilities to German and British import and export firms. In addition to free entry to the British Protectorates, German trade had the benefit of reduced freights on German State railways, of through bills of lading from the interior of Germany, of rebates allowed by German firms on East Africa produce shipped by the

Deutsche Ost-Afrika Linie and of the large State subsidy granted to this line. English trade had no such privileges.

Further, in commercial competition with German firms, British manufacturers were handicapped by the long terms of credit which were offered, even to distributors of uncertain standing, by the German importers, supported by the German Government and German banks. That other methods were employed to increase the handicap would appear from the report, which there is reason to credit, that complaisant Indian traders who showed a partiality for wares of German origin have found themselves provided with a motor bicycle or a free return passage to Mecca. It is estimated that 60 per cent. of the "bazaar" import trade of the East Africa Protectorate used to be in the hands of the German firms. Now that these are closed down, the British importers appreciate the relief from this incubus of unscrupulous and heavily subsidized rivalry.

(2) FOREIGN¹

The records of the value of the export and import trade of British East Africa from 1896 to 1916 (Table III) show the remarkable expansion which has taken place during this period, and which, though checked by the war, will doubtless be resumed, and probably accelerated, on the re-establishment of peace. As the whole foreign trade of Uganda passes through the East Africa Protectorate, and is included in the East Africa figures, it is unnecessary to give the Uganda returns separately.

Exports.—The principal export products of the East Africa Protectorate are hides and skins, fibre, coffee, copra, maize, millet and sesame, beans, pulse and ground-nuts, live-stock, wool, bark and boricities, rubber, beeswax, ivory, potatoes, and ghee. The export of most of these may be expected to increase in the future; but ivory shows a falling-off, due to the depletion of

¹See Tables III-VII in Appendix, pp. 103-6.

old stores and to regulations now enforced for the preservation of elephants; wild rubber is dwindling, and plantation rubber has a somewhat uncertain future. On the other hand, sisal and flax give promise of great expansion, and carbonate of soda is likely to take a leading place on the list. Cotton is the chief article of export from Uganda, and is followed in order of value by hides and skins, coffee, sesame, cotton-seeds, chillies, ivory, and rubber. Small consignments of cocoa are promising. Re-exports from the Sudan and Italian East Africa are negligible. The Congo Free State before the war used to send considerable quantities of ivory and small lots of other products; in 1916 it exported, besides ivory and rubber, consignments of gold valued at £395,723, a sum representing 35 per cent. of the value of exports for the year. The average annual contribution of German East Africa in recent years was about 30 per cent. of the total export trade of the East Africa Protectorate, and consisted mainly of hides and skins, and, in less degree, of ground-nuts, coffee, rubber, cotton, beeswax, ghee, and other commodities. Table IV shows the values during the last ten years of the exports passing through British East Africa from the six East African territories.

Of exports from East Africa rather more than half were consigned, even in pre-war days, to Great Britain and British possessions. The products which the United Kingdom purchased, and still purchases, to the extent of at least 80 per cent., are cotton, coffee, wool, rubber, sisal, and other fibres. France still claims the greater part of the copra export. Grain and oil-seeds are widely distributed to Zanzibar, France, Italy and her East African possessions, India, Arabia, Egypt, and other countries. The place which the United States formerly held as chief customer of East African skins is now taken by the United Kingdom, which also buys about one-third of the hides; most of the hides have gone to Italy since the first year of war. Germany used to take an interest in wattlebark and in cotton.

Table V shows how the exports, comprising produce

of British East Africa, Uganda, the Congo Free State, the Sudan, and German East Africa were distributed among foreign countries during the ten years 1907-1916.

Imports.—Table VI shows the values of the chief articles imported into the two Protectorates during the five years 1912 to 1916. Cotton piece-goods constitute the largest individual item, and represent on the average 27 per cent. of the total import. During the years immediately before the war the cotton goods imported came in the proportion of 25 per cent. from the United Kingdom, 25 per cent. from the United States; 15 per cent. from India, 15 per cent. from Holland, 9 per cent. from Germany, and 11 per cent. from other countries. The United Kingdom provides practically all the whiskey, soap, canvas, bags and sacks, and galvanized iron, and about three-fourths of the leather wares, machinery, vehicles and parts, iron and steel manufactures, haberdashery and wearing apparel, cement, and building materials other than timber. India with Burma sends almost all the imported grain, teak, and tea, over one-fourth of the leather manufactures and cigars, and minor quantities of haberdashery. The Union of South Africa contributes coal, ale and beer, Cape carts, and small consignments of brandy and tobacco. Salt comes from Aden and Egypt; sugar from Java and Mauritius. America furnishes, besides cotton piece-goods, kerosene, vehicles, agricultural implements, and machinery. Kerosene is also sent from Egypt; almost all the petrol is from Sumatra. France contributes brandy, wine and liqueurs; Holland, cotton piece-goods, tobacco, cigars, and gin. Matches are brought from Sweden. Norway and Sweden supply timber for building.

The proportions in which Great Britain and other countries shared in the total import trade of East Africa during the last ten years are shown in Table VII.

Customs and Tariffs.—The only export duties levied on produce of the Protectorates are duties of 15 per cent. *ad valorem* on ivory, 10 per cent. on mangrove

poles, chillies, hides and skins, rhinoceros horns, hippopotamus teeth and tortoiseshells, 6 per cent. on gum copal, 5 per cent. on ebony and on cowrie and other seashells, and 4 per cent. on wild rubber. An export charge of 21 rupees (28s.) is made on each horse, 4 rupees (5s. 4d.) on each camel, and 2 rupees (2s. 8d.) on each donkey.

Imported merchandise generally pays an import duty of 10 per cent. *ad valorem*; but exemption from this charge is given to all Government imports; railway, tramway, and road materials; ships or vessels; trees, plants, and seeds for cultivation; agricultural implements; agricultural and industrial machinery and apparatus; electric and telegraph materials and apparatus; printed matter, photographs, and pictures; motor lorries, petrol, coal, coin and gold bullion; and various other classes of goods. Spirituous liquors pay at the rate of 5 rupees per gallon at 50 degrees of Gay Lussac's alcoholometer at 15° Centigrade.

Commercial Treaties.—The commercial clauses in the Berlin Act of 1885, Brussels Act of 1890, Anglo-German Convention of 1890 and later supplementary agreements, provide for unrestricted trade over the Congo basin and its conventional extension to the East Coast. Within this area differential treatment for the subjects of any nation is disallowed, but sanction is given for the imposition of customs duties on imports to and exports from protectorate territories, goods in transit not being liable to any duty. As between German and British East Africa there was, therefore, before the war, a nominal parity of trading opportunities, impaired in practice, as has been shown, by the handicap under which British merchants were placed in British as well as in German territory.

(D) FINANCE

Public Finance.—The public revenue of the East Africa Protectorate in the last few years has averaged one million pounds, and has balanced expenditure; so that the grant-in-aid from the Imperial Exchequer,

which stood at £130,000 in 1911 and £115,000 in 1912, has been discontinued since the latter year. The revenue is derived chiefly from Government railways and from licences and internal revenue (including poll-tax), and in a less degree from customs, posts and telegraphs, fees of court, rents, sales, and interest. The public debt in 1915 amounted to £569,840.

The finances of Uganda have shown the same advance in recent years to a position of independence of Imperial assistance. The grant-in-aid fell gradually from £103,262 in 1910 to £35,000 in 1914, and in 1915 and 1916 no grant was required or given. Revenue, which in 1915 amounted to £287,025, is drawn chiefly from poll-tax, customs, game licences, land rents, telegraph receipts, motor-transport services, municipal receipts, and market dues.

Taxation in the East Africa Protectorate takes the form of a native hut-tax or poll-tax of 5 rupees per annum, and a non-native poll-tax of 15 rupees. In Uganda a poll-tax of 5 rupees is levied in Buganda, Busoga, Toro, and Ankole; in more remote districts the tax is reduced to 3 rupees.

The two Protectorates have in recent years been granted by the Imperial Government loans bearing interest at $3\frac{1}{2}$ per cent. for road, railway, marine, and harbour development. The sum total of amounts lent or voted is £2,573,000 to the East Africa Protectorate, and £295,000 to Uganda. The grants-in-aid since 1893 have totalled £2,843,383 to East Africa and £2,548,512 to Uganda. Free grants for the Uganda and Magadi Railways represented a total, in 1917, of £5,692,009. It thus appears that the contribution of the British Government to the economic independence of the two Protectorates has now amounted to gifts of eleven millions and authorized loans of nearly three millions.

Banking.—The banks represented in East Africa are the National Bank of India, the Standard Bank of South Africa, and the National Bank of South Africa. Each of these has branches at Mombasa and Nairobi. The National Bank of India is also established at

Kisumu and Entebbe; the Standard Bank of South Africa at Eldoret; both have branches at Kampala, Jinja, and Nakuru.

Influence of Foreign Capital.—The influence of the German capital invested in British East Africa has been to develop the trade with Germany and German East Africa through German importing firms and the shipping service of the Deutsche Ost-Afrika Linie. There would be no reason to object to such a tendency if, in the past, facilities had been reciprocated, and a similar British connection encouraged in German East Africa. There was, however, as has been shown above, no real equality of trading opportunity as between the adjacent British and German possessions, in spite of the nominal reciprocity established by commercial treaties.

Principal Fields of Investment.—There are obviously opportunities for the profitable investment of capital in such important industries as flax-growing, sisal, coffee and coconut cultivation, stock-raising, grain and food production. It is a matter of importance that development of all such resources should be carried on upon some co-operative scheme, and, if possible, with some State guarantee. The cotton industry of Uganda has proved immensely useful to that Protectorate because of the Government control exercised, the uniformity of the product, and the fairly constant level of prices secured. The sisal industry of German East Africa owed its success in large measure to the monopoly that its product enjoyed for the use of the German Navy. With similar encouragement (short of monopolies) the industries of British East Africa would serve to further the development of the country's natural resources, and would materially contribute to the economic independence of the Empire.

The danger of labour shortage for new enterprises is far from negligible, and would appear to suggest that the greatest possible encouragement should be given to the European colonist of modest means to settle in the large areas which after twenty years' experience have been found to be entirely suitable and healthy for

Europeans. It is chiefly the labour difficulty that imperils the success of plantation enterprise; and in view of this the prospective investor will do well to be shy of ambitious new ventures, and to pay more attention to the well-established companies, which are familiar with the economic conditions of the country.

(E) GENERAL REMARKS

Of the three requisites for economic prosperity the East Africa Protectorates possess the first, useful products, in abundance; the second, labour, in bare sufficiency; the third, transport facilities, in a measure inadequate for progress.

Of experimental industries, some, as for example those of sansevieria fibre and wild rubber, have proved failures, while the success of others is still doubtful, at least in competition with other domestic cultures. Thus, in Uganda, other branches of agriculture have been overshadowed by cotton-growing, an industry which is an instructive instance of native co-operation under Government control and guidance. Whether by individual effort or by combination many other industries afford excellent prospects and are practically sure of success. In respect of its products the future of East Africa is very bright.

With regard to labour, the Governments are faced with the problem of holding the balance between opposing influences. The uncivilized native desires a life of indolence complete and undisturbed: the missionaries, who have done much to educate him for agricultural and industrial work, would prefer to see him farm his own small property; while the settlers and plantation-owners depend on him for the labour which will give them a reasonable profit and in the aggregate secure the country's prosperity. There are abundant opportunities for both hired and independent, skilled and unskilled labour; the one attitude that cannot command sympathy is the refusal to work at all.

The transport problem deserves immediate and careful consideration. The extension of the railway to the Congo border would do much to facilitate and develop the trade of Uganda, and other extensions are little less urgent. These, as well as measures to avoid congestion, have been mentioned above, in connection with the Uganda Railway. In particular, the development of Kilindini Harbour is urgently necessary, as the delay to which cargo and vessels are subject under existing conditions is a handicap which imperils the export of lower-priced commodities.

As regards cost of transport, the Uganda Railway authorities claim to have reduced export freight charges to the lowest possible rates, while the shipping lines are said to have run their services in the past at an actual loss. A proposal has been made that the British lines should be subsidized by the Imperial Government, after the German precedent. The growing revenues of the Colony might contribute to such a measure; or, following a suggestion made in Mr. B. Cave's report on Zanzibar (1909), joint action might even be taken by all the East African colonies to secure lower freights and improved services in return for certain concessions or subsidies. The Protectorates singly may not be able to negotiate with effect, but collectively they would be likely to obtain favourable terms. Whatever action may eventually be taken, it is obvious that cheap freights are a prime necessity, if the produce of the country is to be placed on the market at an outlay low enough to repay enterprise and stimulate production.

British East Africa faces towards the east, and an eastward expansion of trade is a probability of the future. Uganda cotton is now beginning to find a market in India; and, in addition to cotton, the coffee, cocoa, copra, rubber, sisal hemp, flax, hides and skins of East Africa may yet figure on the import lists of India, Australia, America, and even China and Japan, while all these countries can supply products suitable to the needs of the Colony.

Attention is sometimes drawn to the adverse trade

balance in British East Africa. The excess of imports over exports is a feature whose significance can easily be exaggerated; for in a country the civilization of which began only twenty years ago production cannot be expected to balance outlay. A large proportion of the imports represents capital expenditure on such things as machinery, houses, and live-stock. For a long time to come the country will require further capital of this description to enable it to develop its resources. The excess of such imports, within limits, will not impoverish but enrich the Colony, and will actually provide the means by which an equilibrium of trade may be established in the course of a few years. The average adverse balance for quinquennial periods has already fallen from 78 and 64 per cent. in 1901 and 1906 respectively to 30 and 31 per cent. in 1911 and 1916.

ZANZIBAR¹

(A) MEANS OF COMMUNICATION

Most of the country roads of Zanzibar and Pemba are still no better than narrow, devious, and difficult paths. But in recent years 75 miles of motor roads have been constructed, connecting the town of Zanzibar with Mkokotoni in the north, Chwaka in the east, and Fumba in the south-west. In Pemba a start has been made on a metalled road to run the whole length of the island. Between the two islands a regular weekly connection is maintained by the Government steamers *Cupid* and *Khalifa*, vessels of 600 tons.

A light railway, seven miles long, runs from Zanzibar town northward to Bububu. This is now Government property, and yields an annual revenue of a few hundred pounds. There is no evidence to show that for the economic development of the island railway expansion would serve better than the judicious extension of

¹ The Zanzibar Protectorate is taken as including Zanzibar, Pemba, and the neighbouring smaller islands.

the road system, supplemented by the existing service of coasting vessels.

The Post Office, with its seven branches in the two islands, deals not only with foreign, transit, and inland letters, but also with parcels, money and postal orders, and savings bank deposits. In each island the Government telephone system, with headquarters in the capital, is connected with the district and agricultural stations. Between Zanzibar and Pemba communications can be carried on by wireless telegraphy.

The coasts of Zanzibar and Pemba are indented with numerous creeks, and fringed, especially on the western side, with groups of islets, which provide nearly a score of natural harbours, suitable for dhows and small craft. Of this description are the Pemba harbours of Msuka Bay, Port Cockburn, Port George, and Chaki Chaki; and, in Zanzibar Island, Menai Bay and Mkokotoni Harbour. None of these, however, is comparable, in the combination of natural shelter, geographical situation, and commercial prestige, with the harbour of the capital. For three centuries Zanzibar held a commanding position as the entrepot for the trade of the East African mainland and of Europe with Arabia and India; and, although its relative importance has declined in consequence of the development of the mainland harbours, it remains a port of call for all East African liners. The harbour is approximately five miles long, with good anchorage everywhere in 7 to 12 fathoms. It is provided with several piers, but all larger vessels load and discharge cargo from lighters. The need for deep-water wharves and proper landing facilities is now appreciated. In 1913 the gross tonnage of ocean-going ships was 1,355,628, of coasting vessels 84,426, and of dhows 62,866. The same shipping lines serve Zanzibar and East Africa.

The two wireless installations on Zanzibar and Pemba are in communication with the continental stations. Cables connect Zanzibar with Mombasa, with Aden, Egypt, and Europe, with India and Australia, and with the coast ports of East and South Africa.

(B) INDUSTRY

Clove-growing is an industry of prime importance, as nine-tenths of the clove crop of the world is produced in Pemba and Zanzibar. Little trouble is taken with the cultivation of the trees and the gathering of the harvest; yet from the 60,000 acres of plantations an average annual yield of 18,000,000 lbs. of cloves is collected. Copra cultivation ranks second to cloves. About 45,000 acres on the two islands are under coconut palms; these produced, in 1915, 8,585 tons and, in 1916, 5,472 tons of copra. The quality and value of both copra and cloves would be greatly enhanced by scientific and careful methods of drying.

Cloves and copra are the only products grown in large quantities for export. Experiments with wild rubber and with cultivated Ceará rubber and cotton have proved unsuccessful, and the cultivation of chillies has declined owing to the natives' objection to the irritation they cause to skin and eyes. Nor has the culture of cinnamon, nutmegs, vanilla, cacao, or sisal, although a demonstrated possibility, as yet attracted the attention of the plantation-owners. Even the sugar plantations have been neglected, and irrigation has never been utilized for the production of larger rice crops. For his own use the native is satisfied with easy harvests of maize, sorghum, rice, cassava, and ground-nuts, and with the tropical fruits, coconuts, oranges, mangoes, pineapples, and bananas, growing everywhere.

Pemba possesses a good stock of native cattle, and a large tract of grazing ground, which, if the menace of East Coast fever were eliminated, would offer possibilities of extensive cattle-breeding on modern methods.

Communal tenure of land is found in some native villages, but the plantations generally are freehold properties. Many of these are heavily mortgaged to Indian traders by the Arab owners, who found themselves embarrassed by the loss of cheap labour caused by the abolition of slavery in 1897.

Interspersed with the plantations are *wakf* lands, properties dedicated to sacred and other special pur-

poses. Plantations to the extent of 16,000 acres, which formerly belonged to the Sultans of Zanzibar, are now owned and cultivated by the Government.

The natives of the coast villages are largely occupied with fishing. The outrigger canoes which they employ are unsuitable for heavy seas; and, consequently, during the south-west and north-east monsoons the fishing population usually migrates northward and southward in turn. Canoe fishing is carried on chiefly with hooks and lines. Nets, with or without fishing stakes, are used inshore, and basket-traps are common.

There are no mines in the Protectorate, and only unimportant manufactures of Indian jewellery, gold and silver work, Indian and native pottery, native ropes and mats. There are a few oil-mills for expressing the oil of copra and simsim, and in conjunction with two of these are found two factories having an annual output of 800 tons of soap.

With its abundant rainfall, its profusion of tropical plants, and in particular its rich clove and coconut plantations, the Zanzibar Protectorate holds a position of great agricultural and economic strength. But great as its resources are, its production falls far short of its capacity. The native population is indolent and improvident, and is said to be dwindling in numbers; while the Arab race, no longer recruited by immigrants from Arabia or supported by cheap slave labour, is losing vitality, and is heavily mortgaged to the Indian moneylenders. Thus the supply of labour and of energetic control is declining rather than improving, while development is impeded by lack of capital as well as labour. Hopes have been expressed that European capital and management may be introduced. The importation of Indian ryots has been suggested as a means of supplementing the native labour supply. Facilities are offered for the freehold purchase of Government and private properties, the latter requiring a careful scrutiny of title before acquisition. The climate of Zanzibar is not, for a tropical island, unhealthy, and risk to the health of Europeans has, in recent years, been reduced by the progress of medical knowledge of tropical

diseases, and by local improvements effected in sanitation and in road-making. But in the meantime the labour difficulty remains a serious deterrent to European enterprise.

(C) COMMERCE

The retail trade of the Protectorate is mainly in the hands of Indians, who purchase cloves and copra from the plantations, and dispose of the dried products to the larger produce firms in Zanzibar. Zanzibar is the only commercial centre of importance, and before the war contained all the export firms—British, Indian, German, and Portuguese—which traded with the mainland. The number and commercial standing of the foreign firms were, speaking generally, commensurate with the trade between their countries and Zanzibar, but the German firms, with the same advantages as they enjoyed in British East Africa, had secured a disproportionate percentage of import and export trade.

For several years before the war exports had exceeded a million sterling per annum, and although for 1914 and 1915 there was a drop in value of 20 per cent., the figures for 1916 showed a recovery to the pre-war average. The total of exports is composed, to the extent of 60 per cent., of the produce of the Protectorate, and to the remaining 40 per cent. of goods imported and afterwards consigned to a further destination. In domestic produce the chief item is cloves and clove-stems, which have attained, in the last six years, an average annual value of over £400,000. Second on the list comes copra, with an average pre-war value of £200,000, one-fourth of this representing re-export. These branches of export trade show no signs of falling off, but may be regarded as likely to maintain their position as the mainstay of Zanzibar's prosperity. Other exports include only small quantities of domestic products; among others, hides and skins, chillies, soap, and gum copal. Of re-exports to the mainland, the

chief are cotton piece-goods, rice, groceries and provisions, petroleum, and soap.

The clove export finds its way to many markets. In recent years British India received over 40 per cent., Germany 20, Great Britain, Holland, and the United States each about 10 per cent., while the remainder was distributed between Italy, Austria, and other countries. Under war conditions in 1915 British India, the United Kingdom, the United States, and Continental Europe absorbed respectively 46, 30, 18, and 6 per cent. of the year's output. Practically the whole copra export has hitherto gone to France. German East Africa used to take most of the rice, petroleum, dried fish, soap, and sugar, and nearly half of the cotton piece-goods.

The commercial returns for a long series of years have shown a remarkable equilibrium of imports and exports, with a consequent absence of adverse trade balance. From the recent average of over a million sterling, the value of imports declined in the first two years of war, but in 1916 rose again and passed the pre-war figure. The total of imports, £1,259,829, in this year for the first time showed a considerable excess over exports, which were valued at £1,052,167; the temporary surplus is probably due to conditions arising from the war.

In peace time Zanzibar imports from the African continent a considerable quantity of copra, ivory, hides, skins, and gum copal, destined for the United Kingdom and Continental Europe, India, and the United States. The chief products intended for domestic use are grains and foods of various sorts, and cotton piece-goods, representing respectively 35 and 20 per cent. of the total value of imports.

Of foreign countries British India normally makes the largest individual contribution to the trade of the Protectorate, taking cloves and ivory, and sending rice, grain, flour, sugar, tea, hardware, crockery and cutlery, timber, bags and kandas, and cotton piece-goods. Second to India, which conducts 30 per cent. of the exchange of products, comes the United Kingdom, with over 12

per cent.; Great Britain buys cloves and clove-stems, ivory, gum copal, hides and skins, and sells piece-goods, building materials, crockery, hardware and cutlery, provisions, furniture, machinery, tobacco, spirits, beer and wine. German East Africa and Germany together, in pre-war years, handled about 20 per cent. of the Protectorate's trade, the Fatherland exchanging beads, piece-goods, crockery, glass, machinery, hardware, beer, wine and sugar for cloves and clove-stems, copra, hides and skins. The trade with France, amounting to over 10 per cent. of the whole, was chiefly remarkable for the French purchase of nearly the whole export of copra and the comparative insignificance of French imports into Zanzibar. The Netherlands and the United States send consignments of piece-goods. Coal is imported from South Africa. Figures of export and import are given in Table VIII (Appendix, pp. 106-7).

Most of the customs duties call for no special remark, but the export duty of 25 per cent. on the value of cloves and clove-stems is one of the main sources of Protectorate revenue. Practically all imports pay a duty of $7\frac{1}{2}$ per cent. of their value.

(D) FINANCE

The chief item in the revenue of the Protectorate is customs, which contributes close on 60 per cent. of the total. British East Africa pays £11,000 per annum as rent for the coast possessions of Zanzibar on the mainland. Revenue approximately balances expenditure in the case of the Agriculture and Railway and Electricity Departments, whereas the Port Service and Shipping Departments have expenses exceeding receipts. The chief charges under expenditure are for the Public Works Department, Civil List, Police and Armed Constabulary, Judicial and Medical Departments. Gifts of £10,000 in 1915 and £20,000 in 1916 were made by the Protectorate to the Imperial Government for the purposes of the war. The totals of revenue and expenditure for eight years were as follows:—

[3918]

I

Year.	Revenue.	Expenditure.
	£	£
1909	204,863	189,014
1910	181,705	192,925
1911	237,422	207,951
1912	242,483	334,679 ¹
1913	275,126	248,356
1914	234,701	213,091
1915	267,405	308,968
1916	281,162	280,203

The gold coins of the Royal Mint in England or of any Mint established as a branch of the Royal Mint are legal tender to an unlimited amount at the rate of 15 rupees to a sovereign. The British India rupee is the standard coin of Zanzibar, while the smaller silver coins—the half, quarter, and eighth rupee—are legal tender for sums up to 5 rupees. Seyidie copper pice, at the rate of 60 to 1 rupee, may be used for payments not exceeding 1 rupee. Government notes of 5, 10, 20, 30, 50, and 100 rupees were in circulation in December, 1916, to the value of Rs. 1,665,715. This issue of notes is secured by cash held in the proportion of 60 per cent. and by War Loan, Indian Rupee Paper, and Colonial Government securities covering the remaining 40 per cent. of the face value of the notes.

Before the war three banks were represented in Zanzibar—the National Bank of India, the Standard Bank of South Africa, and the Chartered Bank of India, Australia, and China.

While, generally speaking, there is no great scope for commercial investment within the Protectorate, individual or joint enterprise has opportunities in the acquisition and development of plantations of cloves, coconuts, and possibly sisal, rubber, and cacao.

¹ Includes purchase price of railway, telephones, and electric-lighting works.

APPENDIX

EXTRACTS FROM TREATIES

I

ANGLO-GERMAN AGREEMENT, OCTOBER 29/NOVEMBER 1, 1886.

1. GERMANY and Great Britain recognize the sovereignty of the Sultan of Zanzibar over the islands of Zanzibar and Pemba, and over the smaller islands which lie in the neighbourhood of the above within a radius of 12 sea miles, as well as over the Islands of Lamu and Mafia.

On the mainland they likewise recognize as possessions of the Sultan a line of coast which stretches without interruption from the Minengani River at the head of Tunghi Bay to Kipini. This line commences on the south of the Minengani River, follows the course of that river for 5 sea miles, and continues thence on the line of latitude to the point where it strikes the right bank of the Rovuma River, crosses the Rovuma, and runs down its left bank.

The coast-line has an internal depth of 10 sea miles measured from the coast direct into the Interior from high-water mark.

The northern limit includes Kau.

To the north of Kipini the said Governments recognize as belonging to the Sultan the stations of Kismayu, Brawa, Meurka, and Magadisho, with radii landwards of 10 sea miles, and of War-sheik with a radius of 5 sea miles.

2. Great Britain engages to support negotiations of Germany with the Sultan for the leasing to the German African Company of the customs duties at the ports of Dar-es-Salaam and Pangani, in return for an annual payment to the Sultan by the Company.

3. Both Powers agree to establish a delimitation of their respective spheres of influence on this portion of the East African Continent of the same character as that to which they have agreed as regards the territories on the Gulf of Guinea.

The territory to which this arrangement applies is bounded on the south by the Rovuma River, and on the north by a line which, starting from the mouth of the Tana River, follows the course of

that river or its affluents to the point of intersection of the Equator and the 38th degree of east longitude, thence strikes direct to the point of intersection of the 1st degree of north latitude with the 37th degree of east longitude, where the line terminates.

The line of demarcation starts from the mouth of the River Wanga or Umbe, runs direct to Lake Jipé, passes thence along the eastern side and round the northern side of the lake and crosses the Lumi River;

After which it passes midway between the territories of Taveita and Chagga, skirts the northern base of the Kilimanjaro range, and thence is drawn direct to the point on the eastern side of Lake Victoria Nyanza which is intersected by the 1st degree of south latitude.

Germany engages not to make acquisitions of territory, accept Protectorates, or interfere with the extension of British influence to the north of this line; and Great Britain makes the same engagement as regards the territories lying to the south of this line.

4. Great Britain will use her good offices to promote a friendly arrangement of the rival claims of the Sultan and the German East African Company to the Kilimanjaro districts.

5. Both Powers recognize as belonging to Witu the coast-line which commences to the north of Kipini and continues to the northern extremity of Manda Bay.

6. Great Britain and Germany will jointly invite the Sultan to accede to the Act of Berlin, February 26, 1885, with reservation of His Highness' existing rights under the 1st Article of the Act.¹

7. Germany engages to adhere to the Declaration signed by Great Britain and France on March 10, 1862, with regard to the recognition of the independence of Zanzibar.

II.

ANGLO-GERMAN AGREEMENT, JULY 1, 1890, ARTICLES I, II, XI, XII.²

ARTICLE I

IN East Africa the sphere in which the exercise of influence is reserved to Germany is bounded—

1. To the north by a line which, commencing on the coast at the north bank of the mouth of the River Umba, runs direct to

¹ The Sultan's adhesion followed on November 8, 1886.

² The other Articles of this Agreement do not concern East Africa.

Lake Jipé; passes thence along the eastern side and round the northern side of the lake, and crosses the River Lumé; after which it passes midway between the territories of Taveita and Chagga, skirts the northern base of the Kilimanjaro range, and thence is drawn direct to the point on the eastern side of Lake Victoria Nyanza which is intersected by the 1st parallel of south latitude; thence, crossing the lake on that parallel, it follows the parallel to the frontier of the Congo Free State, where it terminates.

It is, however, understood that, on the west side of the lake, the sphere does not comprise Mount Mfumbiro; if that mountain shall prove to lie to the south of the selected parallel, the line shall be deflected so as to exclude it, but shall, nevertheless, return so as to terminate at the above-named point.

2. To the south by a line which, starting on the coast at the northern limit of the Province of Mozambique, follows the course of the River Rovuma to the point of confluence of the Msinjé; thence it runs westward along the parallel of that point till it reaches Lake Nyassa; thence striking northward, it follows the eastern, northern, and western shores of the lake to the northern bank of the mouth of the River Songwe; it ascends that river to the point of its intersection by the 33rd degree of east longitude; thence it follows the river to the point where it approaches most nearly the boundary of the geographical Congo Basin defined in the 1st Article of the Act of Berlin, as marked in the map attached to the 9th Protocol of the Conference.

From that point it strikes direct to the above-named boundary; and follows it to the point of its intersection by the 32nd degree of east longitude; from which point it strikes direct to the point of confluence of the northern and southern branches of the River Kilambo, and thence follows that river till it enters Lake Tanganyika.

The course of the above boundary is traced in general accordance with a map of the Nyassa-Tanganyika Plateau, officially prepared for the British Government in 1889.

3. To the west by a line which, from the mouth of the River Kilambo to the 1st parallel of south latitude, is conterminous with the Congo Free State.

The sphere in which the exercise of influence is reserved to Great Britain is bounded—

1. To the south by the above-mentioned line running from the mouth of the River Umba to the point where the 1st parallel of south latitude reaches the Congo Free State. Mount Mfumbiro is included in the sphere.

2. To the north by a line commencing on the coast at the north bank of the mouth of the River Juba; thence it ascends that bank of the river and is conterminous with the territory reserved to the influence of Italy in Gallaland and Abyssinia, as far as the confines of Egypt.

3. To the west by the Congo Free State, and by the western watershed of the basin of the Upper Nile.

ARTICLE II

In order to render effective the delimitation recorded in the preceding Article, Germany withdraws in favour of Great Britain her Protectorate over Witu. Great Britain engages to recognize the sovereignty of the Sultan of Witu over the territory extending from Kipini to the point opposite the Island of Kwyhoo, fixed as the boundary in 1887.

Germany also withdraws her Protectorate over the adjoining coast up to Kismayu, as well as her claims to all other territories on the mainland, to the north of the River Tana, and to the Islands of Patta and Manda.

ARTICLE XI

Great Britain engages to use all her influence to facilitate a friendly arrangement, by which the Sultan of Zanzibar shall cede absolutely to Germany his possessions on the mainland comprised in existing Concessions to the German East African Company, and their dependencies, as well as the Island of Mafia.

It is understood that His Highness will, at the same time, receive an equitable indemnity for the loss of revenue resulting from such cession.

Germany engages to recognize a Protectorate of Great Britain over the remaining dominions of the Sultan of Zanzibar, including the Islands of Zanzibar and Pemba, as well as over the dominions of the Sultan of Witu, and the adjacent territory up to Kismayu, from which her Protectorate is withdrawn. It is understood that if the cession of the German coast has not taken place before the assumption by Great Britain of the Protectorate of Zanzibar, Her Majesty's Government will, in assuming the Protectorate, accept the obligation to use all their influence with the Sultan to induce him to make that cession at the earliest possible period in consideration of an equitable indemnity.

ARTICLE XII

Subject to the assent of the British Parliament, the sovereignty over the Island of Heligoland, together with its dependencies, is ceded by Her Britannic Majesty to His Majesty the Emperor of Germany.

[NOTE.—An Act of Parliament was passed on August 4, 1890, to carry this Agreement into effect. 53 and 54 Vict., c. 32.]

TABLE I.—UGANDA RAILWAY REVENUE, 1904-1917

Year.	Receipts.	Expenditure.	Net Revenue.
	£	£	£
1903-4	131,567	191,668	-60,101
1904-5	153,794	151,155	2,639
1905-6	204,928	148,250	56,678
1906-7	241,211	164,448	76,763
1907-8	232,069	167,856	64,713
1908-9	232,660	167,822	64,838
1909-10	246,146	180,279	65,867
1910-11	300,116	201,597	98,519
1911-12	360,223	228,852	131,371
1912-13	489,213	280,186	209,027
1913-14	546,345	332,862	213,483
— War line —			
1914-15	515,924	335,324	180,600
1915-16	629,994	342,694	287,300
1916-17	780,688	428,863	351,825

TABLE II.—UGANDA RAILWAY AND MARINE STATISTICS, 1907-1917.

Year.	No. of Passengers.	No. of Train Miles.	Tonnage of Trade Goods.	Earnings from Coaching Traffic.	Earnings from Goods Traffic.	Earnings from Telegraphs.	Miscellaneous Earnings.	Earnings from Steamer Service.	Total Earnings.	Total Working Expenses.	Percentages of Total Expenses to Receipts.
				Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	
1907-8	339,933	705,656	54,855	804,380	2,211,503	9,735	31,368	424,112	3,481,048	2,510,350	72.11
1908-9	284,871	702,856	57,226	788,215	2,199,106	9,387	31,742	461,463	3,489,913	2,517,338	72.13
1909-10	293,052	747,770	60,213	785,740	2,386,479	9,739	49,452	460,785	3,692,195	2,704,190	73.24
1910-11	403,224	967,305	77,478	887,876	2,924,132	10,726	44,828	634,180	4,501,742	3,023,947	67.17
1911-12	442,479	1,208,065	115,767	1,010,168	3,584,037	14,324	57,875	736,954	5,403,358	3,432,781	63.53
1912-13	500,304	1,491,896	172,694	1,183,305	5,093,320	20,327	72,313	969,200	7,338,465	4,202,781	57.27
1913-14	616,197	1,631,685	189,556	1,411,073	5,618,491	18,664	85,910	1,061,044	8,195,182	4,992,923	60.93
1914-15	561,468	1,342,221	203,158	2,191,978	4,605,250	48,601	160,392	732,650	7,738,871	5,029,869	64.99
1915-16	586,428	1,354,398	255,316	2,750,995	5,582,690	55,323	554,612	506,286	9,449,906	5,140,404	54.40
1916-17	764,045	1,592,348	328,180	3,499,651	6,761,060	28,431	700,871	720,304	11,710,317	6,432,944	54.98

TABLE III.—EAST AFRICA PROTECTORATE: EXPORT AND
IMPORT TRADE, 1896-1916

Year ended March 31.	Export Trade (including produce from Uganda, German East Africa, Congo, Sudan, and Italian East Africa).	Import Trade (excluding Government im- ports, specie, rail- way and telegraph materials, and goods in transit to foreign territory).	Total of Exports and Imports (including Government imports, specie, &c., &c.).
	£	£	£
1896	73,764	176,983	..
1897	78,135	261,706	..
1898	72,618	297,655	..
1899	71,145	472,369	..
1900	121,686	446,612	..
1901	71,327	450,004	..
1902	96,339	421,260	..
1903	134,530	443,082	..
1904	134,158	436,947	..
1905	214,577	518,143	..
1906	316,141	672,360	..
1907	440,705	753,647	1,679,114
1908	515,052	799,717	1,766,079
1909	436,313	797,158	1,610,327
1910	590,057	775,246	1,769,695
1911	962,911	997,983	2,569,436
1912	1,016,898	1,247,260	3,086,969
1913	1,203,201	1,808,343	4,094,693
1914	1,482,876	2,147,937	4,880,267
1915	1,004,796	1,469,210	3,602,951 ¹
1916	1,111,424	1,708,333	3,739,118 ²

¹ Including imports by Expeditionary Force, £300,936.² Including imports by Expeditionary Force, £429,186.

TABLE IV.—EAST AFRICA PROTECTORATE: EXPORTS (COUNTRIES OF ORIGIN), 1907-1916.

	Year ended 31st March—									
	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
	£	£	£	£	£	£	£	£	£	£
East Africa Protectorate ..	163,749	157,097	140,418	190,668	276,480	333,670	421,084	443,824	314,804	329,519
Uganda Protectorate ..	126,491	140,277	140,370	211,796	371,513	377,074	427,228	564,244	506,878	356,642
German East Africa ..	138,030	173,236	102,119	169,241	285,538	280,113	331,292	448,103	150,941	872
Italian East Africa ..	..	..	..	..	343	82	457	..	..	..
Sudan ..	..	..	..	..	1,688	3,634	1,655	..	187	182
Congo Free State ..	12,435	44,442	53,406	18,352	27,349	22,325	21,485	26,127	31,986	424,209
Total ..	440,705	515,052	436,313	590,057	962,911	1,016,898	1,203,201	1,482,876	1,004,796	1,111,424

TABLE V.—EAST AFRICA PROTECTORATE: EXPORTS
(COUNTRIES OF DESTINATION), 1907-1916

PERCENTAGE OF TOTAL VALUE OF EXPORTS

Countries.	Year ended 31st March—									
	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
United Kingdom ..	13·3	20·4	22·2	32·4	36·8	40·3	40·8	46·3	59·8	67·9
British Possessions ..	15·1	15·5	18·9	13·5	8·9	10·3	11·6	8·0	8·1	16·1
Austria-Hungary ..	3·3	2·5	0·5	0·8	1·2	1·4	1·3	0·5	0·1	..
Belgium ..	1·3	5·8	7·9	0·4	0·7	1·0	1·0	2·0	0·6	..
France ..	12·8	12·0	15·3	14·0	11·7	14·3	19·1	14·0	7·8	2·6
Germany ..	13·3	16·0	10·7	12·8	19·2	14·6	9·7	14·8	10·1	..
U.S.A. ..	31·2	19·5	15·6	19·1	13·8	9·0	7·8	6·5	5·0	..
Italy ..	..	..	..	..	..	1·6	2·3	2·5	3·5	10·3
Other countries ..	9·7	8·3	8·9	7·0	7·7	7·5	6·4	5·4	5·0	3·1

TABLE VI.—EAST AFRICA PROTECTORATE: IMPORTS
(VARIETIES AND VALUES), 1912-1916

Articles.	Year ended 31st March—				
	1912.	1913.	1914.	1915.	1916.
Agricultural implements	£ 27,384	£ 35,419	£ 47,717	£ 21,132	£ 14,370
Arms and ammunition	19,151	27,396	27,253	11,902	6,668
Apparel, &c. ..	40,932	60,223	60,743	43,768	45,050
Building materials ..	52,603	124,089	134,148	65,996	46,028
Cotton piece-goods ..	394,715	522,331	570,598	269,244	451,022
Furniture ..	7,868	10,829	15,274	8,476	5,398
Grain and flour ..	100,903	115,437	130,092	147,452	113,202
Iron and steel wares ..	40,652	58,205	84,670	40,869	37,702
Kerosene oil ..	15,086	16,806	23,276	26,976	35,987
Machinery and parts ..	50,392	80,506	104,708	56,694	44,724
Provisions ..	76,878	95,600	128,307	140,430	159,848
Spirits and wines ..	33,293	51,162	57,866	64,988	97,340
Sugar ..	42,571	60,376	61,806	69,309	95,033
Tobacco ..	26,527	34,182	45,531	46,589	90,596
All other sorts ..	318,305	515,782	635,948	453,385	465,365
Total trade imports	1,247,260	1,808,343	2,147,937	1,469,210	1,708,333

**TABLE VII.—EAST AFRICA PROTECTORATE: IMPORTS
(COUNTRIES OF ORIGIN), 1907-1916**

PERCENTAGES OF TOTAL TRADE IMPORTS

Countries.	Year ended 31st March—									
	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
United Kingdom ..	40·1	41·2	37·5	34·8	36·0	41·3	40·0	42·3	43·4	40·06
British Possessions..	24·9	25·8	27·0	26·7	25·0	20·5	21·3	20·2	26·3	26·18
Austria-Hungary ..	2·8	2·7	2·4	3·7	2·7	2·2	1·7	3·1	3·9	0·43
France	1·5	2·3	2·0	2·1	1·8	1·3	1·4	1·4	1·6	1·80
Germany	7·0	7·9	7·6	10·2	10·5	9·6	8·7	9·0	4·7	0·65
Holland	5·0	6·1	6·0	5·3	6·7	6·3	5·7	4·7	3·9	7·49
U.S.A.	7·7	4·0	8·0	8·7	7·0	9·9	9·4	8·6	5·9	9·89
Italy	..	..	..	..	..	..	3·1	1·6	1·0	0·97
Other countries ..	11·0	10·0	9·5	8·5	10·3	8·9	8·7	9·1	9·3	12·53

**TABLE VIII.—ZANZIBAR PROTECTORATE: EXPORTS AND
IMPORTS, 1913**

EXPORTS

	£
Cloves	412,547
Clove-stems	16,146
Copra	216,842
Ghee	8,409
Groceries	23,820
Gum copal	8,390
Hides and skins	12,596
Ivory	39,857
Petroleum	20,359
Piece-goods	85,149
Rice	24,386
Soap	8,871
Specie	58,698
Other articles	112,796
Total	£1,048,866

IMPORTS

	£
1. For domestic use mainly :	
Bags and kandas	16,068
Beads	4,031
Beer, spirits, and wine	8,448
Cement and lime	5,766
Coal	29,156
Crockery and glassware	6,567
Dried fish	12,742
Grain and flour	56,275
Hardware	28,308
Live-stock	17,004
Machinery, motors, &c.	8,482
Rubber	5,813
Simsim	11,863
Sugar	31,143
Tea	7,702
Tobacco	19,666
2. For re-export, wholly or largely :	
Copra	46,240
Ghee	31,515
Groceries	38,656
Gum copal	5,859
Hides and skins	5,997
Ivory	34,273
Petroleum	16,455
Piece-goods	191,023
Rice	177,076
Soap	7,820
Specie	161,012
Other articles	118,887
Total	<u>£1,103,347</u>

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I. GEOGRAPHY PHYSICAL AND POLITICAL

BRITISH SOMALILAND

(1) POSITION AND FRONTIERS

BRITISH SOMALILAND, which has an area of about 58,000 square miles, lies between $11^{\circ} 27'$ and 8° north latitude and $42^{\circ} 35'$ and 49° east longitude. It is bounded on the north by the Gulf of Aden, and on all other sides by land. The great sea-routes leading from the Suez Canal to the East, to Australasia, and to East Africa pass close to its coast. Its land frontiers march with Italian Somaliland in the east and south-east, with Abyssinia in the south-west, and with French Somaliland in the west. Almost all its boundaries are artificial lines, which have not been demarcated. In the east the line follows the meridian of 49° east (a short distance east of Bandar Ziada) from the sea to its junction with 9° north latitude. From this point the line goes south-west to the intersection of 48° east longitude with the eighth parallel of north latitude, which it then follows as far as 47° east longitude. It then turns west-north-west to Arran Arrhe (about $9^{\circ} 4' N.$ and $43^{\circ} 53' E.$), whence it goes in a north-north-westerly direction to the mountain of Jifa Medir (about $9^{\circ} 42' N.$ and $43^{\circ} 15' E.$). Here it turns almost due north and runs for about ten miles to Mount Egu, next west-north-west for about the same distance along the Sau range, and then north-north-west *via* Biya Anot to Mount Somadu. From here it follows the caravan-route from Biya Kaboba to Zeila as far as Abaswein, and thence a straight line, passing a short distance west of Jallelo (about $10^{\circ} 59' N.$ and $43^{\circ} E.$),

to Loyi Ada on the Gulf of Aden. The seasonal migrations of the nomadic tribes compel some of them to cross and recross the south and south-west frontiers at least once a year, but in practice this custom occasions little trouble.

(2) SURFACE, COAST, AND RIVER SYSTEM

Surface

The southern part of the Protectorate consists of an elevated interior plateau, which rises gradually towards the north from an altitude of about 2,000 ft. to as much as 7,000 ft. This zone has an average width of about 35 miles in the west, 120 miles in the centre, and nearly 200 miles in the east. The northern scarp of the plateau descends, precipitously in most places, to the maritime zone, a strip of territory varying in width from about 60-30 miles in the west to about 2 miles or under in the east. The drainage of the maritime zone is towards the Gulf of Aden: that of the plateau zone is towards the Webi Shebeli in the west, and towards the Nogal and Darror rivers in the south-east and east, all of which drain to the Indian Ocean.

Maritime Zone.—The maritime zone consists in its northern part of the coastal plain, a sandy tract with some patches of alluvial soil, which are traversed by watercourses, generally dry, running from south to north. The plain slopes gradually upwards from the sea, rising to altitudes of 300-400 ft. at the foot of the mountains. It is bare in places, but for the most part is covered with coarse grasses and a sparse growth of stunted acacias and of *kidthi*, which furnish excellent browsing for camels and goats. In the alluvial patches there is as a rule a fairly dense growth of bushes and trees and also much land covered by the finer grasses, valuable for grazing. The width of the plain

is about 60 miles at Zeila, 30 miles at Harag Jid, and 7 miles at Berbera, while farther to the east it varies from 2 miles to a few hundred yards.

The maritime mountains reach an altitude of 4,500 ft. in the south, but are much lower in the north. In the west they are low table-topped plateaux of black igneous rocks, diorite, diabase, &c., bearing a scanty crop of low bushes and tufts of grass. The edges of these plateaux are precipices 30 ft. high, below which are steep slopes of débris running down to watercourses, whose banks are clothed with bush and tree vegetation. East of Bulhar the hills are principally parallel ridges of limestone, running east and west; but some ridges and isolated peaks are of metamorphic rock (granites, syenites, quartzites, &c.). Between the ridges are undulating plains, traversed by broad, flat, dry watercourses running northward, with banks on which grow reeds, *gurha* thorn-trees, *wabe* trees, and *hig*. As a rule the watersheds are stony and are studded with low mimosa-trees, but there are stretches of coarse grass. East of Berbera these limestone ridges form a confused mass of broken hills, traversed by numerous watercourses running from south to north, and intersected by small plains. Much of this area is covered with trees or grass. The mountains narrow as the interior plateau trends to the north until, at the western end of the Warsangeli Mountains (about 10° 42' N. and 47° E.), they form a narrow belt between the scarp of the interior plateau and the maritime plain. These eastern maritime mountains are undulating in the west, while farther to the east, towards the Italian frontier, they are very precipitous. They are traversed by numerous watercourses running from south to north, some of which, e. g. the Sabe and the Selid, are of considerable size and are believed to contain perennial running water in their upper reaches. West

of the Warsangeli Mountains the maritime hills vary in height from a few hundred feet to 4,000 ft. or more; in the Warsangeli country they vary from about 700 ft. to about 1,500 ft. In some parts of the latter region they are wooded, with stunted trees, mostly acacias, near the coast.

The western part of the maritime zone is known as the Guban, while that portion which lies south of the volcanic hills near Bulhar, east of about $43^{\circ} 30'$ east and roughly following the 10th parallel of north latitude, is called the Ogo-Guban, and borders on the Ogo, an important grazing district of the interior plateau. The Ogo-Guban is composed of a series of terraces falling to the north, and traversed by narrow valleys. Stretches of grass on black vegetable soil are scattered among forests of cedars, acacias, aloes, &c., and furnish extensive grazing grounds.

Interior Plateau.—The plateau zone is in general a limestone country, in which isolated peaks and ridges, as well as some stretches of plain, are composed of Archaean rocks, or of sandstone, conglomerates, or igneous rocks. As has been stated, this plateau rises gently from the south and terminates, in most places, in a great precipitous scarp descending to the north. In the west of this zone little more than the scarp lies in British territory, and this consists of broken, hilly country rising to altitudes of about 4,500 to 5,500 ft. Farther to the east, between the Ogo and the Ogo-Guban, the altitude is about 4,500 ft., while east of that again it rises to about 7,000 ft. in what is generally known as the Golis range, though it appears as a range of hills only when viewed from the north. East of the Golis the scarp is again lower, though farther east again it rises to about 7,000 ft. in the Warsangeli country. From the crest of the scarp the plateau, descending to the south, merges into the Haud plain, for the most part by a gentle slope.

The northern part of this plateau zone consists of great grazing areas, of which the most important are the Ogo, the northern stretches of the Nogal and Warsangeli plateaux, and the upper part of the Darror valley. All of these, except the last, are fairly well wooded with cedars, euphorbias, acacias of many species, figs, &c., interspersed with great well-watered plains of *dihe*, *daremo*, and other grasses. South of these areas, and merging with them, lies the great Haud plain, which extends far to the south, east, and west into Abyssinia and Italian Somaliland.

That part of the Haud which lies within the Protectorate varies in altitude from 2,000 ft. in the south to 4,000 or 5,000 ft. in the north. It is divided by the Nogal valley (which is generally known as the Nogal Plain) into the Northern, or Sorl, Haud and the Southern Haud, two approximately equal areas. The Nogal valley is a great limestone plain, some hundreds of feet lower in level than the Haud, which it crosses from near Burao to its south-east corner. It is watered by the Tug Der coming from the Ogo and by the Tug Darrero coming from the Warsangeli country, which unite to form the Nogal stream. The northern part of the plain forms a swamp in the rains, but furnishes excellent pasture afterwards. South of the swamp there is good grazing and some tree vegetation as far as about 47° E., south of which the country is arid and stony. The Northern Haud, comprising the southern parts of the Nogal and Warsangeli plateaux, is little known. It is believed to be an undulating limestone country, about 3,000 ft. in altitude, with many extensive, well-watered prairies. The Southern Haud is an undulating country, waterless after the first month of the dry season, but supplying very good grazing during the rains and browsing for camels at all times of the year.

Parts of it are sandy desert, but most of it is wooded with thorn-bush intersected with vast grass plains, such as the Marar prairie near Hargeisa.

Coast

The coast is about 400 miles in length. From Loyi Ada, on the frontier of French Somaliland, it runs in a south-easterly direction to Bulhar, about 90 miles, thence east for about 40 miles to Berbera, and then generally east-north-east for about 270 miles to Bandar Ziada, near the frontier of Italian Somaliland. In a few places the shore is rocky, and there are insignificant bays and headlands, but generally it consists of a low, sandy, unbroken beach. There are no large headlands or gulfs, and the whole coast is exposed to winds from the north, east, and west; it is also encumbered in many places by shoals and reefs. There are a few islands near Zeila, and one, Mait ($11^{\circ} 13' \text{ N.}$ and $47^{\circ} 13' \text{ E.}$), in the east, on which a considerable quantity of guano is collected for export.

River System

Rivers fall from the northern scarp of the interior plateau into the Gulf of Aden, and from its southern slopes into the Indian Ocean. They are all intermittent and are dry during the greater part of the year, although the upper reaches of some which flow from the Warsangeli Mountains to the Gulf of Aden are believed to contain perennial water. In times of flood many of the rivers have a great volume of water.

(3) CLIMATE

Very few meteorological observations have been made. The climate of the maritime zone is markedly

different from that of the interior plateau, but in both zones it is dry and healthy, although hot.

Maritime Zone.—Here the climatic conditions are governed by the north-east monsoon, which blows from November to March, and by the south-west monsoon, which blows from May to September. The north-east monsoon is somewhat erratic in November and December, but is steady from January to March inclusive. During these last three months there is no rain, and this is the healthiest time of the year. In November and December come the heaviest rains, which are said to fall usually in somewhat light showers, with occasional thunderstorm rain. The total annual rainfall is only 3–4 inches (75–100 mm.) on the coast and 10–20 inches (254–508 mm.) in the south. In January, the coldest month, the maximum and minimum shade temperatures recorded are 89° F. (31·5° C.) and 72° F. (22° C.) respectively. In February the temperature begins to rise, and in April sometimes reaches its maximum height. In this month, after the departure of the north-east monsoon, there are calms and, late in the month, the south-west monsoon is ushered in by light rains. During this monsoon there is no rain except some light showers in July and, in some years, in September. The south-west wind, the *karif*, blows furiously every day from midnight until 2 p.m. during July, August, and September, and is varied occasionally by a sea-breeze in the evening. May and September are said to be the hottest months; the highest recorded shade temperatures on the coast and in the interior of the maritime zone are 110° F. (43° C.) and 118° F. (48° C.) respectively, with corresponding minima of 80° F. (26·5° C.) and 82° F. (28° C.). October is a hot month with calms, very similar to April.

Interior Plateau.—The north-east monsoon does not

penetrate to this region, and there is dry weather from mid-October to mid-March, especially in the last three months. The south-west monsoon begins in April and lasts until the end of September. It blows with some strength throughout this period in the north part of the zone, while farther to the south it is hardly felt except in July and August, when it blows very strongly. Throughout the plateau zone there are thunderstorms in March and April, and occasionally in May and June. In the northern part the rains begin in July, and gradually increase in strength, becoming heaviest in September; farther to the south there are heavy rains in August only. The rainfall in the north is said to vary from 10 to 20 inches (254-508 mm.) a year, and in the south to be somewhat less. All through the year the maximum and minimum shade temperatures are respectively about 10° F. (6° C.) and 20° or 30° F. (11° C. or 17° C.) less than in the coast region, except in the extreme south, where they are about the same.

(4) SANITARY CONDITIONS

In the interior all seasons are equally healthy, and the climate is dry. The people are nomads, living entirely in the open air, eating comparatively little food, and abstaining entirely from alcohol. The struggle for life is so hard, however, that only the fittest survive. Cholera and dysentery, as well as malaria, are unknown, although in damp climates the Somali have been found to be very subject to malaria. On the other hand, owing to the scarcity of food, the nomad Somali show little power of resistance to disease and often fall victims to phthisis and pneumonia, of which many children die. Ophthalmia, skin diseases, and ulcers are common. African relapsing fever has been

reported from Hargeisa, but there seems to be some doubt about its identification. Epidemics of small-pox occurred in 1889, 1904-5, and 1911-12, but it is not known how far they extended into the interior; travellers do not mention this disease as being prevalent. Syphilis, which is common on the coast, is said to be penetrating inland. Wounds and fractures are treated with much success by the natives. The Ishak tribes are said to be more successful than the Darods in their use of medicines. In almost all diseases counter-irritation plays an important part in the treatment.

On the coast, where the climate is less healthy and diseases are imported from trading vessels, there is a good deal more sickness. The most unhealthy times of the year are May and September, the months immediately preceding and following the period of the hot-weather *karif* winds; the climate is at its best from November to February inclusive. Malaria, dysentery of a mild type, pneumonia, ulcers, and syphilis are the most common maladies. Cholera and beri-beri are both known, and epidemics of small-pox are not uncommon. Bubonic plague has not occurred. There are general hospitals at Berbera, Bulhar, and Zeila. The coast climate is not unhealthy for Europeans; they suffer chiefly from neurasthenia, general debility, and slight intermittent malaria.

(5) RACE AND LANGUAGE

The Somalis probably came from Yemen and displaced the Hamitic race of Gallas, amalgamating with them in the process. Anthropologically, at the present day, they are held to be Hamitic; culturally, they are Semitized to a noticeable extent.

They themselves claim that the Ajis, or upper classes, as distinct from the Sabs, or outcasts, consist of two

distinct races: the Asha tribes (who are subdivided into the Darods and the Ishaks) of Arab descent, and the Irir or Hawiya tribes of Galla descent. The Sab tribes, the Tomals, the Yebirs, and the Midgans, are a distinct race from the Somalis and are believed to be of Galla stock, although some hold that the Tomals are descended from Darod tribesmen who married Midgan women.

The Somalis of the Protectorate are surrounded by people of their own kindred, except where they come into contact with the Gallas of Abyssinia, who live in the Harrar Hills. The Sab tribes are scattered among them and are not confined to definite areas.

The Somali language is akin to the Galla tongue. It is not written, even the few educated Somalis writing in Arabic only. The Sab tribes all speak Somali, but the Midgans and Yebirs each have a language of their own, which they keep secret and about which very little is known.

(6) POPULATION

The great majority of the population being nomad, there are few towns and villages. Of the coast towns only Zeila, Bulhar, and Berbera are of any importance. There are a number of villages along the Warsangeli coast, where the tribes are more settled than elsewhere. In the interior there are about half a dozen priests' villages, of which Hargeisa (population about 2,000) is the most important.

No census has ever been taken, except of the foreigners in the three principal coast towns. In 1911, excluding Europeans and the army of occupation, these numbered less than 3,400. The native population is estimated to be 300,000, that is, about five per square mile. In the three principal coast towns there is a floating population of Somalis who come to trade during

the winter. Their numbers, in the hot and the cold seasons respectively, are estimated as follows: at Berbera, 8,000 or 10,000 and 25,000 or 30,000; at Zeila, 5,000 and 7,000; at Bulhar, a few hundreds and 10,000.

As the Somalis are shepherds and inhabit a country in which the grazing conditions compel them to move their flocks according to the seasons of the year, there is a constant and regular coming and going of the tribes (such as the Aysa Musas and the Habr Gerhajis) from north to south and vice versa. Some (e. g. the Habr Awals) even cross the frontiers into Italian and Abyssinian territories, while others (e. g. the Ogaden) come north from these regions. Migrations of this sort occur all over the country, and each tribe has one strip of country (the whole of which is not necessarily in British territory) which it shares with one or more other tribes. The perpetuation of this state of affairs is assured by treaty with neighbouring Powers, and the tribes jealously assert and defend their rights under it.

In the absence of census statistics nothing is known about the increase or decrease of the population. In 1906 it was surmised that, owing to the peaceful state of the country, the population was increasing, and it may be that on account of the recent unrest it has since decreased. It is certain that the hard life led by the Somalis leads to the death of many children, and it is probable that, even under peaceful conditions, the population can increase but slowly.

SOKOTRA

(1) POSITION

SOKOTRA is the most easterly, and by far the largest, of a group of four islands,¹ under British protection, which lie in the Indian Ocean to the east-north-east of Cape Guardafui. These islands command the ocean trade-route from the Suez Canal to the East and to Australasia.

Sokotra is about 130 miles from Cape Guardafui and about 190 miles south-south-east of Ras Fartak, the nearest point on the Arabian coast. It lies between $12^{\circ} 19'$ and $12^{\circ} 42'$ north latitude and $53^{\circ} 20'$ and $54^{\circ} 30'$ east longitude. It has an extreme length from east to west of about 71 miles, an extreme breadth from north to south of about 22 miles, and an area of about 1,250 square miles.

(2) SURFACE AND COAST

Surface

The greater part of the main island consists of a stony, arid, undulating limestone plateau, with an average altitude of about 1,200 ft. The plateau ends in abrupt cliffs falling in some places to the sea, and elsewhere to diluvial plains, with a length varying from 1 to 50 miles and a width of as much as 5 miles from the sea-shore. The plateau rises to Mount Haghier, a broad ridge of granitic rock, fertile and well-watered, situated on the north side of the island, east of its centre. The ridge is some 20 miles long from east to west and 10 miles broad, with an extreme altitude of about 4,900 ft.

¹ For the other islands see below, p. 18.

Its crest is a line of jagged peaks, from which the ridge descends precipitously in numerous spurs towards the north coast, and more gently towards the south, where it merges into the limestone plateau. In the east the slopes are somewhat steep, while in the west they are easy. The upper part of the ridge is bare; lower down, it is wooded and intersected with rich pasture lands. It forms the water-parting of the eastern half of the island, and numerous perennial streams descend from it. On the north side there are three main streams, all flowing in deep channels. Of these the Wadi Dilal, the most westerly, enters the Bay of Tamarida, while the Wadi Iheli and the Wadi Diberni reach the sea farther east.

The limestone plateau covers all the rest of the island except three points in the west and one in the east, where there are outcrops of granitic rock and narrow belts of chalk formation. It has an undulating surface, several of the slopes, such as Jebel Shaab in the west and Jebel Muni and Jebel Felink in the east, rising 1,000 ft. or more above the neighbouring surface. Moreover, it is cut up by a complicated system of narrow ravines with steep sides. Its eastern part is traversed by the perennial streams descending the southern slopes of Mount Haghier. Of these the most important, named from east to west, are the western branch of the Wadi Felink, the Wadi Arkas, the Wadi Faierho, the Wadi Aserho, and the Wadi Dihazhaz, all flowing in wide fertile valleys. East of these lies the eastern branch of the Wadi Felink, and west of them the Wadi Irek, a long watercourse, both of which flow through limestone country and are not perennial. West of the Wadi Irek, in the western half of the island, the water-parting lies near the south coast, and one main watercourse, the Wadi Ried, with numerous branches, drains the whole country to the

north. There are also three minor watercourses which drain to the west. None of these are perennial. The whole of the limestone country is stony and arid, containing a few stunted trees and bushes and some poor grazing grounds.

The coastal plains consist of sand, gravel, and boulders. They are traversed by shallow watercourses, dry except during the rains, and most of them contain shallow lagoons of fresh or brackish water, some of which are surrounded by date-palms and some by mangrove trees. Their vegetation is scanty. During the rains there is a fair growth of grass, suitable for grazing, but this dries up and leaves only stunted bushes and herbs. The largest of the coastal plains is the Naukad, which extends for nearly 50 miles along the centre of the south coast and averages about 3 miles in width; much of its surface, especially in the west, is covered with drifting sand-dunes. Other important plains exist at Kalansiya on the west coast, and at Ghubbet Kurmeh and Tamarida Bay on the north coast. Ghubbet Kurmeh is more than 20 miles in length and about 2 miles in average width, while the Tamarida plain is 4 or 5 miles long and 3 or 4 miles wide.

Speaking generally, the Mount Haghier ridge and the eastern half of the island are fertile and wooded, and produce good pasturage. The rest of the island is more or less desolate, except at a few places such as Kalansiya.

Coast

The coast-line is over 180 miles in length. It consists of the plains already described, and of bold, rugged cliffs, whose altitude varies from about 200 ft. to over 1,900 ft. There are neither gulfs, estuaries, nor harbours. The south coast is almost unbroken, but

on the north and west coasts there are several small bays and headlands. The most important bays are the Ghubbet Shaab and the Ghubbet Kalansiya on the west, and the Ghubbet Kurmeh and Tamarida Bay on the north ; on the south the only bays are the Ghubbet Neh in the west and Bandar Assal in the east.

(3) CLIMATE

No regular meteorological observations are available. What little is known about the climate is gathered from native reports, from general knowledge of the region, and from isolated facts collected by explorers. In common with the rest of this region the climate of Sokotra is governed by the north-east and the south-west monsoons, of which the first blows, approximately, in November, December, and January, and the second in June, July, and August. Both seasons are believed to be rainy, and although one traveller was told by natives that there was no rain from November until June, it seems that most rain falls during the winter months. It is generally admitted that the driest season is from February to May inclusive. The existence of many perennial streams flowing from Mount Haghier suggests that the rainfall is considerable. During the winter there are heavy mists on Mount Haghier. On the north coast the wind blows in violent gusts during both monsoons (especially the north-east) ; in the south-west monsoon it is steady and less violent on the south coast. The temperature is said to be more equable than in the neighbouring coastal region. The cool season lasts from October to March inclusive, January and February being the coolest months. From the few readings of the thermometer which have been recorded it appears that the shade temperature in the plains rises to about 70° F. (21° C.) during

the cool months, and is about 10° F. (5.5° C.) higher in April and May ; in the hills it is said to be about 9° F. (5° C.) cooler than in the plains.

(4) SANITARY CONDITIONS

The island is said to be healthy, but there is a certain amount of malarial fever in the coastal plain of Tamarida. It is thought that the chief ailments of the natives arise from gastric troubles. It is stated by one authority that the natives make no use of plants for medicinal purposes, and that the remedy they employ chiefly is cauterization with a hot iron.

(5) RACE AND LANGUAGE

Not much is known about the racial affinities of the Sokotrans. The inhabitants of the coastal region are described as of mixed Arab, Indian, and African blood, while the interior is occupied by Bedous (Bedouin), who are considered to be of three different races. The Karshin, who occupy the western end of the island, claim Portuguese descent ; the Momis, at the eastern end, claim Abyssinian descent ; and the Kamhanes, in the Mount Haghier region, say that they are a mixture of the aboriginal inhabitants with Mahra Arabs. The Arabs say that the Sokotrans have Greek blood, and this is probably true. One authority distinguishes three different types among the Bedous. The first class are tall, broad-shouldered, with stout limbs and lean flanks, thin lips, and straight hair ; the second are shorter in build, with round heads, thick lips, and curly hair ; the third are of Semitic type, with lean limbs, small heads, long noses, thick lips, and straight hair.

The language of the Bedous, which is not written, is believed to be derived from that of the Mahra country

in southern Arabia, but has become so differentiated that the two peoples can scarcely understand one another. Sokotri has been less influenced by Arabic than has Mahri. Apparently the coastal inhabitants use the Sokotri language, but some of them speak Arabic, which is unknown to the Bedous.

(6) POPULATION

Estimates of the population of Sokotra range from 4,000 to 12,000. The Bedous live in their villages only for the latter half of the year, while the coastal inhabitants live in theirs all the year round. All the villages are small, consisting of from 5 to 10 houses; in many cases they are surrounded by groves of date-palms. They are much scattered in the more densely populated parts, those of the Bedous lying in the lower valleys of the eastern half of the island, and of the others along the northern and western coasts. One traveller was told that there were 400 villages in all, but this number is probably too high. There are three towns, two of which, Tamarida and Kadhup, are situated on the north coast between Ras Haulaf and Ras Taab, while the third, Kalansiya, is on the west coast. At Tamarida, where the Sultan has a palace, the population is estimated at 400; at the other two towns it is said to be smaller.

Nothing whatever is known about the increase or decrease of the population, nor about the birth and death rates. There are signs of abandoned cultivation in parts of the island, and it may be inferred that the population used to be more numerous than it now is. Unquestionably the island could support more inhabitants.

ISLANDS OF ABD EL-KURI AND THE BROTHERS

Of the other three islands off Cape Guardafui Abd el-Kuri, the most westerly, is about 20 miles long and $3\frac{1}{2}$ miles wide at its widest part, while the other two, known as The Brothers (Darzi and Samneh), are respectively 3 miles and $6\frac{1}{2}$ miles in length and 1 mile and 3 miles in width.

The Brothers are uninhabited, but a few people, who speak the Sokotri tongue, live on Abd el-Kuri. This island, of which very little is known, is composed of Archaean rocks, capped with limestone. It is hilly (the altitude of the highest point being about 1,600 ft.), absolutely uncultivated, and almost bare of vegetation; it contains very little water. The people, who have a considerable strain of negro blood, live chiefly on fish, molluscs, and turtle; they are said to obtain rice and dates from Arab traders by barter.

II. POLITICAL HISTORY

BRITISH SOMALILAND

CHRONOLOGICAL SUMMARY

1840	Treaty with rulers of Tajura and Zeila.
1877	Conditional recognition of Egyptian jurisdiction in Somaliland.
1884-7	British Protectorate established.
1885	French Protectorate of Gulf of Tajura.
1889	Italian Somaliland delimited.
1897	Boundary with Abyssinia delimited.
1901-15	Wars with the Mullah.
1910	Withdrawal to coast.
1915	Interior reoccupied.

HISTORY

THE Protectorate owes its origin to the capture and occupation of Aden by the authority of the Bombay Government in 1839. In the following year the East India Company made treaties with the Sultan of Tajura (now in French Somaliland) and the Governor of Zeila, binding each of them, in effect, not to enter into treaty relations with other Powers, and securing the cession of small islands off these two harbours. On September 7, 1877, an agreement was concluded between the British and Egyptian Governments, which recognized Egyptian jurisdiction on the Somali coast, subject to the following condition, embodied in Article V:

The present Agreement shall definitely come into operation so soon as His Imperial Majesty the Sultan shall have given a formal assurance to Her Majesty's Government that no portion of the territory of the Somali coast, a territory which, together with all other countries incorporated with Egypt

and forming an integral part of the Empire, shall be recognized by His Imperial Majesty as a dependency of Egypt, or of the countries placed under His Highness' hereditary rule, be ceded on any pretence whatever to a foreign Power.

This assurance was never given, and the agreement remained inoperative. The Egyptian Government, however, exercised *de facto* jurisdiction over the whole Somali coast till 1884, when, in consequence of the collapse of Egyptian authority in the Sudan, it was decided that the Egyptians should retire from the whole of the coast, between the Straits of Bab-el-Mandeb and Ras Hafun, on the Indian Ocean, south of Cape Guardafui. In communicating this decision to the Turkish Government, Lord Granville drew a clear distinction in political status between (1) the coast from the Straits of Bab-el-Mandeb eastward as far as and including Zeila, over which Turkish sovereignty, though never formally admitted by the British Government, had not been practically disputed, and (2) the coast between Zeila and Ras Hafun, where Turkish claims to sovereignty had been repeatedly denied by the British Government. He intimated that, if the Turkish Government was prepared, on the withdrawal of the Egyptians, to maintain its authority over Tajura and Zeila, its rule would be recognized by the British Government as far as and including Zeila; eastward of Zeila, and especially at Berbera, which was the source of the chief supplies of Aden, the British Government would take its own measures for the preservation of order and the security of British interests.¹ As Turkey took no action beyond protesting that Berbera was unquestionably under Turkish sovereignty, troops were sent from Aden to Zeila. Between 1884 and 1886 treaties were made with the Somali tribes from Zeila eastwards, placing them under British

¹ See *State Papers*, 1884-5, vol. 76, pp. 674-84.

protection, and on July 20, 1887, the Powers were officially notified, in accordance with the terms of the General Act of the Berlin Conference, that a British Protectorate had been established on this Somali coast, from Ras Jibuti on the southern coast of the Bay of Tajura to Bandar Ziada. .

The French, in March 1862, had bought Obok in the Bay of Tajura from the Danakil chiefs ; but they took no steps in the direction of occupation and exercise of sovereignty before 1883. In September 1884, the Sultan of Tajura ceded his country to France ; and Great Britain, when officially notified by the French Government in February 1885, took no exception. The old treaty of 1840 was thus allowed to become obsolete ; and by an exchange of notes on February 2-9, 1888, the French and British Governments agreed upon a boundary line between their Protectorates. By this agreement, which remains in force, the western frontier of the British Protectorate, as defined in 1887, was withdrawn from Ras Jibuti to Loyi Ada.

In 1889 the Italian Somaliland Protectorate or Protectorates came into existence, and were duly notified to the British Government. The boundary between the Italian and the British spheres of influence was drawn by an agreement of May 5, 1894, the Horn of Africa being included in the Italian Protectorate. Finally, the boundary between Abyssinia and British Somaliland was settled by treaty of May 14, 1897, with annexe of June 4, 1897.

About the end of the century a local Mahdi, known as the Mullah, appeared in the interior of the Protectorate and began to preach a Holy War, directed as much against the Abyssinians as against the British. In 1901 he was attacked both by the Abyssinians and by Somali levies under the British Consul-General or Commissioner, Col. Swayne, and was driven out of the

British into the Italian sphere. In 1902 he reappeared, and an indecisive fight took place in Italian territory, the Somali levies having been by this time strengthened by a battalion of the King's African Rifles. In 1903 there were further operations, in which Indian troops and some British and Boer mounted infantry took part, under the command of Brigadier-General Manning (now Sir William Manning), the Abyssinians also co-operating. There was some heavy fighting; one small detachment on the British side was annihilated, and another severely checked and forced to retreat. Further reinforcements were then sent. General Sir C. Egerton took command, and in January 1904 the dervishes were heavily defeated. European prestige being thus vindicated, the Italian Government on March 5, 1905, made an agreement with the Mullah, giving him and his following a fixed residence in Italian territory in touch with the sea, and embodying peace between him and the British, who allowed him the use of certain grazing grounds within their territory. This agreement was supplemented by another signed by representatives of the British Commissioner and the Mullah at Berbera on March 24, 1905, by an exchange of notes between the British and Italian Governments on April 12–May 26, 1905, and by a further exchange of notes between the two Governments on March 19, 1907.¹ In 1908 the Mullah became restive again; in 1909 it was found necessary to bring reinforcements into the Protectorate; and in 1910, in view of the constant expense caused by interminable raids and counter-raids, the British Government decided to withdraw from the interior to the coast—a policy which was strongly criticized in Parliament. The withdrawal led to intertribal fighting among the friendly tribes, and to encroachments by the Mullah.

¹ See Hertslet's *Map of Africa by Treaty*, ed. 1909, vol. iii, pp. 961–3 and 1120–2.

In 1912 a small corps of camel constabulary was raised, which in August 1913 suffered a severe reverse at the hands of the dervishes, the commander being killed. The military force of the Protectorate was then strengthened, and in November 1914 and February 1915 the dervishes were driven out of strongholds which they had occupied and heavily defeated. Writing on September 8, 1915, the Commissioner reported :

With the military occupation of the interior a complete transformation has been brought about in the internal condition of the country, and peace amongst the various friendly tribes within the protected area has been well established.¹

Fresh recrudescence of trouble in 1919 led to a decisive defeat of the Mullah early in 1920.

SOKOTRA

The island of Sokotra seems to have been better known in classical and mediaeval times, or at least to have had more history, than is the case to-day. It was in past times a centre of piracy; its connexion has always been with Arabia; and it is now in effect a dependency of Aden. The suzerain or owner of the island, the Sultan of Kishn or Keshin in Arabia, was in 1876 bound over by the Indian Government not to enter into relations with regard to the island with any foreign Power without the consent of Great Britain; and on April 23, 1886, he signed a treaty, formally placing the island under British protection.

¹ *Colonial Reports (Annual)*, No. 867, October 1915, p. 16.

III. SOCIAL AND POLITICAL CONDITIONS

BRITISH SOMALILAND

(1) RELIGIOUS

IN religion the Somalis are Sunni Mohammedans. Most of the Darod tribes of the Ashas belong to the Saleh sect, while most of the Ishaks are Shafi'i. Although fanatical, the people in the interior are not very strict in their religious observances, and they probably would be even less strict were it not for the visits they receive from wandering mullahs. On the coast the tribes are less lax, probably owing partly to their being less nomadic than those of the interior, and also by reason of their intercourse with Arabia. All the Sab tribes claim to be Mohammedans, and the Yebirs are strict in their observances; there is some doubt about the orthodoxy of the Midgans, but this seems to be unfounded.

(2) POLITICAL

The British Protectorate started as a dependency of Aden; and with Aden it has always been specially connected. Down to 1898 the government was in charge of the Resident at Aden, under the Bombay Government and therefore under the India Office. In that year it was transferred to the charge of the Foreign Office, and in 1905 to that of the Colonial Office. An Order in Council of October 7, 1899, established a system of jurisdiction for the Protectorate based on the Indian Codes.¹ By a later Order in Council of

¹ An earlier Order in Council of December 13, 1889, was repealed by one of January 11, 1900.

June 23, 1904, a Commissioner was substituted for a Consul-General as the chief authority in the Protectorate; and by a further Order in Council of January 8, 1906, it was provided that

The Commissioner may make Ordinances for the administration of Justice, the raising of revenue, and generally for the peace, order, and good government of all persons in the Protectorate.

The Commissioner was by this time acting under the Secretary of State for the Colonies, and under his authority and control he remains the lawgiver of the Protectorate, as well as the head of the administration.

It is satisfactory to note that the report on British Somaliland for the year 1916-17 can state that

The continued loyalty of the friendly Somalis, despite disturbing outside influences, the cessation of internal fighting within our sphere, the security of the caravan routes, the diminution of crimes of violence in the interior, the favourable trade conditions, and the resulting increase in Government revenue, are all sure indications of a more settled form of administration.¹

• (3) EDUCATIONAL

There are three Government native schools—one at each of the coast towns of Berbera, Bulhar, and Zeila—where a few Somali children are taught, together with the children of Indian and Arab traders.

¹ Somaliland Report for 1916-17, *Colonial Reports (Annual)*, No. 944, December 1917, p. 8.

IV. ECONOMIC CONDITIONS

BRITISH SOMALILAND

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) Roads

THERE are no roads in British Somaliland in the European sense of the word. The only road which can be considered suitable for wheeled traffic was constructed during the operations against the Mullah in 1902-4, and runs from Berbera to Bihendula and on through the Sheikh Pass to Burao and Kirrit. From the pass there are two branches, one to Wadamago and the other to Bohotle. This is a very rough military road and in parts the going is very heavy.

Roads fit for wheeled traffic could be constructed on the maritime plain at no very great expense; farther inland they would probably become impassable during the wet season. The caravan routes from the interior are merely tracks, scarcely defined except through the bush country. Pack camels, however, afford such a plentiful and cheap means of transit that the want of roads is little felt.

(b) Railways

A railway has been projected and surveyed between Berbera and Harrar (276 miles), with a branch line from Argan to Burao (97 miles).

(2) EXTERNAL

(a) *Ports*

British Somaliland possesses in Berbera the only sheltered anchorage on the south side of the Gulf of Aden. The harbour lies within a low sandy spit extending westward for nearly $1\frac{1}{2}$ miles, and affords complete shelter from all but westerly winds. The Aden mail-boats and buggalows come alongside the pier off the European town, and ships of 2,000 to 3,000 tons can approach within 250 yds. in 30 ft. of water. At the head of the pier there is a depth of 10 ft. of water at high tide. The water-supply, which is slightly brackish, is brought in pipes from Dubar, 8 miles from the town. It is laid on to the pier, where there is a delivery of 237 gallons per hour, and to tanks in the town with a capacity of over 19,000 cubic feet.

Zeila and Bulhar are both very exposed ports. Large steamers have to anchor off them at some distance and trust to small coasting boats for loading or discharging cargo. During the south-west monsoons landing is difficult and sometimes impossible. Both places are very inadequately supplied with water.

(b) *Shipping*

The number of steamers which entered the ports of British Somaliland during the year 1914-15 was 263, with a tonnage of 70,000. The number of sailing vessels (native-owned dhows) was 1,340, with a tonnage of 18,000. The number of ships cleared would be about the same. Considerably more than half the tonnage entered the port of Berbera. The great majority of the ships were of British nationality.

The coasting trade between Aden and East African ports entirely ceases during the south-west monsoon

from July to September, but throughout the year dhows from Berbera and the western ports of British Somaliland maintain a desultory trade.

(B) INDUSTRY

(1) LABOUR

As the physical conditions of the country are suited to pastoral pursuits rather than to agriculture, the people are mostly shepherds and therefore have had no opportunity for economic development. By some they are held to be lazy, but this opinion seems to be based only on the fact that they allow their women to work for them. When employed at the fibre factory which was established a few years ago, they proved themselves to be capable and energetic. As stokers on steamships they are found to be very useful, and fairly easy to manage. An authority who knows them well says that they are energetic and adaptable. They appear to be capable of considerable economic development.

Returns kept at the three chief coast towns show that there are about 3,000 emigrants from the country each year, and the same number of immigrants. These figures probably refer to natives who go to work at Aden and elsewhere, or to seek employment on steamers and trading dhows, returning to their homes after a comparatively brief absence. There is no permanent or considerable movement of people either outwards or inwards.

(2) AGRICULTURE

(a) *Products of Commercial Value*

Agricultural products may be said at present to be quite insignificant. For his grain food, as well as for rice and dates, the Somali depends largely upon imports.

The following suggestions have been made by competent authorities as to the possible development of the country.

Coffee.—It is suggested that the Golis range of mountains offers excellent prospects for the cultivation of coffee, the conditions being somewhat similar to those existing in the Harrar province of Abyssinia, which produces some of the finest coffee in the world.

Date-palms.—There are said to be very good prospects for the cultivation of the date-palm on the coast; this matter has been already taken in hand by the Government of the Protectorate.

Fibre.—The country produces various types of fibre, but the only one which seems to offer any commercial prospects is that known as *Sansevieria Ehrenbergii*. This fibre has always been used by the Somalis in the manufacture of their camel ropes. Even when cleaned by hand, after the rough and ready native methods, it fetches a good price on the London market. It is classed with the best sisal hemp, and when properly cleaned should command from £34 to £35 per ton. The plant is very common throughout the country and the supply is practically unlimited. An attempt has already been made to exploit it, but owing to the trouble in the interior, the project had to be abandoned.

Forest Products.—Myrrh is obtained from the *didin* tree (*Balsamodendron myrrha*), which is found in the eastern part of the coast region and also in the Warsangeli country and southwards thereof. There are two kinds of frankincense, *loban dakar*, which comes from the *mohar* (*Boswellia Carteri*), a tree common in the maritime mountains south of Berbera and in the Warsangeli and Mijjerten countries, and *loban maidi*, which is obtained from the *yehar* tree (*Boswellia Frereana*), found in the north-east of the country. The

wood of the *deyib* (*Juniperus procera*), a large cedar, is suitable for making lead pencils; the tree is specially abundant on the top of the scarp of the interior plateau.

Tobacco.—It is said that tobacco grows well both on the coast and in the interior. The locality most suitable for its growth would probably be the foothills of the Golis range.

Live-stock.—The great bulk of the wealth of Somaliland consists in live-stock belonging to the natives. There is good grazing in most parts of the country. The camel is by far the most important domestic animal. It is kept mainly for its milk, which is a principal food of the Somalis; and its flesh, which is highly esteemed by the natives, is occasionally eaten. The Somali camel is an excellent beast of burden; it can carry a load of 300 lb. for several successive days, travelling nine hours a day. The natives never ride their camels, though they would make good mounts.

There are considerable herds of cattle, which are confined to the Golis range and the neighbouring hills. They are of the small-horned or hornless zebu variety, and give fair milk, but are not nearly such fine animals as the Abyssinian breed. They are kept to provide the *ghee*, or clarified butter, which is consumed in considerable quantities by the inhabitants of the coastal region. Live animals and *ghee* are exported to Aden, and hides are sent to the United States of America. In some years lack of water and of fodder during the dry season causes a good deal of mortality from starvation among the cattle. In all years this disability reduces the animals to poor condition, and on this account they will never be able to compete in the production of meat with the Arussi cattle of Abyssinia.

Sheep are of the black-faced, fat-tailed variety, and

constitute the chief food of the Somalis. They are also exported in considerable quantities for the use of the Aden garrison. They have little wool and are never shorn, but their skins, being thin, fetch a good price on the American market for glove manufacture.

Along with every flock of sheep a few goats are found ; they give poor milk, and are of no particular value, although their flesh is eaten when mutton is not available. There is also a trade in goatskins, which are exported for the manufacture of glacé kid shoes and for book-binding.

There are large numbers of hardy small ponies, especially in the east, but their numbers are said to have been diminished greatly by the constant fighting since 1900. They are used solely for riding.

Ostriches are almost domesticated in the interior, but their feathers are less valuable than those from the Cape.

(b) Irrigation

Agriculture is usually said to offer poor prospects owing to the scantiness of the water-supply. It may, however, be pointed out that the country is by no means waterless ; numerous permanent springs exist, especially in the more mountainous parts, but as the water is only required for domestic needs it is commonly allowed to flow away and disappear beneath the surface. At Dubar in the maritime hills, hot springs exist, and the water from these, before it was required for the town of Berbera eight miles away, disappeared into the sand soon after it emerged from the rocks. To-day the water is collected in tanks and passed on in pipes to Berbera, where it supplies the entire population. In the same way the springs at Bi-hendula, Armaleh, Daraas, Shamahelah, Upper Sheikh, and Harawa in the Gadabirsi country, to mention

only a few, might easily be utilized, and at no very great cost. In localities less favoured, dams could be made, especially in stock-raising areas such as the Arori and Toyo plains, and the great plains in the west and the Nogal valley. It is possible that with careful preservation and regulation of the existing water-supply, agricultural production, now virtually negligible, might attain considerable dimensions.

(3) MINERALS

As regards the mineralogy of the country very little is known.

Coal.—A sample of coal stated to have been obtained from a locality 53 miles east of Berbera and 30 miles south of Karam was submitted to the Imperial Institute for examination. They reported as follows: 'If the specimen now reported on is fairly representative of the coal obtainable from this deposit, the latter can be of no immediate value except for local use, as the coal could not compete even in the nearer Mediterranean and East African markets with better coal available from other sources. The deposit may, however, be of great economic value to Somaliland later on, and should be thoroughly examined.'

Gold.—Statements are to be met with, especially in older accounts of the country, to the effect that gold-fields exist in British Somaliland. It has been suggested that the gold-producing district, known to the ancient Ethiopian Empire as Sasu, may be located in the north-east corner of Somaliland, stretching southwards in the direction of Obbia in Italian Somaliland. Attempts have also been made to prove that the gold-bearing country known to the ancient Egyptians as Punt is identical with those parts of Somaliland. There is, however, no evidence of the existence of gold-fields in the country. The ranges of

the Somali hinterland are Archaean gneiss, schists, and granites, but, notwithstanding their resemblance to those of Egypt, they do not, so far as is known, furnish auriferous deposits. Recent expeditions into the interior of Italian Somaliland, such as those of Bricchetti and Robecchi, make no reference to modern gold-washings or even to gold occurrences. It is true that alluvial gold has been found in British Somaliland; but on the whole it seems unlikely that the country possesses any rich deposits of the mineral.

Oil.—The existence of mineral oil in the Protectorate has been investigated by the Colonial Office, whose expert reported that oil had been found about 28 miles south of Berbera. His report was considered to justify preliminary borings on a considerable scale.

Salt.—It is stated that the salt-pans which exist behind the town of Karam can be worked at a profit. The exact commercial prospects of the undertaking are, however, not ascertainable at present. Samples of salt from various parts of Somaliland have been submitted to the Imperial Institute for examination. It was reported that refined salt of good quality could be obtained therefrom.

Lithographic stone is found at Eilo, and apparently elsewhere also; limestone is widely distributed; gypsum is found at Kirrit and many other places; lead, silver, cinnabar, and talc are reported from the Warsangeli country. Natural hot springs are known to exist in various places, but their waters have not been analysed.

(C) COMMERCE

EXPORTS AND IMPORTS

The following table shows the value of the exports and imports (excluding specie) of British Somaliland for recent years :

	<i>Exports (rupees).</i>	<i>Imports (rupees).</i>
1913-14 . .	3,248,945	3,573,287
1914-15 . .	2,643,395	3,043,250
1915-16 . .	2,858,947	3,176,170

Exports to the United Kingdom in 1914 consisted of raw hides (£8,410) and sheep-skins (£3,752). The trade of the country consists chiefly in the export of skins to Aden, India, and the United States. Imports from the United Kingdom in 1914 amounted in value to £1,422.

The exports include sheep and goats, cattle, skins and hides, ghee, ostrich feathers, guano, pearls, gums and resin, fibre and coffee from Harrar, and small quantities of gold ingots from Abyssinia (£12,000 worth in 1913-14).

The principal imports are textiles, rice, dates, and sugar.

The value of the trade between Abyssinia and the ports of British Somaliland during the year 1913-14 amounted to nearly £62,000. This trade has suffered considerable diminution in the last few years owing partly to the unsatisfactory condition of political affairs in the interior. It is believed that with the restoration of order it will very soon revive, as it will always be cheaper for the Somali tribes of Abyssinia, and particularly the Ogaden, to transport their goods on their own camels to the coast than to send them by road *via* Jibuti.

(D) FINANCE

(1) PUBLIC FINANCE

The Protectorate does not pay its own way, though it is relatively not a very heavy charge on the Exchequer. The budget figures are as follows :

The revenue of the Protectorate from all sources for 1915-16 amounted to £29,270, representing a deficit of £4,567 on the estimate, but an increase of £5,439 as compared with the previous year. The customs dues are the main source of revenue ; they produced £26,021 in 1915-16. There is a 10 per cent. *ad valorem* import and export duty at Berbera and Bulhar. The parliamentary grant in aid for 1915-16 amounted to £89,000.

The expenditure of the 'Protectorate has been as follows :

	£
1913-14	68,646
1914-15	113,283
1915-16	124,467

It may be mentioned that the recent large increase is due to the strengthening of the military forces in the country.

There is no public debt.

(2) CURRENCY AND BANKING

The monetary unit in the Protectorate is the Indian rupee. The following Indian coins are also in circulation : pice, $\frac{1}{2}$ anna, 1, 2, 4, and 8 annas. The British sovereign is accepted at the coast, the rate of exchange being Rs. 15. The value of the coin in circulation is estimated at Rs. 6,000,000. Bank of England notes also circulate, being payable on demand without discount. There are no banks in the Protectorate, but

a private firm, Cowasji, Dinshaw Bros., accepts deposits from private individuals and cashes cheques drawn against them.

(3) INFLUENCE OF FOREIGN CAPITAL

There are seven trading houses established at Berbera and Bulhar—mostly Arab or Parsee firms—branches of houses in Aden. There are four trading houses in Zeila.

SOKOTRA

(A) MEANS OF COMMUNICATION

There are no harbours in Sokotra. Kalansiya, where boats call when there is occasion, has an apology for a harbour or roadstead, facing Africa, and more or less sheltered from the north-east monsoon. No steamship lines call at the island; communication with Africa and Arabia is maintained by numerous dhows and catamarans.

There are many rough tracks, most of them leading towards Tamarida. Carriage is by porters and camels. There is no telegraph.

(B) INDUSTRY

(1) NATIVE OCCUPATIONS

The only industries practised are the weaving of woollen cloth, some of which is exported, and the making by hand of rude unglazed pottery for local use. This work is performed by the women of the villages, without distinction of class, each household making its own pottery. The men are said to be lazy, but this opinion appears to be based on the fact that they do not cultivate more land, as they can provide themselves with a sufficiency of food and clothing without undertaking agricultural work. Fishing is their main occupation, but near their villages they do a little cultivation and some of them leave the island for trade purposes. According to one traveller, slaves are employed in fertilizing the palm-trees, but other authorities do not mention them and nothing further is known about them.

(2) AGRICULTURAL AND GENERAL RESOURCES

The inhabitants cultivate vegetables, millet, &c., round their own dwellings, but the only field crop grown is *bombe* (*Sorghum vulgare*). There appears, however, to be but little of this, and although in Sokotra the crop requires watering, in only one case has irrigation been known to have been employed. A little tobacco and cotton is grown in the plains. The date-palm is cultivated extensively along the lower courses of all the perennial streams, and on the shores of most of the freshwater lagoons. It is valued not only for its fruit, but also for its wood, leaves, and fibre, which can be used for roof-beams, ropes, and sleeping mats. Owing to the lack of suitable soil, the scanty rainfall, and the deep channels of the perennial streams, which would make it difficult to install irrigation works, there is little scope for extending cultivation.

In ancient times the wealth of Sokotra lay in its export of the various varieties of myrrh, frankincense, aloes, and dragon's blood gum. These are still valuable, but all can now be obtained elsewhere, and their export from Sokotra has practically ceased. There are many plants used locally for dyeing purposes.

The chief export from Sokotra is *ghee*, or clarified butter, which is of excellent quality and well known in the towns and villages of the Arabian and African coasts. Immense herds of cattle are therefore maintained on the island, especially at the eastern end. They are small shorthorns, without humps and with a deep dewlap, and are excellent milkers. There is much rich pasture-land towards the centre of the island. There are a good many small sheep, generally black, with poor fleeces. There are no mules, horses, or dogs. A few fowls of an inferior kind are kept.

The camels, to which reference has already been

made, are used as beasts of burden and also for milking. The breed is single-humped and probably Arabian in stock, but the animals are larger and finer than those of Arabia, and have developed a special faculty for hill-climbing. Even when laden they can use paths which in most countries would hardly be considered practicable for mules.

The forest resources of Sokotra, other than the gum-producing trees already referred to, are not considerable. The commonest tree is the euphorbia, and there is one species of box whose timber is reported to be valuable. The woods consist mainly of closely-growing shrubs and bushes, through which small trees are scattered, the crop being most dense in the valleys.

Nothing is known of any minerals of commercial utility.

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I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND FRONTIERS

The Anglo-Egyptian Sudan is a region of north-eastern Africa, lying approximately between 4° and 23° north latitude and $21^{\circ} 30'$ and 30° east longitude. It is bounded on the north by Egypt; on the east by the Red Sea, Eritrea, and Abyssinia; on the west and south-west by French Equatorial Africa; and on the south by Uganda and the Belgian Congo.

The country has (1918) a total approximate area of 1,024,000 square miles, and is divided into the following provinces:—

Halfa, on the Egyptian frontier, 112,300 square miles.

Berber, on the right bank of the Nile from the north-east frontier to Khartum, 98,600 square miles.

Red Sea, comprising the coastal mountains and plain, 27,200 square miles.

Dongola, west of the Nile, between Halfa and Kordofan, 124,300 square miles.

Khartum, at the junction of the White and Blue Niles, 4,600 square miles.

White Nile, comprising the river zone between 12° and $15^{\circ} 30'$ north latitude, 13,300 square miles.

Blue Nile, comprising the eastern Gezira and river zone to about 16° north latitude, 12,000 square miles.

Kordofan, the central region lying west of the White Nile and north of the Bahr el-Ghazal, 113,700 square miles.

Nuba Mountains, between southern Kordofan and Upper Nile, 32,200 square miles.

Kassala, on the eastern frontier between 13° and 17° 30' north latitude, 44,900 square miles.

Sennar, the region east of the White Nile between 9° and 14° north latitude, 38,700 square miles.

Upper Nile, comprising the river zone between 8° and 12° north latitude, 36,200 square miles.

Bahr el-Ghazal, between Kordofan and the southwestern frontier, west of the Nile, 114,100 square miles.

Sobat-Pibor,¹ between the Bahr el-Jebel and the Abyssinian frontier north of 6° north latitude, 24,400 square miles.

Mongalla,² between 6° north latitude and the Uganda frontier, 63,800 square miles.

Darfur, between Kordofan and French Equatorial Africa, 153,300 square miles.

A certain unity is given to this vast country by the upper and middle valley of the Nile, which traverses it from south to north, and forms a great natural line of communication over 2,000 miles in length, linking the region of the equatorial lakes with Egypt and the Mediterranean.

In the north, the boundary dividing the Sudan from Egypt, as agreed by the British and Egyptian Governments in 1899, runs from a point as yet undetermined in the Libyan Desert to the Wadi Gabgaba along the parallel of 22° north latitude. North of Wadi Halfa, however, a small enclave extends 20 miles north to Faras Island. East of Wadi Gabgaba the line is defined by a series of mountain summits as far as Bir Shalatein on the Red Sea coast (23° 10' N., 35° 35' E.).

The eastern frontier is formed by the Red Sea from Bir Shalatein to 18° north latitude. Thence the section between the Sudan and Eritrea runs in a general south-

¹ Strictly, this is a military district, not a province. It is announced (March, 1919) in Army Orders (Khartum) that the Upper Nile and Sobat-Pibor Districts are to be amalgamated and known as the Upper Nile and Pibor District; headquarters of the district to be at Akobo.

² Including the old Lado Enclave.

westerly direction to the confluence of the Baraka with the Dada, which is followed to its source at about 37° east longitude and 17° north latitude. Thence it runs generally south by Jebel Benefer ($16^{\circ} 30' N.$) to Jebel Anderaib ($15^{\circ} 14' N.$). Crossing the Wad Gash it then runs to the bend of the Setit opposite the mouth of the Khor Royan ($14^{\circ} 15' N.$).

From this point the frontier between the Sudan and Abyssinia runs south-south-west to the Atbara at Gallabat, thence south to Jebel Magbara, where it turns and runs west for 35 miles to the Rahad. From here it again runs south-south-west, crossing the Blue Nile near Bumbode. At $10^{\circ} 40'$ north latitude it turns north-west to Jebel Kashangaro and then again continues south by Jebel Gemi ($9^{\circ} N.$) to the Khor Jokau or Garre, which is followed to its confluence with the Baro. Thence the frontier is formed by the Baro, Pibor, Akobo, and Kaya south-south-east as far as a point 35° east and 6° north; thence it curves south-east by Wad Kibish to the Sanderson Gulf in the north-west of Lake Rudolf. The latter part of this line, from the junction of the Sobat and Pibor down to Lake Rudolf, is provisional only, and has not been ratified.

The southern frontier, dividing the Sudan from Uganda, runs west from a point on the Sanderson Gulf about $4^{\circ} 30'$ north for about 110 miles. It then runs in a generally south-western direction to Nimule on the Bahr el-Jebel. From Nimule, the boundary follows the west bank of the Bahr el-Jebel to the mouth of the Kaju River, which is followed to its source; it then runs to a point on the River Kaia which is as yet undetermined, and up the Kaia to the Nile-Congo watershed.

As defined by the Agreement of 1894, the western boundary, dividing the Sudan from the Belgian Congo, begins at this point, and runs north-west along the Nile-Congo water-parting to about 5° north latitude. From this point, where French Equatorial Africa succeeds the Belgian Congo as the western neighbour

of the Sudan, the boundary, as defined by the Anglo-French Agreement of March 1899,¹ and the supplementary convention of September 8, 1919, continues to follow the watershed to 11° north latitude. From 11° to 15° north latitude it runs to the junction of the Wadi Azum and the Wadi Kaja; follows the latter to the Wadi Azunga, which it follows to a point north of Jebel Kudri to be fixed by the Boundary Commission; then turns N.E., N. and N.W. to a point about half-way between the 15th and 16th parallels, where it turns due E. until it reaches long. 24°, which is the eastern limit of the French sphere; it then turns N. and follows that degree of longitude until its intersection with parallel 19° 30' of north latitude.

It will be seen that the frontiers dividing the Sudan from Egypt in the north and Uganda in the south are purely artificial, corresponding with neither racial nor geographical divisions; and their exact position is of little or no importance. The eastern frontier, on the other hand, is exposed to certain disadvantages, including that of leaving the head-waters of the great Nile affluents outside Sudan territory.

(2) SURFACE, COAST, AND RIVER SYSTEM

Surface

Such unity of character as the Sudan possesses is given to it by the Nile valley, which forms its chief natural feature. The country is best conceived as a great plain or shallow depression, extending north from the equatorial lakes to the Egyptian frontier, and comprising successive zones of swamp, steppe, and desert. This plain is bounded to the west by the hills of the Nile-Congo watershed and the highlands of Darfur (8,000–9,000 ft.), and to the east by the Abyssinian tableland and its continuation in the Red

¹ The actual wording of the Agreement is self-contradictory: see *Italian Libya*, No. 127 of this series (cf. also below, pp. 34, 35).

Sea range (6,000–8,000 ft.). From about the 12th parallel northwards, these hill-systems retreat further and further from the river, leaving a vast plain which increases in width from south to north, finally becoming continuous with the Sahara. Through this flow the Nile and its great tributaries, draining a total area of nearly three-quarters of a million square miles.

The country is best considered as falling into three divisions: the desert, the intermediate zone, and the tropical swamps and forests.

(1) The desert extends south from the Egyptian frontier to about the 18th parallel eastward of the Nile and the 16th westward of it. It is really an eastward extension of the Sahara, but is divided by the shallow valley of the Nile into the Libyan Desert to the west and the Nubian Desert to the east. The Libyan Desert, still imperfectly known, is a sandy uninhabitable waste, waterless except for the Nile and a few oases.

The Nubian Desert is a more rugged and rocky district with an average elevation of 1,500 to 3,000 ft. above sea-level, stretching from the Nile to the Red Sea mountains and bounded to the south by the Atbara-Port Sudan railway. East of the Halfa-Khartum railway, the desert is known as the Atbai. It is bounded to the east by the Red Sea range, a spur of the Abyssinian highlands averaging 6,000 to 7,000 ft. in height, which separates it from the coastal plain. From its centre a number of deeply-cut *khors* (see p. 100), often fertile and luxuriously wooded, and divided by ridges of rock and shale, run both to the Nile and to the Red Sea.

(2) South of the desert, a region consisting of Kordofan and Darfur on the west and the district between the Atbara-Port Sudan railway and the 12th parallel on the east forms a well-marked transitional zone. Northern and central Kordofan consist chiefly of undulating and badly-watered plains, sandy and arid in the north, moister and more fertile in the south. Northern and north-eastern Darfur are similar in character to southern Kordofan. In central Darfur

is the great volcanic massif of Jebel Marra (9,000 ft.). South and south-west of this the country is more fertile and better watered, while east of the Nile the soil is of a much richer type, being especially so near the frontier (Tokar, Kassala) and in the rich alluvial tracts of the Gezira between the Blue and White Niles. The so-called Isle of Meroe, between the Atbara, Blue Nile, and White Nile, exhibits all the varying features of the transitional zone, while in the Gezira the Sudan reaches its highest point of potential fertility.

(3) The tropical zone, between the 10th parallel and the Uganda frontier, consists of a wide and shallow depression, bordered to the west and south by the Dar Fertit hills, the plateau of the Nile-Congo watershed, and the mountains of the Uganda frontier, and to the east by the outlying south-westerly spurs of the Abyssinian highlands. The greater part is clothed with savannah, open forest, and bamboo jungle. The bottom of this basin, especially between the Bahr el-Ghazal and Bahr el-Jebel, is permanently waterlogged and forms a large swamp area. East of the Bahr el-Jebel, much of the Sobat-Pibor and Mongalla districts consists of marshy grass-land, forming a savannah swamp during the wet season, but parched and sterile in the dry months. On the Uganda border this gives place to a group of rugged granite mountains rising in the Imatong range to over 9,000 ft. in height. This region is still imperfectly known.

Coast

The coast line, from Bir Shalatein to Ras Kasar, is about 400 miles long. The only bays of importance are Dongonab or Dokhana (at about 21° N.) and Akik, north-west of Ras Kasar. The shores are low, and consist mainly of coral furrowed by numerous streams (*khors*). The coastal plain, varying in breadth from ten to twenty miles, rises gently to meet the well-defined foothills of the Red Sea range. Twenty-seven miles south of Suakin the mountains approach the

shore and then turn sharply to the south-west, bordering the wide and fertile plain of Tokar, which extends nearly to the Eritrean frontier.

Throughout its length the coast is fringed by coral reefs and shoals, offering considerable obstacles to navigation. The most important formation of the kind is the Suakin group, an archipelago of reefs, rocks, and islets extending from about $18^{\circ} 21'$ to $19^{\circ} 27'$ north latitude, at an average distance of ten miles from the shore. There is a deep, broad channel between this group and the mainland.

River System

With hardly any exception the whole Sudan is drained by the great system of the Nile and its tributaries. The waters of the White Nile have been called with justice the "life blood of the country." From Nimule, where these waters enter the Sudan, to Halfa, where they leave it, they have a course of over 2,000 miles, nearly the whole of which is navigable at all times of the year.

The Nile.

(a) *General Description.*—The Nile system consists of two elements: (i) the swamp-rivers of the south and south-west, i.e., the Bahr el-Jebel, Bahr el-Ghazal, and their tributaries, contributing a comparatively small but constant volume of water throughout the year; and (ii) the flood-rivers descending from the Abyssinian plateau—i.e., the Blue Nile, Atbara, and Sobat, which bring down a great volume of water after the rains, but little or none in the dry season.

The latter are by far the most important, and their fluctuations cause enormous changes in the character both of the main stream and of the country surrounding it.

(i) The Bahr el-Jebel, draining the equatorial lakes, and the Bahr el-Ghazal, fed by the network of

streams which descend from the Nile-Congo watershed and Dar Fertit hills, unite at Lake No ($9^{\circ} 30' N.$) to form the White Nile. They furnish practically the whole summer discharge of the Nile, but only one-twentieth during the flood period. At Lake No the Bahr el-Jebel discharges about 300 cubic metres per second at all seasons, the Bahr el-Ghazal only 12 to 30, whilst the White Nile at Khartum, above the Blue Nile confluence, discharges 300 cubic metres per second at the low-water period, but 1,600 to 1,800 at the top of the flood, this increase being chiefly provided by the Sobat, the most southerly of its great flood tributaries.

(ii) The most important of these flood tributaries is the Blue Nile (Bahr el-Azrak). This is the name given to the lower course of the Abbai, which drains practically the whole centre of the Abyssinian tableland. Issuing from Lake Tsana (5,770 ft. above sea-level), it flows for 535 miles through Abyssinia, receiving numerous tributaries. It enters the Sudan at Kiri ($35^{\circ} E.$, $11^{\circ} 12' N.$), and joins the main river at Khartum. A mere trickle in the winter, it becomes during the summer and autumn a swift torrent, bringing down an immense volume of water and silt from the Abyssinian tableland. Its maximum discharge at this time is 10,000 to 12,000 cubic metres per second, and it contributes a quantity of water and fertilising matter greatly exceeding that of all the other branches and tributaries of the Nile system. The difference between the flood and low-water levels is 20-23 ft.

The Atbara, which also rises in the neighbourhood of Lake Tsana, enters the Sudan at Gallabat and the Nile near El Damer. The river is only a succession of pools in winter; but it begins to rise in June, and by August discharges 3,000 cubic metres of water per second, heavily charged with silt. The Sobat River (Bahr el-Asfar, or Yellow River) is formed by the confluence of the Baro and its tributaries, draining the southern part of the Abyssinian plateau, with the Pibor and its tributaries, draining the plains and

swamps east of the Bahr el-Jebel. These two rivers unite on the Sudan-Abyssinian frontier, whence the Sobat flows north-west through alluvial plains to its junction with the White Nile, fifty-six miles above Kodok (Fashoda). The river discharges about 900 cubic metres per second at flood time in October, sinking to 45 in mid-April, before the rise begins. The Nile, swollen by all these tributaries, has, at Berber, a maximum discharge in full flood of 14,000 to 16,000 cubic metres per second.

Emerging from the northern end of Lake Albert, and flowing north, the Nile, here known as the Bahr el-Jebel (river of the mountains), enters the Sudan at Nimule. The reach between Lake Albert and the frontier being navigable, the Sudan Government has reserved a small enclave south of Nimule to act as a port of trans-shipment between Uganda and the Sudan. Four miles north of Nimule the river enters the Fola Rapids, and thence it continues with a turbulent course through rocks and rapids to Lado, where the Sudan plain is entered and the character of the river completely changes. From this point to Lake No (about 500 miles) it winds slowly among vast swamps, giving rise to a labyrinth of channels and lagoons, which change after every flood and make skilled pilotage essential. This is the so-called *sudd* area. Its full extent is unknown, since it has not been fully explored, but its area probably exceeds 35,000 square miles.

The word *sudd* ("block"), popularly applied to the Nilotic swamps, really belongs to the great masses of vegetation which break from them during the stormy season, under the combined influence of gale and flood, and drift into the lagoons and ultimately the river channel. This *sudd* consists chiefly of papyrus and reeds, with the soil in which their roots are embedded, and forms huge floating islands which ground when they reach a shallow and quickly root in the muddy bottom. Each fresh mass arriving is sucked underneath the first, until the whole becomes wedged

into a solid block, often having an under-water thickness of 15 or 20 ft. These blocks, which may be upwards of a mile in length, dam the main channel, cause the flooding of surrounding marshes, and prevent navigation. They constitute a great danger to shipping, as a steamer caught amongst them is exposed to the risk of being crushed, and is certain to be imprisoned for an indefinite period. Of recent years, however, supervision during the stormy season has kept the river open to traffic.

At a point about $7^{\circ} 12'$ north latitude the river throws off from the right bank a branch called the Bahr el-Zeraf (river of giraffes), really a relief channel for the floods when the main stream is blocked by *sudd*. The Zeraf runs through little-known and inaccessible swamps for over 200 miles, and rejoins the White Nile fifty miles below its confluence with the Bahr el-Ghazal.

The Bahr el-Ghazal joins the Bahr el-Jebel at the west end of Lake No ($9^{\circ} 29'$ N.), and on issuing from this lake the river, henceforth called the White Nile (Bahr el-Abiad) flows east for ninety-six miles in a sluggish stream, broken by many islands and backwaters, to the confluence of the Sobat ($9^{\circ} 20'$ N.). Thence to Omdurman (516 miles) it receives no more perennial affluents. The only obstacle to navigation on this long reach is the Abu Zeid ford (13° N.), where the water sometimes falls as low as 2 ft. At Khartum the combined stream of the White and Blue Niles is about three miles wide; and between this point and Halfa, after receiving the waters of the Atbara below El Damer ($17^{\circ} 32'$ N.), it attains its greatest volume. The Island of Argo, between Dongola and Kerma, is perhaps the most fertile spot in the Sudan.

The whole stretch of 946 miles between Khartum and the northern frontier is full of reefs and rapids, and contains five of the six great cataracts, which are caused by the volume of flood-water having eroded the bed of the river and brought to the surface numerous dykes and ridges of volcanic rock. Navigation here

is therefore dangerous, and in places impossible, and the greater part of the traffic goes by rail from Halfa to Abu Hamed or Khartum.

(b) *Floods*.—The floods, which are the most important feature of the Nile system, depend upon the rains of the Abyssinian tableland. The effect of these rains is first felt on the Sobat at the end of April, and on the Blue Nile and Atbara about a month later. The Bahr el-Jebel and Bahr el-Ghazal begin to rise about the same time, and the total effect on the Nile system is felt at Halfa about mid-June. The rise here attains its maximum about September 5, when the mean height is 7·94 metres, after which the river sinks gradually, the lowest reading, 1·40 metres, being obtained about June 1.

(c) *Cataracts*.—Between Khartum and Assuan (Aswan), a distance of 1,124 miles, there are 351 miles of broken water and rapids, commonly called the Cataracts. Full details with regard to these are given below (p. 75).

Other Rivers.

Two other rivers are the Gash and Baraka, both rising in the Eritrean highlands. The Gash, entering the Sudan between the mountains of Anderaib and Abu Gamal, passes Kassala, where the bed is 150 yards wide, and then spreads out and loses itself in the alluvial plain north of the town, which is fertilized by its silt. So, too, the Baraka, entering the plain of Tokar from the south, spreads out to form a delta, the waters of which seldom reach the Red Sea, but deposit a fan of rich alluvial soil. Both these rivers flow only between the beginning of July and the end of September, on an average 80 days in the year.

With the exception of comparatively small areas of open water, such as Lake No, in the *sudd* region, and Lake Abiad, in the Nuba Mountains province, there are no lakes in the Sudan.

(3) CLIMATE

The climatic conditions of the Sudan range from Saharan conditions in the north to equatorial conditions in the extreme south. North of Khartum the Nile valley and desert are practically rainless, though intermittent winter rains fall on the coast. Khartum itself has an annual mean of 4·76 in. (120 mm.); Suakin, on the coast, one of 7·95 in. (202 mm.). South of this region the summer rains begin, increasing (a) with decrease of latitude and (b) with the proximity of the Abyssinian plateau. The mean at El Obeid is 15 in. (381 mm.), at Roseires 28·34 in. (720 mm.), and at Kassala 12·60 in. (320 mm.). In the extreme south-east the climate is of the full equatorial type, with rains lasting from February or March to October or November, and falling with special heaviness in spring and late autumn. Kodok has a mean of 29·76 in. (755 mm.) and Mongalla of 36·93 in. (938 mm.).

Since the whole country lies within the tropics, the mean temperature is high. The summers are hottest, winters coldest, and diurnal variations widest in the north. Thus at Berber 120° F. (49° C.) in the shade has been registered in June, whilst in January the thermometer may fall to 50° F. (10° C.). Khartum has a mean maximum (June) of 107·8° F. (42° C.) and a mean minimum (January) of 58° F. (14·5° C.). In the highlands of Darfur and in the Upper Nile valley altitude and moisture moderate the heat. The diurnal range, which is considerable, varies from 29·8° F. (16° C.) at Wadi Halfa to 22·9° F. (12·5° C.) at Mongalla. North of the twelfth parallel May and June are the hottest months; in the equatorial zone, November and January.

The north-east trades blow steadily in the interior of the northern Sudan, seldom backing beyond north-west. At Suakin and Tokar, on the coast, variable winds with violent and often dangerous sand storms prevail between June and August. South-west winds are normal

in this region in August and September, north and north-east during the rest of the year. In south Kordofan south winds prevail from April to September, north and north-west in the winter months; whilst in the Bahr el-Ghazal the south-west monsoon blows from May to October, the north-east trades during the rest of the year. In the extreme south the equatorial region of calms and light variable airs is reached.

(4) SANITARY CONDITIONS

On the whole the northern or Saharan and steppe regions of the Sudan are healthy and suited to Europeans, provided that ordinary precautions are observed. Owing to the enormous variations of temperature care must be taken to guard against night chills and exposure to the sun. Sanitary conditions in the towns have been much improved since the British occupation. Khartum, where typhus, cholera, and malaria were once endemic, is now one of the healthiest towns in the world, with a death-rate (1912) of about 9 per thousand. Omdurman, which had an evil reputation as the home of typhus, cerebro-spinal meningitis, and other diseases, has also been cleansed. In other Sudan towns, however, all water must be boiled to guard against the ever-present typhoid and dysentery; a precaution even more essential in the tropical region, where guinea-worm and other horrors await those who neglect it.

The most prevalent disease in the Sudan is undoubtedly malaria. Europeans and Egyptians are specially liable to attack, and should take quinine daily as a routine precaution in all districts south of Khartum, at least during and after the rains. In the Bahr el-Ghazal and *sudd* region generally malaria rages from April to December, and here the malignant type and blackwater fever are prevalent. June and July are the worst months, and stations near the rivers are the most affected. Wherever possible, camps and settlements should be made on high ground at a distance from the bank, and water obtained from wells.

Among the negro population leprosy, bronchial complaints, pneumonia, and various tropical diseases, such as guinea-worm, are common, but sleeping sickness, though a few cases have occurred in the extreme south, has not yet obtained a foothold in the Sudan. Venereal diseases have been imported from the north, and are common near the Government posts. A peculiar infectious disease called *kala azar* exists in the east, its range extending southwards from Kassala to about 10° north latitude, and west to about $33^{\circ} 30'$ east longitude. It is characterised by fever and wasting, and appears to be spread by vermin. The natives are chiefly liable to attack, though Europeans are warned against sitting or sleeping in native huts in the infected areas.

The chief scourge of the Arabs is syphilis, especially in Kordofan. Smallpox, which formerly broke out at intervals with great virulence, is now much diminished. Cerebro-spinal fever, however, still gives trouble, a severe epidemic having occurred in 1915.

(5) RACE AND LANGUAGE

Race

The wealth of the Nile valley has made the Sudan from earliest times peculiarly liable to invasion; hence the original stocks have been overlaid by successive waves of immigrants, and the country is now a Babel of numerous races and tongues. The principal incursions have been those of black races from south and west, and of Arabs from the east. These have intermarried with and frequently been absorbed by the aboriginal population, the result being a mixture of races which makes classification unusually difficult. Speaking generally, the desert zone in the north is now peopled by nomadic Hamites and Arabs, the central region by Arabs, Nubas, and negroids, the tropical belt south of the twelfth parallel by negroes. The change of type, how-

ever, is gradual. Negroes have descended the Nile valley and now form a large element of the population north of the true black zone, whilst the so-called Arabs of Kordofan and Darfur exhibit many Nubian and negroid characters.

(1) The *Hamites* or *Bejas* are a group of nomad tribes sometimes, but wrongly, included among the Arabs.

The principal Beja tribes in Sudan territory, where they mostly inhabit the Atbai desert and the Kassala region, are now the Bisharin, Hadendoa, and Kawahla. The Bisharin, who range the Atbai desert, are divided into the Um Ali in the north and Um Naji in the south. They are a wild people, primitive and hostile to progress. The Hadendoa are a large tribe with many divisions, lying south of the Berber-Suakin road, between the Atbara and the sea, and the Kawahla of the Blue Nile are semi-nomadic.

(2) The *Arabs* are the latest comers among the great races of the Sudan, the northern half of which they now dominate. In the Sudan, however, the name "Arab" by no means indicates a tribe of pure or even preponderatingly Arabian blood, as the immigrants have everywhere absorbed and Arabicized, rather than exterminated, the original populations. The Arabs are found chiefly between the eleventh and fifteenth parallels, especially in the Kordofan plains, the Gezira, the White and Blue Nile provinces, the country between the Atbara and Blue Nile, and Darfur.

The principal tribes are the Kababish, a large mixed tribe, one of the richest in the Sudan, found north of El Obeid, with a branch in Dongola province; and the Hamar, between El Nahud and El Odaiya, a large tribe at least 60,000 strong, of Darfur origin, with three divisions, partly nomadic but now largely sedentary, although making excellent fighting men. The chief Baggara tribes are the Hawazma, between El Obeid and Kadugli; the Messeria, east and south-east of El Odaiya; and the Homr—originally part of the Messeria

—with three divisions, south-west of the Nuba Mountains. All these are large and wealthy tribes, with many divisions and numerous flocks and herds. In the White Nile province and the Gezira the chief tribes are the Hassania—probably the largest in the district—inhabiting both river banks from Geteina to Kawa and extending into Berber; and the Gimma, of the Gedid district near Kosti, owning large herds of cattle, gum plantations, and arable land. In Darfur the Arab tribes form the most important section of the population.

(3) The *Nubas* were probably the chief aboriginal inhabitants of the northern and central Sudan, where, according to some authorities, they were once the ruling race and the creators of ancient Meroë. After the Arab invasion the majority of the Nile Nubas were absorbed into the conquering tribes, but isolated groups survive, chiefly on the Nile banks between the First and Fourth cataracts. These Nubas or Nubians (*Barabra*) are probably a quite distinct race from the Nubas proper, the inhabitants of the Nuba mountains.

(4) The *Negroid* type appears to be largely represented in Darfur and on the Upper Blue Nile, but our knowledge of these races is still imperfect. The so-called “black Arabs” of Darfur, such as the Zaghawa and Bedaiat in the north-east, are probably negroids, being the result of perpetual intermarriages of the Arab immigrants with the black races. In the present state of our knowledge, however, no definite conclusion can be drawn on this point.

(5) The *Negroes* of the Sudan, mostly found south of the twelfth parallel, consist of a bewildering number of distinct peoples, greatly varying in size, colour, character, and language. Only a few of the more important races can be described. They have been divided by Frobenius into three groups: the negroes of the swamps, those of the ironstone plateau, and the Nyam-Nyam of the Nile-Congo watershed. This classification, based on distinct ethnic characters, will be followed here.

(a) The swamp negroes form the main population of the Bahr el-Ghazal and Mongalla provinces. The most important are now the Shilluk, Dinka, Nuer, Beir, Jur, and Bari.

The *Shilluk* inhabit a thickly populated strip of fertile territory 12 to 20 miles wide, extending along the left bank of the White Nile from Lake No to Jebel Ahmed Agha, and along the right bank from the Sobat to Kodok. They are also found on both banks of the Sobat for 30 or 40 miles up stream. They are exceedingly brave, and the best fighters in the Sudan.

The *Dinka*, the largest and most important of the swamp tribes, forming several distinct groups in the Bahr el-Ghazal province, are in many ways a strong contrast to the Shilluk. They are generally savage, sullen, and treacherous, conservative and unenterprising to the last degree, lazy (only cultivating small crops for immediate use) and indifferent hunters. They are chiefly cattle breeders, and more prosperous than the Shilluk.

The *Nuer*, who are closely akin to the Dinka, are the most powerful and numerous tribe of the Sobat region. Their territory extends along the lower Pibor, Sobat, and Baro rivers.

The *Beir*, a widely-spread tribe in the Sobat-Pibor district, are as yet unspoilt, and are one of the finest types in the Sudan, making excellent soldiers and scouts. They own large herds of cattle, and have little intercourse with their neighbours.

The *Jur*, living between Wau and Tonj, on the edge of the ironstone country, are said to be a branch of the Shilluk, but strongly resemble the Dinka, whom they serve. They are expert iron workers, and make the spearheads used by the swamp races.

The *Bari*, living on both banks of the Bahr el-Jebel, between Bar and Nimule, are a distinct race, with a language related to that of the Masai of Uganda. Under Dervish rule their prosperity was ruined and their spirit broken, and they are now poor and mentally degraded.

(b) The negroes of the ironstone region form a well-marked ethnic group, occupying the ferruginous lands between the swamps and the Nile-Congo water-parting. The most interesting and characteristic are the *Bongo*, whose country lies south of Wau. Another tribe of very similar habits and appearance is the *Golo*, who dwell west of Wau.

(c) The *Nyam-Nyam*, or *Zande*, live in the highlands of the Nile-Congo water-parting, between the fourth and sixth parallels, south and south-west of the ironstone negroes. Their estimated number is not less than 2 millions, and their territory, part of which lies within the Sudan and part in the Congo and Ubanghi, has an area of about 48,000 square miles. The Nyam-Nyam are a distinctive race of round-headed, chocolate-brown people, with long, thick, frizzled hair. They are by far the most intelligent and well organised of the black races, admirable hunters and fighters, and, when drilled, make excellent troops, alike in the Sudanese and the French Ubanghi armies. In former days they were notorious cannibals.

Language

North of Khartum, and over the greater part of Kordofan and Darfur, Arabic is generally spoken. The Barabra of Dongola province, however, speak four or five dialects of Nubian; and a group of closely related languages, of which eighteen distinct forms have been identified, are current among the Nuba of the Nuba mountains. The Beja tribes of the north-east speak a tongue known as Bedawiya, which has some affinities with Somali; and the black races of the Blue Nile, Darfur, and the south have each their own tongue. The Shilluk language, which is akin to that of the Acholi of Uganda, is current far beyond the present limits of the tribe, and this fact supports the tradition that the Shilluk were once a great nation and dominated the country of the Bahr el-Jebel and Sobat. The Dinka tongue, which is related to Shilluk, is also un-

derstood by the Jur and other subject tribes. The Bari language belongs to the Masai group. The dialects of the swamp races are often extremely rudimentary, and seldom contain any abstract terms or high numerical symbols.

Among the ironstone negroes the principal tongues are Bongo and Mittu, dialects of the latter being spoken by a large group of tribes. The Nyam-Nyam speak a distinct language, more primitive than Bongo, having no tenses and few expressions for abstract ideas.

(6) POPULATION

Distribution

The total population of the Sudan was estimated in 1917 at 3,400,000, although the number may be rather higher than this. There are in all about 45,000 foreigners, mostly Syrians, Egyptians, &c., of whom there are some 25,000; while there is also a considerable number of settlers from West Africa (about 15,000). These people first entered the country when on pilgrimage to Mecca, and have settled permanently in the Sudan.

The European element is very small, being in all under 4,000. A large proportion are Greeks and Italians engaged in trade. The British, outside the governing classes, are very few.

The most thickly inhabited regions are the valleys of the White and Blue Niles, between 10° and 16° 30' north latitude. Khartum province has a density of 27 per square mile, that of Blue Nile 16, and that of White Nile 12. Next in order are the Bahr el-Ghazal and Upper Nile provinces with 9 to the square mile, and Nuba Mountains with 8. It is probable, however, that certain parts of the province of Bahr el-Ghazal—such as Bor, in the Dinka country—are among the most densely populated rural districts of the Sudan.

The crowded Shilluk country (Upper Nile), which is said by some authorities to be the most densely populated tract in the whole of Africa, has the appearance of a continuous village. The most sparsely inhabited regions are, of course, the northern deserts. Halfa province has only one inhabitant to 3 square miles, Dongola one to the square mile, Berber and Red Sea $1\frac{1}{4}$, and Kassala 2.

In the arid north the inhabitants tend to be either nomadic or assembled in towns on or near the Nile. In the moist and fertile south and on the upper courses of the Abyssinian tributaries they are scattered in villages, which form in the most favourable districts thickly clustered rural colonies.

Towns and Villages

Omdurman, the principal native city, which extends for six miles along the left bank of the Nile opposite the Blue Nile confluence, had in 1917 a population of 59,429. Its importance dates from the Dervish period, when, as the residence first of the Mahdi and then of the Khalifa, it grew from a straggling village to a vast collection of native huts. All the principal tribal chiefs have houses or agents there, and it is the headquarters of native trade. Khartum, the administrative capital, is built on the tongue of land formed by the junction of the Blue and White Niles, and has now a large modern quarter, Khartum North, on the right bank of the Blue Nile. The population of Khartum proper in 1917 was 23,083, and of Khartum North 15,973. Next in importance are Wad Medani, a flourishing town on the Blue Nile 147 miles above Khartum, with a population of about 15,000, chiefly Fung and Hameg blacks and Arabs; El Fasher, the capital of Darfur (reputed population 20,000), El Obeid, the capital of Kordofan (10,000), Suakin (10,000), El Nahud in Kordofan (7,500), Kosti (7-8,000), Kassala (6,000), and Berber town (5,000). In the south many of the village settlements shelter a considerable population.

Movement

No country in the world has suffered in recent times such great fluctuations of population as the Sudan. Before the Dervish period (1881) the inhabitants were reckoned at $8\frac{1}{2}$ millions, but the immense wastage from warfare and disease under the rule of the Mahdi and Khalifa had so reduced them that in 1904 they numbered less than 2 millions. The population of the Bahr el-Ghazal province fell in this interval from $1\frac{1}{2}$ millions to 400,000; that of Sennar from a million to 150,000; of Berber from 800,000 to 83,000; of Kassala from 500,000 to 74,000; of Khartum from 700,000 to 81,000; and of other districts in like proportion. Of the 800 villages which in 1883 existed on the banks of the Dinder and Rahad, in 1900 not one remained. Though the inhabitants are increasing steadily under British rule, and the rate will be greatly accelerated as the numerous children born since 1898 become of marriageable age, the country is still under-populated. The estimated numbers in 1917 had risen to $3\frac{1}{2}$ millions, the most substantial increase being in the provinces of Bahr el-Ghazal (now 1,000,000), Upper Nile (from 150,000 to 300,000), Blue Nile (from 132,000 to 192,800), and Khartum (135,000).

The movement of the black races from south to north, which was formerly caused by the slave trade, is now modified, although continued to some extent by the demand for free labour.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 730-667 B.C. Ethiopian dynasty in Egypt.
 545 A.D. Christian kingdom of Nubia.
 640 Arab conquest of Egypt.
 Fourteenth century. The Dagus invaded by the Tungur Arabs.
 1500 Final Arab conquest of Nubia.
 1505 Amara Dunkas creates the Fung Kingdom.
 1517 Sultan Selim takes Cairo. Egypt becomes a Turkish Pashalate.
 1724-62 Ascendancy of the Fung Kingdom.
 1748 Conquest of Kordofan by the Fungs.
 1789 Downfall of the Fung Kingdom.
 1798 Napoleon invades Egypt.
 1801 British compel French to evacuate Egypt.
 1806 Mehemet Ali Pasha of Egypt.
 1820 Mehemet Ali annexes the Sudan.
 1822 Foundation of Khartum.
 1849 Death of Mehemet Ali.
 1853 John Petherick's expedition.
 1854-63 Reign of Khedive Said.
 1858-72 Anti-slave trade edicts.
 1863-79 Reign of Khedive Ismail.
 1869-71 Baker Pasha Governor.
 1872-75 Bogos and Harrar seized from Abyssinia.
 1874-79 Gordon Governor.
 1874 Zobeir annexes Darfur.
 1875-76 Defeat of Ismail by Abyssinians.
 1879 Accession of Tewfik.
 1880-81 Rauf Pasha Governor.
 1881 Rise of the Mahdi.
 1883 Surrender of Egyptian garrisons in Kordofan.
 Defeat of Hicks Pasha.
 1884 Gordon reaches Khartum.
 1885 Fall of Khartum. Recall of relief expedition.
 Death of the Mahdi. Accession of the Khalifa Abdullah.
 1886 Frontier withdrawn to Wadi Halfa.
 1889 Defeats of Dervishes at Argin and Toski.
 1891 Tokar recovered.
 1894 Kassala taken by Italians.
 1896-99 Reconquest of the Sudan.

- 1898 Frontier Convention with France.
Battles of the Atbara and Omdurman.
- 1899 Agreement between Great Britain and the Khedive.
Declaration modifying the Frontier Convention with France
of 1898.
Death of the Khalifa.
Sir R. Wingate becomes Sirdar.
- 1900 Capture of Osman Digna.
- 1901-2 Agreements with Italy as to Eritrean frontier.
- 1902 Treaty with Ethiopia as to Abyssinian frontier.
Gordon College opened.
- 1904 The Lemaire mission.
- 1906 Agreement as to frontier with Belgian Congo.
- 1910 Creation of Governor-General's Council.
Lado Enclave surrendered to Sudan Government.
- 1914 Frontier with Uganda readjusted.
- 1916 Revolt of Ali Dinar. End of the Fur Sultans.
Darfur incorporated in the Sudan.
- 1919 Supplementary Convention to Anglo-French Convention of
1899.

I. HISTORY TO 1899

(1) *Early History to 1500*

FROM the beginning the rulers of Egypt, successively Egyptian, Assyrian, Libyan, Persian, Greek, Roman, Arab, and Turkish, have regarded "Nubia" and "Ethiopia," the land south of the Second Cataract of the Nile, with both greed and anxiety. Only rarely, however, did they actually subdue any part of it; and once (B.C. 730-667) an "Ethiopian" dynasty in retaliation ruled the whole of Egypt.

The Romans of the Empire, as masters of Egypt, found two peoples inhabiting the Northern Sudan, the *Blemmyes* (ancestors of the Beja Hamite folk of to-day) and the *Nobatae* (represented to-day by the Barabra of Dongola district). To safeguard their own southern frontier against the former they enlisted the latter in their service. Eventually (545) a powerful Nubian kingdom, Christian in religion, with its capital at Old Dongola, was established. The Nubians, divided in the tenth century into the two

independent States of Makorra (capital Dongola) and Alwa (capital Soba, on the Blue Nile 14 miles south of Khartum), preserved their Christianity and their independence, even against Arab pressure, for upwards of a thousand years. The Arab conquest of Egypt (640), flooding southwards, broke upon this barrier; and not until 1500 did the Arabs achieve the final conquest of Nubia, absorbing and proselytising the native inhabitants and banishing Christianity from the land.

Meanwhile the Blemmyes-Beja tribes, never Christianised, embraced Mohammedanism with fervour, and became largely intermixed with the Arab invaders from the north and from over the Red Sea. These also penetrated from the west and north-west into Darfur and Kordofan. For all these 5,000 years and more Ethiopia, the land of the negroes south of lat. 12° N., remained unknown to history.

(2) *Turks, Fungs, and Furs* (1500-1820)

In 1517 Selim, Sultan of Turkey, took Cairo, and soon conquered and ruled all the land south as far as the Third Cataract. South of this, two powerful native kingdoms practically divided the Sudan between them. The Fung Kingdom, a true negro power, created in 1505 by Amara Dunkas, ruled from the Third Cataract to Fazogli, from the White Nile to Suakin. Its capital was Sennar. In 1748 it conquered Kordofan; traces of this conquest remain to-day in the Nuba Mountains. It reached its highest pitch of power in the period 1724-62, and its fame spread as far as Constantinople. In 1789 the Fung Kingdom was destroyed by the rude tribe of the Hameg, and only miserable relics of it exist to-day in the Fungs of Jebel Gule, who preserve in part their pagan customs and speak their ancient tongue as well as Arabic. To the west lay the kingdom of the Furs, for long years rivals with the Fungs in the struggle for Kordofan. These Furs or Fors derived from the

aboriginal negroid Dagu people of Darfur, who were subject in the fourteenth century to invasion by the Tungur Arabs, a people of uncertain origin. Dâli, the first of the Fur Sultans, drew up a code of laws which lasted as long as the Sultanate. There was an unbroken succession of Sultans of Darfur for 400 years. In physical characteristics the original negro element predominated, but in religion the Arab. Religious fanaticism drove the last Sultan, Ali Dinar, to revolt against the Anglo-Egyptian Government in 1916, and with his defeat and death the Sultanate came to an end.

By the end of the eighteenth century, save for Darfur, the whole of the Sudan was in anarchy and confusion. The Turkish hold of the north was feeble, maintained precariously by Bosnian garrisons and Mameluke beys. The far south remained *terra incognita*.

(3) *Annexation by Egypt; Exploitation (1820-81)*

In 1820 the Sudan was annexed to Egypt by Mehemet Ali, who had "amputated" the latter country from the decaying body of the Ottoman Empire. In the Sudan he hoped to find gold, slaves, and recruits for his army in vast quantities. Only the gold failed him. For his own security also he needed to give employment to his turbulent army and to suppress the remnants of the Mamelukes who had taken refuge in the south. The work of annexation he entrusted to his youngest son, Ismail, who in 1822 was entrapped and burnt alive at Shendi. But the work went rapidly forward. Egyptian rule was extended south to Fazogli and west to the borders of Darfur; and in 1822 Khartum was founded as the centre of administration. The first twenty governors (1825-77) were Egyptian. By Mehemet Ali's death in 1849 Egyptian power reached up the Nile to Kodok (Fashoda), and eastwards included all the Beja country, Kassala, and the Taka Abyssinian border district. Traders in ivory (whose pioneer was the Englishman, John Petherick, in 1853)

and slave-raiders soon pushed beyond the limits of actual administration, and were able easily to frustrate the Khedive Said (1854-63), who wished to abandon the whole of the Sudan. He had to content himself with issuing the first proclamation of the abolition of slavery, which had no validity save on paper.

Henceforward, and especially from the year 1860, the negro peoples of the Nile Valley and of the Bahr el-Ghazal were the unceasing prey of the organized Arab slaving companies or "Khartumers," despite repeated Khedivial edicts against slavery (e.g., 1858, 1863, 1869, 1872). For twenty years in succession the Southern Sudan was devastated, and the inhabitants, through raids, slaughter, famine, and the horror of caravan marches, reached the lowest level of misery.¹ The appointment of European Governors of the Upper Nile or of Khartum, such as Baker (1869-71) and Gordon (1874-79), proved only a temporary hindrance to a traffic based on greed, stimulated by lust, sanctioned by religion and by custom, on the maintenance of which the whole agricultural welfare alike of the Sudan and of Egypt seemed inevitably to depend.

The megalomania and extravagance of the Khedive Ismail (1863-79) extended the frontiers of the Egyptian Sudan in all directions. On the south, Sir Samuel Baker reached the borders of Unyoro; but his successor, Charles George Gordon, found it necessary to withdraw the most southerly Egyptian garrisons from the Bari country. Darfur was annexed in 1874 by Zobeir, the semi-independent prince of Arab slave traders, in Ismail's name. Zobeir's son, Suleiman, revolted (on his father's detention at Cairo) in the Bahr el-Ghazal Province, but the rebellion was suppressed and Suleiman himself slain by Gordon's lieutenant, Romolo Gessi, and Egyptian rule came within sight of the Nile-Congo divide. Another

¹ The testimony of all the European observers, Gordon, Baker, Junker, Schweinfurth, Gessi, Slatin, &c., is unanimous. The figures of the loss of life and slave captures none the less almost exceed belief.

of Gordon's lieutenants, the German doctor Emin, governed the Equatorial Province up to Lake Albert, and the Austrian soldier Slatin was appointed to Kordofan. On the east Ismail's possessions, won largely by purchase and diplomacy, included Suakin, Massawa, and the coastal region southward to beyond Berbera. Bogos and Harrar were wrenched from Abyssinia in 1872-5; but King John of Abyssinia inflicted severe defeats on Ismail's worthless troops at Gudda-Guddi in 1875 and Gura in 1876; and these districts were ceded back to Abyssinia a few years later in return for Abyssinian help against the Dervishes. When Ismail was deposed in 1879, his vast Sudanese possessions were in a state of indescribable misery and bankruptcy, and the whole of the Egyptian administration of the land was rotten to the core.¹ At the root of the whole evil was the slave trade, which would revive to-morrow if the English share in the administration of the Sudan was surrendered and if the French lost control of Wadai.

The accession of Tewfik (June 1879) soon caused the resignation of Gordon, who left the Sudan in December 1879. In the following year Gessi also resigned. The old order of things returned unchecked and even stimulated by Rauf Pasha at Khartum (Governor 1880-81). Gordon's withdrawal destroyed the last hope of peace and reform in the Sudan.

(4) *The Mahdia and the Reconquest (1881-99)*

In August 1881 Mohammed Ahmed, an ascetic *fiki* of the despised Berberine race of Dongola district, aged about 40, a man inspired by genuine religious enthusiasm and faith in his own divine call for the purification of Islam, a seer of visions, yet of the shrewdest intelligence, proclaimed a holy war against all infidels, "Turks," and the Egyptian oppressors of the country. He appropriated the traditional

¹ The evidence of Lord Cromer and of Gordon's reports and diaries is decisive.

Sunni title and personality of the Mahdi; and his superb oratory, early military successes, and personal attractiveness rallied the greater part of the population of the Northern Sudan to him. His chief supporters were the fierce Baggara cattle-owning tribes of the western deserts, who were alarmed by the efforts, however feeble and in part insincere, which the Government was making to abolish slavery. For the slave trade was "at once their religion, their occupation, and their principal source of income." Religious zeal was, however, the chief cause and also the binding-force of the rising. Hatred of the Egyptian tax-gatherer, official, and oppressor had spread universal discontent through the country and brought all the wretched to the Mahdi's banner. The worthlessness of the Egyptian army of occupation, men and officers alike, gave the movement an unexampled opportunity of success.

Eluding capture by a timely "Hegira" to Jebel Gedir in the Nuba mountains, the Mahdi slew two governors of Fashoda and destroyed their armies, captured after long sieges the Egyptian garrisons in Kordofan (January 1883), and annihilated the avenging army of 10,000 men under Hicks Pasha at Shekan, a few miles south-east of El Obeid, on November 5, 1883. This caused the surrender of Slatin in Darfur next month. In the eastern Sudan the Egyptian garrisons were beleaguered, and Suakin was on the point of capture.

The Government decided to evacuate the whole Sudan, and despatched Gordon to withdraw the garrison and provide a working Government instead. This combination of tasks and the vacillation of the British Government proved fatal. Gordon arrived in Khartum on February 8, 1884, unsupported, and was soon invested. A British rescue expedition was sent six months too late, and lingered, perhaps unduly, on its march. Khartum fell to the Dervishes on January 26, 1885. Gordon was killed, and the town was shortly afterwards partially destroyed, its surviving inhabi-

tants being removed to the Dervish capital, Omdurman. The British expedition was recalled in June 1885. Sennar surrendered on July 30, and on the same day Kassala was captured. Some of the garrisons in the eastern Sudan were rescued by the Abyssinians; King John, by the treaty of Adowa (June 3, 1884), receiving back Ismail's acquisitions as the price of his aid. The whole of the eastern Sudan, save Suakin, was practically abandoned. A Dervish advance to the north was checked at Ginnis on December 30, 1885; but this was defensive strategy only. By April 1886 the frontier of Egypt was withdrawn to Wadi Halfa.

Meanwhile the Mahdi, who in four years had made himself undisputed ruler of two million square miles of territory, died at Omdurman on June 22, 1885. The Khalifa Abdulla, of the Taaisha section of Baggara, who had been his chief general, seized the power, and with some difficulty maintained his position in the face of constant rebellion at home and exhausting war with the Abyssinians on the frontier. Not until 1889 was he free to resume the plan of the invasion of Egypt. Eleven thousand Dervishes, under his Emir, Wad-el-Nejumi, were, however, defeated at Argin, a few miles beyond Wadi Halfa, on July 2, 1889, and destroyed at Toski by Sir Francis Grenfell on August 3, in a battle which proved the sterling merit of the new Egyptian model army, for years carefully trained by and under the leadership of British officers. The Khalifa was henceforth reduced to the defensive. He lost Tokar to the Egyptian army on February 8, 1891, and Kassala to the Italians on July 17, 1894. In the far south his Emirs' efforts to conquer the Upper Nile and Bahr el-Ghazal had never met with complete success, Emin always lurking quietly out of their reach. Darfur was always restless; and the Nuba mountaineers remained defiant.

Yet the Khalifa, a man of great political sagacity and force of character, kept his Dervishes loyal to him, played successfully on their religious fanaticism (a

difficult task now that the Mahdi was dead), and was always dangerous. Under his rule the country suffered greatly from battle, oppression, disease, and famine. The population was said to have been reduced from eight and a half millions to two millions; whole tracts were deserted and went out of cultivation; towns were destroyed; tribes which opposed the Khalifa (such as the Jaalin, Shukria, and Kababish) became practically extinct. Omdurman itself, it is true, grew into a conglomeration of 150,000 souls, swarming in squalid pestilential mud hovels. The loyalty of the Baggara, an efficient spy system, and the terror of the Khalifa's system of government triumphed over all the misery and discontent of the population.

The Abyssinian defeat of the Italians at Adowa on March 1, 1896, and the fear lest this should incite the Dervishes to attack Kassala, at once determined the British Government to reconquer the Sudan. An advance on Dongola would divert their attention. But there were other and deeper motives, three in number. viz.: (1) policy—the security of Egypt and safeguarding of her water supply; (2) philanthropy—the redemption of the Sudanese from misery and the final destruction of the slave trade; (3) sentiment—English *amour propre* and the popular indignation at the fate of Gordon. All three co-operated strongly to move the Government, and the Sirdar, Sir Herbert Kitchener, was ordered to take the field.

The great offensive was accomplished with thoroughness and methodical precision. The first brush with the enemy occurred at Firket on June 7, 1896. On September 23 Dongola was reoccupied, and Merowe (Merawi) became army headquarters for the next few months. In the following year Abu Hamed was captured on August 7, and Berber occupied on August 31. The railway was built to Abu Hamed, the Suakin-Berber road was reopened, and Kassala was taken over once more by Egypt on Christmas Day.

In the spring of 1898 the army marched south from Berber. On April 8 the Dervish army of 12,000 men,

under Mahmud, was attacked and routed in its position on the Atbara. On September 2 the Khalifa himself and his main army of 40-50,000 men fell upon the Anglo-Egyptian army of 22,000 men, under the Kerreri hills, a few miles north-west of Omdurman. The Khalifa lost 27,000 men killed and wounded, and the survivors fled to the desert. He himself escaped, to be finally caught and slain in battle at Um Debreika on November 24, 1899. Before this, the Sirdar had hastened south to meet the French expedition under Marchand at Fashoda (Kodok) on September 19, 1898; and the Anglo-Egyptian claim to the whole valley of the Upper Nile was presently recognized by the French Government, Marchand leaving Fashoda and making his way to the French Somali coast. Sennar, Karkoj, Roseires, Gallabat, and Fazogli were retaken, and El Obeid was occupied on December 17, 1899. The Sultanate of Darfur was re-established, and Ali Dinar, one of the Khalifa's prisoners at Omdurman, was restored to the throne of his ancestors as client prince. Osman Digna, the vigorous and elusive leader of the Dervish forces in the eastern Sudan, was captured on January 18, 1900. On December 22, 1899, Sir Reginald Wingate succeeded Kitchener as Sirdar and Governor-General of the Sudan, a post which he retained for seventeen years. The whole work of the regeneration of the Sudan has taken place under his auspices. The total cost in money of the reconquest of the Sudan (1896-99) was £E. 2,412,000, of which the British Government contributed some £E. 780,000. But the country was found devastated, depopulated, and ruined. The harder task of reconstruction remained

II. THE REGENERATION OF THE SUDAN, 1899-1917

(1) *The System of Government*

The first task after the reconquest was to establish the political status of the Sudan and to make provision for its government. The shadowy claims of Turkey could in justice and in safety be completely dis-

regarded. Simply to hand the country back to Egypt was, in view of the past and of the share taken by Great Britain in the reoccupation, impossible. A condominium of Great Britain and Egypt in the Sudan was created by an agreement between the British Government and that of the Khedive, signed at Cairo on January 19, 1899, the terms of which were extended to the town of Suakin by a subsequent Agreement of July 10, 1899. The nature and provisions of this Agreement freed the Sudan from any possibility of interference by any Power other than the two concerned. The Sultan of Turkey raised a feeble and ineffective protest; but no formal assent to it of any Power was requested. The share of the British Government in this system of administration was, in the Preamble to the Agreement, based definitely on the "right of conquest." Its only later modification was the creation in January 1910 of the Governor-General's Council. Under the terms of this Constitution the Sudan has been administered for the last nineteen years.

During this period no enactments concerning the Sudan have been passed by the British Parliament. The somewhat anomalous system of Government has worked admirably. Its semi-military character was and is inevitable, but the civilian element in it constantly tends to increase.

(2) *Frontier History*

The frontiers of the Sudan, as fixed by the Agreement of January 19, 1899, and by subsequent arrangements, are coterminous with Egyptian, Belgian, French, Italian, and Abyssinian territory, and with the Uganda Protectorate. The history of the last five frontiers and of the relations of the Sudan Government with the semi-independent Sultan of Darfur may be briefly summarised.

(a) *The Belgian Enclave Frontier*.—The Lado Enclave was a large tract of country, with a popula-

tion of some 50,000, bounded on the east by the Nile and Lake Albert; on the north by a straight line running due east from the old Belgian Nile station of Kiro (approx. $5^{\circ} 50'$ N.) to longitude 30° E.; and on the west by longitude 30° E. till it reaches the Nile-Congo watershed; then along the water-parting to a point two-thirds of the way down the western shore of Lake Albert. This was assigned to the Congo Free State by an agreement, signed at London on May 9, 1906, which itself cancelled the Brussels Agreement of May 12, 1894. This earlier agreement had surrendered to King Leopold all the country south of 10° N. latitude and east of 35° E. longitude at a time when the Upper Nile valley was either in Dervish possession or No Man's Land, and the Belgian effective occupation was limited to a few posts on the river near Wadelai.¹

The Agreement of 1906 contracted and defined the boundaries of Belgian territory on and west of the Bahr el-Jebel. But by the Agreement the Lado Enclave, as it was called, reverted to the Sudan on the death of King Leopold; and it was in consequence formally surrendered to the Sudan Government without any friction on June 16, 1910. By a proclamation of August 4, 1910, the former Lado Enclave became part of Mongalla province. The subsequent frontier arrangement with Uganda transferred the southern portion of it to the latter Protectorate.

The Belgian Congo Frontier.—In 1904 the Belgian Lemaire Mission, coming from the Congo Free State, established five fortified posts on the Sudanese side of the Nile-Congo divide in Bahr el-Ghazal province; and King Leopold showed so obvious a disposition to annex the district thus temporarily occupied that a somewhat acute political tension resulted. This was ended by the Agreement of May 9, 1906, which fixed the Nile-Congo divide as the frontier as far as the

¹ Chaltin's Congo column occupied Rejaf in 1897.

French frontier to the north, viz., the source of the Mbomu river.¹ By 1907 all Congolese troops had withdrawn to their side of this frontier. In 1908 the Congo Free State became a colony of Belgium, since which time relations between the Sudan and the Belgian officials have always been cordial. A joint boundary Commission for the delimitation of the frontier was arranged for the end of 1914, but its work was postponed by the outbreak of the European War. By the Agreement of May 1906 the so-called "Mahagi" strip of land, giving access from the west to Lake Albert, was leased to the Belgian Congo, and this strip was actually delimited in 1913. Since the readjustment of the Sudan-Uganda frontier of 1914 this now concerns Uganda only.

Apart from some recent disturbances with native chiefs where the three frontiers—Belgian, French, and Sudanese—meet, to suppress which the officials of the three countries co-operated heartily and successfully, nothing has happened to disturb the peace of this frontier. The ever-threatening peril of sleeping-sickness (bequeathed first to the Sudan with the Lado Enclave, and a serious menace on the Yei river) calls for similar co-operation in the enforcement of such quarantine and other precautions as may be possible.

(b) *The French Ubanghi Frontier.*—This frontier between the Sudan and French spheres of influence, was defined by a declaration, signed at London on March 21, 1899 (completing the "Convention between Great Britain and France" of June 14, 1898), and by a supplementary convention signed on September 8, 1919 (*cf.* above, p. 4). By this the frontier line was drawn northwards from the source of the Mbomu river along the Nile-Congo divide for some 450 miles; next it separated Darfur on the east from Wadai on the west, and then ran north-west up to the frontier of Tripoli. In 1899 the French had

¹ Fixed by the Agreement of August 14, 1894, between France and the Congo Free State.

hardly penetrated east of Lake Chad, and it was not until their effective occupation of Wadai and its capital Abesher (Abechr) in 1909 that direct relations were established by the border officials of the two countries. In 1910 these met to concert measures against the slave trade, of which Wadai was the last and flourishing refuge, and by a system of passes to restrict the travelling companies of merchants and pilgrims to their professed and legitimate employments. In 1912 the question, difficult here as on the Eritrean frontier, of the conditions under which native chiefs and their adherents should be allowed to migrate over the frontier was subject to similar discussion, and the working principle of disarmament and removal some distance inland (unless in the case of fugitives from justice) was adopted.

The actual delimitation of the frontier and the project for a railway to link the Bahr el-Ghazal and Upper Ubanghi had hardly come under consideration when they were stopped by the outbreak of the European War. In 1916 a rebellious chief, Mopoi, gave trouble to French, Belgian, and Sudanese authorities alike. German intrigue, as also Pan-African propaganda, were suspected but not proved. Joint action by the officials on the spot suppressed the rising, which had caused the French some loss. In 1917 an old elephant-poacher, Krikri, had also to be dealt with on the frontier. The French have been during the last few years most active in keeping robber frontier tribes such as the Gura'an in check. The relations between the officials of the two countries have been most friendly, and it is recognized that their interests are identical.

(c) *Darfur*.—Darfur, which for eighteen years (1899-1916) constituted a dependent state lying between Sudan territory and French Equatorial Africa, is a land rectangular in shape, measuring approximately 153,300 square miles, some 450 miles from north to south, and 350 from east to west. On the north it borders the Libyan desert and Dongola

province; on the east Kordofan; on the south the Bahr el-Ghazal province; on the west Wadai. The original Fur inhabitants are mostly found in the west round the Marra mountains; the Arab element predominates elsewhere. It is a turbulent land of many feuds, with wild, lawless tribes, the Bedaiat and Gura'an, on the frontiers, who throughout this period have unceasingly harried their Kordofan neighbours (particularly the Kababish and Hawawir). Others of its tribes have from time to time attempted to migrate *en masse* into Sudanese territory to secure better treatment, as did the Maalia and Zeiadia in 1904. The "Arbain" (Forty Days) road through the desert by Bir Natrun to Upper Egypt at Assiut has been the constant scene of depredation by raiders from Darfur; and the Sudan Government's efforts from 1905 to 1908 to keep this trade route open (from 1884 to 1905 it was always unsafe) were not very successful.

The land was until 1916 ruled by Ali Dinar, a youthful grandson of Sultan Mohammed Fadl (who reigned 1801-1839), who was recognised as Sultan at the end of 1899. He paid regularly since 1901 a small annual tribute of £E. 500 to Khartum, and received occasional advice and instructions. For the most part he was left to go his own way, and during his reign his will was sole law in the country. He gradually accumulated a large store of arms, including 6,000 rifles, and gathered half the entire wealth of the country into his own possession. His religious zeal was fervent; his harem large. From time to time tribes and sheikhs defied him; but he suppressed them with more or less success.

Musa Madibbo, however, sheikh of the Rizeigat Arabs in the south of Darfur, always maintained his independence, and harboured refugees who fled to escape Ali Dinar's extortions. Ultimately (1915-16) this sheikh proved useful to the Sudan Government. The French, soon after their occupation of Wadai, became involved in disputes with the Sultan concerning the border districts of Dar Tama and Dar Masalit,

and the Sudan Government intervened in the matter.

The French proposals in 1913 were unacceptable, but the question was on the high road to settlement by arbitration at The Hague when the outbreak of the European War interrupted the negotiations. Ali Dinar, corrupted by letters from Enver Pasha in February 1915, by a Turkish decoration in August 1915, and by gifts of arms from the Senussi in March 1916, renounced his allegiance and prepared to invade Kordofan and Upper Egypt in co-operation with the Senussi invasion of Egypt from Sollum and Siwa.

In March 1916 a punitive expedition was sent against him, which marched from El Nahud in Kordofan on the Sultan's capital, El Fasher. The Darfur army of 3,500 men was routed at Beringa, and the capital was occupied on May 23. The Sultan fled to Jebel Marra. In September the advance was resumed, and finally Ali Dinar was surprised and killed in his camp at Giuba, 30 miles south-west of Kulme, on November 6, 1916. His last adherents surrendered on November 23. Darfur was then incorporated into the Sudan. Co-operation with a French column against the lawless frontier tribes in December 1916 speedily followed. A new military post and wireless station on the western frontier at Kereinik were established in 1918 to protect the Wadai-Darfur trade routes. The country is still largely unexplored and unmapped.

(d) *The Eritrean Frontier*.—A long series of agreements and other documents has defined the Sudan-Eritrean frontier from Ras Kasar on the Red Sea coast to Umbrega on the Setit river. The work of survey and delimitation is now all but complete. A commission of December 1915–January 1916 surveyed the section farthest south. There were also concluded between the two countries a Customs Convention (November 26, 1901), a Postal Convention (January 8, 1902), and a Telegraph Convention (January 8, 1902).

Neither on the Eritrean nor on the Abyssinian

border does the political coincide with the ethnical frontier. The large nomad tribe of the Beni Amer on the former, that of the Anuak on the latter, are divided between the Sudan and its neighbour. In both cases this has led to difficulties. On the Eritrean frontier the nomad, of sheer necessity, desires to move his flocks and herds from pasturage to pasturage, according to the various seasons of the year, and thus to come down every autumn from the Eritrean hills to the Kassala and Atbara plains. The problem has been further complicated by the constant recurrence of cattle disease in Eritrea. Full liberty of action to permit or prohibit such migration was reserved by both Governments in the Sabderat Agreement of February 28, 1901, which superseded earlier arrangements of 1895 and 1898. At present such migrations are discouraged. Both in this matter and in that of the utilisation of the waters of the Gash for storage and irrigation purposes (one of great importance to Kassala) the goodwill of the Italian authorities and border officers has never been lacking. Relations with Eritrea throughout the period have been most friendly, and, save for spasmodic acts of brigandage, the peace of the frontier has been undisturbed. The chief need is the building of the railway from Thamiam on the Red Sea line to Kassala town (see p. 83).

(e) *The Abyssinian Frontier*.—A treaty with Ethiopia of May 15, 1902, defined the frontier between Abyssinia and the Sudan, and gave the latter certain trade facilities and railway concessions. Of the last no use has been made. For trade purposes a block of territory was leased to the Sudan at Itang on the Baro (see Appendix III) for which in 1904 the present commercial station at Gambela was substituted. Hence a road runs to Addis Abbaba, and here, too, is the only wireless station in Abyssinia. More than three-quarters of the total Sudan trade with Abyssinia passes through Gambela.

To the Sudan, as to Egypt, the water contributed to the Nile by the rivers rising in Abyssinia, the Blue

Nile, the Sobat, and their tributaries, is of vital importance, as the amount exceeds that supplied from any other source. The same treaty therefore forbade the construction of any work across the Blue Nile, the Sobat, or Lake Tsana which might arrest the flow of their waters into the Nile, except by agreement with the Governments of Great Britain and the Sudan. This clause has been duly observed, and no such work attempted. The idea of a regulating barrage at the lake led to the despatch in 1915 of a joint mission of enquiry by agreement with the Abyssinian Government; but circumstances prevented any great result from this mission, which returned to the Sudan early in 1916.

The actual frontier from the Setit on the north to lat. 6° N. on the south has been (1903 and 1909) partially surveyed, but the section from the Sobat to Lake Rudolf is still provisional and not fully explored. Except where it follows the course of a river, it cannot be said to be in any case delimited. Slave-raiding, slave-smuggling, arms-smuggling, ivory-poaching, have all contributed since 1899, and especially since the retirement of the Emperor Menelik (1910), to keep this frontier in a most disturbed condition. The tribes of the south-eastern Sudan (especially the Nuer, Beir, Berti, and Burun) have suffered constant raids by the Galla, Anuak, and other Abyssinian highlanders.

To check the evil the Sudan has been thrown of late years entirely on its own resources. The Jebel Jerok punitive expedition of 1904 had some Abyssinian help in suppressing the slave-raiders under Ibrahim Wad Mahmud. From 1907 to 1912 raids from over the frontier, as on Gezan, Jebel Kashangaru, and Jebel Faronge, were of annual occurrence. Vigilance patrols have constantly to intercept the *jellabas*, or merchants, who smuggle slaves over the border into the Sudan. Since 1911 the smuggling of arms and ammunition has been a still greater evil, affecting Uganda as well as the Sudan. The Anuak are said to have acquired 25,000 rifles in this year, and the Sudanese

tribes from the border as far as the Bahr el-Jebel have learnt to purchase rifles from Abyssinian merchants by illicit trade in ivory.

These pugnacious and little-known tribes of the south-eastern Sudan and of the Uganda border have thus been able to indulge in their favourite pursuits of inter-tribal feuds with greatly increased ferocity. From 1912 to 1917 there has been constant fighting among the Anuak (part of this tribe belongs to the Sudan), Nuer, Beir, Burun, and Dinka peoples, and a succession of punitive patrols has had to be despatched. Over a large part of the south-eastern Sudan security of life and the maintenance of order have been uninterruptedly menaced. So great was the burden on Mongalla province that a new Sobat-Pibor military district was carved out of it in 1912, with an area of 24,400 square miles, and a complete battalion was assigned to it. Military posts were fortified at Nasser, Akobo, Bonjak, Pibor, and, in 1917, at Nyerol. Others are urgently needed on the Boma plateau and in the Garjak Nuer district. The land beyond the border remains a sanctuary for marauders, and the strengthening of the military resources of the frontier districts cannot prevent this. The creation of a strong, friendly, and sympathetic Central Government in Abyssinia is the chief need of the immediate future, and the best hope for the restoration and maintenance of order on this, the only one of the Sudan frontiers which is to-day, as it has always been, in a thoroughly unsatisfactory condition.

(f) *The Uganda Frontier*.—Down to December 31, 1913, the fifth parallel of north latitude was the frontier between the Sudan and Uganda,¹ Mongalla on the Bahr el-Jebel being the southernmost place belonging to the former, Gondokoro the most northerly belonging to the latter.

When in 1910 the Sudan acquired the Lado Enclave.²

¹ As it still appears (erroneously) on most published maps, including the 1918 reprint of the War Office Map of Abyssinia (1908).

² See above, p. 33.

the left bank of the Nile for some 200 miles belonged to it, the right bank to Uganda. As a result of a joint commission in 1913 the whole frontier was readjusted by a large exchange of territory, the Sudan giving up 4,700 square miles and receiving 17,000 (much of which was unexplored and marshland). On the river, Dufile was fixed on as the northernmost Uganda station, Nimule as the most southerly Sudan post. From Nimule the frontier runs eastward to Lake Rudolf, westward to the Nile-Congo divide and the Belgian frontier. Most of it has not yet been surveyed, and the whole is at present provisional only. By this exchange, the Madi, Lugwari, and Alur tribes belong to Uganda, the Bari (hitherto divided), Toposa, and Latuka tribes to the Sudan.

Exploration and, lagging behind it, administration have since January 1, 1914, been gradually pushed eastwards from the river to the Lafit, Lokoia, Imatong, and Dongatolo hills (1914-16). Sultan Lokidi, of the Latuka people, offered opposition at Tarangole, and was killed in battle in June 1917. The tribes to the east of this place are still little known. On the outbreak of the European War the tribes on the Sudan side of the new frontier raided over the border, and at the request of the Uganda Government Sudan troops from Mongalla temporarily patrolled the northern strip of Uganda territory. The Sudan also sent a contingent to the Turkana expedition on the west of Lake Rudolf in 1915. Uganda has now resumed the administration of her own northern territory. Much fighting took place in 1917 with the Turkana on the frontier north of the Laburr mountains, these being assisted by Abyssinian riflemen raiding from the Kibish river. Further military operations against the Turkana, in co-operation with forces from the British East Africa Protectorate, were necessary, December 1917-June 1918. The frontier in the extreme south-east of the Sudan is disturbed, hostile natives finding here, as farther north, ready refuge over the Abyssinian frontier.

(3) *Internal History; Religious Fanaticism;
Slavery*

Neither the death of the Mahdi nor the overthrow of the Khalifa completely destroyed the belief in the former's divine mission prevalent in the northern Sudan. From 1899 the recrudescence of fanaticism has always been a possible peril. To it the Arabs of the Gezira and the Baggara of Kordofan were always liable. To the former was due the one really dangerous outbreak of these years, the rising in 1908 at Katfia. The Baggara were found still paying surreptitious visits to the Khalifa's grave in 1915 (a fact which completely justifies the destruction of the Mahdi's tomb at Omdurman in 1898). In the years 1901-16 a dozen or more religious fanatics, secretly or openly hostile, have excited attention. The career of the original Mahdi emphasised the importance of the "*obsta principiis*" maxim, which has throughout determined the action taken in these cases by the Sudan Government. Thanks to this, only the 1908 outbreak caused disturbance of any long duration or involved the loss of English life. The summary list of these fanatics is as follows:—

In February 1901 Ali Abdul Kerim in Khartum province claimed to be the Mahdi. He was arrested and imprisoned. In the autumn of 1902 Mohammed el-Amin, from Bornu, declared himself the Mahdi in Kordofan on his return journey from Mecca. He was captured at Dar Gimma and executed at El Obeid. In 1904 Mohammed Adam declared himself the prophet Isa (i.e., Jesus') at Singa in Sennar province. He was killed in a skirmish. In April 1908 Abdul Kader, an old pardoned Mahdist, rebelled in the Mesellemia district of Blue Nile province, preached a holy war, murdered an English officer² at Tugr

¹ In the tenets of all Moslem sects there is a close connection between Jesus and the Mahdi in relation to the Second Advent. This belief in various shapes is based on "the Traditions," not on the Koran.

² Mr C. C. Scott-Moncrieff.

village, and attacked a punitive force at Katfia. In May he was captured, tried, and hanged. The unrest spread to the White Nile province, and took many months to die away. Abdul Bagi, one of his adherents, escaped arrest until April 1914, when, after stout resistance, he was taken and died of wounds soon after.

In 1908 Abu Howara, a *fiki*, proclaimed the immediate advent of Jesus at Burdia in Kordofan. The Governor appeared instead, and the *fiki* was both arrested and discredited. In the same year Abdel Wahab and other Mahdist *fikis* in Dongola province were detected in plots against the Government. In 1910 Hashmi, who declared himself the Sahib el-Wakt ("Master of the Times") and his sons gave trouble at Kitiab village, in Berber province. He was arrested and hanged for murder. In 1910 a *fiki* among the Shenabla in White Nile province claimed to be the prophet Isa. He was killed in an affray with the local police. In 1910 a Mahdi arrested at Abba Island in the same province proved to be a deserter from the 9th Sudanese battalion. In 1900 Nigma el-Din, a *fiki*, used the excitement caused by Halley's Comet, the "Mahdi's Star," to cause a disturbance at two villages of Taaisha (the Khalifa's old tribe) in Sennar province. He eluded arrest and caused fresh trouble in three Fellata villages south of Sennar next year. He again escaped, and thus justified his claim to invisibility.

In 1912 Akasha Ahmed, a *fiki*, one of Abdul Kader's old adherents in 1908, claimed to be the prophet Isa at Jebel Gedir in the Nuba mountains (the scene of the Mahdi's "Hegira" in 1881). He was killed in fighting. In 1915 Ahmed Omar, a Fellata from Sokoto, also declared himself the prophet Isa at Jebel Gedir, and called on the Fellata villagers of the district to join him. They remained quiet, and he and his small band of followers were slain in attacking the local police. In January 1916 a youth in Halfa province declared himself the destined ruler of the world and attracted adherents. He was suppressed. The

number of these fanatics, petty as many of their risings seem, justifies the unsleeping vigilance of the Government and the prompt action taken in every case by the local authorities.

Throughout these years (1899-1917) the Government and officials have been untiring in their efforts to destroy the remnants of the slave trade on the Abyssinian and western frontiers, to intercept slave caravans, to detect and punish the kidnapping of women and children, and to promote the gradual disappearance of domestic slavery. As a result, though sporadic kidnapping continues, the slave trade otherwise is stamped out, and domestic slavery is dying.

(4) *Provincial History*

The Sudan on its reoccupation was divided into ten provinces and districts,¹ viz., Halfa, Dongola, Khartum, Berber, Kassala, Suakin (called Red Sea province from 1906), Kordofan, Fashoda (called Upper Nile province from 1903), Sennar, and Bahr el-Ghazal. Later readjustments added four, viz., Blue Nile (formed out of Khartum province in June 1902, and named Gezira province till January 1, 1905); White Nile (formed January 1, 1905, of districts taken from Blue Nile and Kordofan); Mongalla (created in 1906, consisting of the southern portion of Upper Nile); Nuba Mountains (the southern portion of Kordofan, separated from this for administrative purposes as from January 1, 1913, and for financial purposes from January 1, 1914). Darfur was annexed in 1916. The military district of Sobat-Pibor was separated as such from Mongalla in 1912. The total number of provinces is now fifteen, besides this one military district.² Various readjustments of provincial boundaries and some changes in the assignation of tribes to one or other have also been made from time to time; some tribes are distributed over two or more provinces.

¹ This early distinction is immaterial.

² For details of organization, &c., see below, p. 59.

The actual delimitation of provincial boundaries has been steadily in progress, but is not yet in all cases completed. Irrigation and labour have throughout the period been the chief problems of the northern provinces, communications and transport of the southern. The process of pacification and economic development has been pursued with success from the beginning.

The chief historical events may be briefly summarised under the various provinces. These differ so widely in size, condition, and inhabitants (the Sudan being one great "*conluvis nationum*") that a more generalized treatment of their history is hardly possible.

Halfa.—Locusts, rainstorms, and a low Nile (as especially in 1913) have at times occasioned distress, but the province has on the whole been prosperous and has always paid its way. The closing of the old military railway from Halfa to Kerma in 1905 increased the scantiness of communications; but this involved no such disastrous consequences as were feared. In 1903 the backward Sukkot and Mahas districts of Dongola province were transferred to Halfa. Wadi Halfa, the capital, has become a flourishing cosmopolitan town.

Dongola.—Capital: Dongola from 1899 to 1903, Merowe (Merawi) from 1903. In 1902 the kidnapping of women and children by the Bisharin and Jaalin for sale as slaves in Jedda market caused unrest. The tribes of the far western deserts and the Arbain road have been constantly harried by Bedaiat raids from Darfur. The Hawawir tribe has given trouble and refused to pay tribute, but in 1917 was assigned to Kordofan; otherwise the province has always been rich, prosperous, and contented. The system of basin irrigation established here in 1909 has averted most of the evils caused by a low Nile (as in 1913). Schools are popular, malaria is decreasing, and progress is deliberate and assured.

Khartum.—The population of the three towns, Khartum, Omdurman, and Khartum North (called

Halfaya down to 1903), has risen from 69,000 in 1903 to 98,485 in 1917; that of Khartum itself from 8,000 to 23,000. Gordon College was opened by the Sirdar on November 8, 1902. Khartum Cathedral was consecrated by the Bishop of London on January 26, 1912, the 27th anniversary of Gordon's death. Locusts at times ravage the gardens, but successful war is waged on the mosquito. Dust remains "a necessary constituent of the atmosphere."

Berber.—This province's receipts exceeded its expenditure as early as 1902. The gold mines at Um Nabardi and archæological activity at Meroe afford useful employment, especially in bad years (as 1914), to the inhabitants, who are mostly small cultivators and hard-working. The Zeidab experimental plantation and an irrigation basin at Kelli (opened in 1914) are of present use and future promise. The Jaalin are recovering slowly from their massacre by the Dervish Mahmud in 1897. Only one petty outbreak of fanaticism, that of Hashmi in 1910, has occurred. For the roving tribes of the Atbai blood feuds and raids are still among the diversions of life.

Blue Nile.—Created in 1902, and called Blue Nile from January 1, 1905; capital, 1902-1905, Kamlin; from 1905, Wad Medani. This province has been the chief home of Mahdist fanaticism in the Sudan; the Kátfia outbreak of 1908 caused two years' unrest. The experimental farm at Tayiba was opened in 1911. Great irrigation projects in the Gezira are now approved, but were delayed by the European War. There have been many boundary disputes and adjustments with White Nile, Sennar, and Kassala.

White Nile.—Created in 1905. This province is financially most prosperous, and has always paid its way, its surplus rising from £E.4,593 in 1905 to £E.30,783 in 1912. Dura is exported to Egypt in good years (as 1909), imported from India in bad (as 1913). The Arab camelmen, "almost naked themselves," purchase jewellery in large quantities for their women. There has been much immigration into the province of

Fellata, Fur, Taaisha, and others. Public security has been good, crime rare, and service in the police correspondingly popular.

Sennar.—Capital from 1905, Singa. A railway extension to this place from Sennar is wanted. On the Abyssinian frontier, and in the remoter districts of Dar Fung (where Soda post was established in 1903), the Tabi hills, and farther south where the administration has not yet reached, there have been not infrequent disturbances, as in 1905, 1910, and 1917. The more settled northern portions on and near the Blue Nile are prosperous. In 1902 revenue nearly balanced expenditure. There were small fanatical outbreaks in the Gezira in 1904 and 1910, and Fellata immigrants in 1916 gave cause for anxiety also on this score. Food and employment in the bad years, 1913–14, were plentiful, and attracted many temporary immigrants from the north and west. There has been archæological excavation at Jebel Moya and Segadi, which gave useful employment. The Gezira irrigation project involves a dam at Makwa, on the Blue Nile south of Sennar, and a canal (see p. 120). The latter was begun in 1914, but all was suspended by the European War. There is a good deal of malaria, and a little of the fatal *kala azar* in the province. The people of the south are most primitive, and still largely unknown.

Red Sea.—Called Suakin province up to 1906. Capital, Port Sudan, formally opened on April 8, 1909. A credit balance was first shown in 1911. On January 17, 1912, the King and Queen visited Port Sudan and Sinkat.¹ In this province, first of all in the Sudan, a civilian was appointed Governor (in 1908). Railway extension from Suakin to Tokar is desirable (see p. 84).

Kassala.—Frontier problems with Eritrea and Abyssinia have always called for much attention. Some

¹ Since this date, the Seventeenth of January has been observed annually throughout the Sudan as "King's Day" and a general holiday.

of the tribes have proved troublesome, as the Gemilab in 1914, the Shukria and Hadendoa in 1917. An outlaw band under Abu Bakr was hunted down on the Atbara in 1914. There has been a good credit balance since 1909. Railway communication with Kassala town is badly wanted (see p. 83).

Kordofan and Nuba Mountains.—Separated as from January 1, 1913 (financially from January 1, 1914). El Obeid was reoccupied on December 17, 1899, and the whole huge province (then 167,000 square miles; now, by readjustment, Kordofan is 112,500, Nuba Mountains 32,200) was found devastated and depopulated by the Dervishes. From 1901 to 1905 many tribes, as the Hamar, Gowama, Awaida, Taaisha, &c., were brought back to their former homes in the province, whence the Khalifa had forcibly or otherwise removed them. There has also been much immigration of new folk from the west, as the Berti to Dar Hamar in 1904, and the Fellata, Hausa, and Takruri, who settle permanently *en route* to or from Mecca. Immigration from Darfur was forbidden (to conciliate Ali Dinar) in 1905. The towns of El Obeid, El Nahud, and Shershar have grown greatly in size.

The revenue of the province doubled between 1908 and 1913, and the surplus of £E.38,000 in 1912 surpassed that of any other province. The railway from Sennar *via* Kosti to El Obeid was opened in 1912. A slave-raiding gang was suppressed at Kailak in 1902, and this evil is now at an end. Even the Baggara tribes are learning to work for themselves. Long-existent intertribal feuds, as of the Kababish with the Beni Gerrar or Kawahla, and the Hawazma with the Messeria, are persistent. Raids from Darfur of Bedaiat and Gura'an have provoked reprisals in the north-west.

Kordofan, on the whole, has prospered and developed greatly, and its one source of anxiety now consists in the variations in the market price of gum, on which its welfare almost wholly depends. The Nuba Mountains province, on the other hand, has been and remains

constantly disturbed. The Nuba inhabitants, persecuted remorselessly by the Dervishes, have lasting feuds with the Arabs, and equally among themselves, and, trusting in their well-nigh impregnable and inaccessible rocky mountain fastnesses, honeycombed with galleries and caves, remain distrustful and often defiant of Government, a traditional hostility reaching back to the days of Mehemet Ali. All the mountaineers are now well armed with rifles obtained by raid and trade from Dervishes and Arabs.

Scarcely a year has passed without some disturbance with these hillmen. They enjoy a fight, and the most slender pretext is enough to provoke a raid on a neighbouring mountain; they are, however, said to be continually taunted by their women with "not being the men their fathers were." Hence the history of the period is that of one long series of punitive expeditions to the different *jebels* to enforce the maintenance of order, and, if possible, respect for the new Government. The years 1908-1910 and 1914-1917 were especially full of such expeditions, the restlessness of the latter years being certainly in part a reflex of the alarmist rumours concerning the situation in Egypt provoked by the European War. The list of such disturbances and patrol visits, often accompanied by stubborn, if brief, fighting, in which at times Arab sufferers from Nuba depredations have joyfully co-operated with the Government police and troops, includes those at Jebel Buram (1908-1917), Dagig (1910, 1913), Heiban (1911), Krongo Bakhait (1911), Tagoi (1910, 1911), Tira el-Akhdar (1914, 1915), all in Talodi district; Daier (1904), Eliri (1906), Nying Nying (1906), Katla Karun (1910), Shat el-Safia (1904), Miri (1915), and other hills in Kadugli district (1913), and in Dilling district, the worst of all, Dulman (1914), Fanda (1908), Kadaro (1906), Katla Kidu (1908, 1909), Mandal (1904, 1914), Sabei (1914), Tima (1909, 1910), and Nyima, the most formidable hill group (1906, 1908, 1914, 1916, 1917), whose inhabitants were finally reduced to submission for the first time in their his-

tory by serious military operations lasting from April 1917 to February 1918.

Upper Nile.—Called Fashoda down to 1903. Capital moved in May 1914 from Kodok to Malakal. Its southern portion became Mongalla province in 1906.

In both this and Mongalla province communications, owing to climate, rains, and swamps, are difficult both to open up and to keep open. The history of Upper Nile province is mainly that of the Shilluk, Dinka, and Nuer peoples¹ and the Government's relations with them. The Shilluk have given little trouble. Mek Yor was deposed in 1903, and removed to Wadi Halfa. His successor, Mek Fadiat, was loyal to his death on February 6, 1917. A bare majority of the votes of the five tribal chiefs, amid much excitement, then elected Mek Farfidi, when only the presence of a Government force prevented bloodshed. Some small Shilluk disturbances occurred in 1911 (caused by the regulations forbidding the slaughter of elephant herds by means of grass fires), in 1915, and in 1916. The Dinka have been both quarrelsome and lazy, especially the Khor Filus Dinka, who had to be compelled to pay their head tax in 1909. The Nuer, who form half the population and occupy half the province, have from the first been a difficult problem, the despair of the Governor, and still so remain. Savage, warlike, and suspicious, they have fought continually among themselves and with their neighbours. The Gaweir Nuer on the Bahr el-Zeraf gave much trouble in 1913 and 1914, but in 1916 paid their tribute. Punitive patrols were despatched against the Lau and the Garjak Nuer in 1917, both being old rebels against the Government. The Nuer country is one of the problems of the future. Financially the province has made good progress, showing a surplus first in 1911, which was more than doubled in 1912.

Mongalla.—Created in 1906. The military Sobat-

¹ See above, p. 39.

Pibor district was created out of it in 1912.¹ The frontier readjustment with Uganda dates from January 1, 1914.² The Beir tribe has constituted its chief domestic perplexity. From 1907 their raids on the Dinka were frequent, but a strong military expedition to Lom in the spring of 1912 subdued them. The Latuka country has recently been opened up. The Nilotic folk, especially the Bari, remain hopelessly lazy. The province does not yet pay its way.

Bahr el-Ghazal.—The Egyptian flag was hoisted at Meshra el-Rek in September 1898, but a military force first reached the place on December 13, 1900. In June 1901 Sultan Tembura, on the Nile-Congo divide, was visited. In 1902 military posts were established at Wau, Tonj, Rumbek, Shambe, and elsewhere, and a civil administration replaced the purely military occupation. By an ordinance of February 7, 1907, the Sudan codes were first applied to the province.

The eastern district has throughout called for much attention, owing to the unruliness of its Dinka and Nuer inhabitants. The Gok and Shish Dinka have been peaceable, the Agar and Atwot Dinka very much the reverse. In 1901 the Agar Dinka murdered a British officer,³ and were punished. They remained unfriendly in 1916. The Atwot Dinka on Lau River, and their chief Ashwol (Loitch section), have been continuously hostile since 1903, and quarrel also freely among themselves. Punitive expeditions in 1907 and 1910, and a visit of the chief to Khartum in 1911, made no lasting impression. In 1917, Ashwol was still at large, defying the Government, and the Atwot attacked a Government post at Gnopp. Vigorous military measures were taken against the tribe in 1918. In 1914 and 1915, the Nuer raided the Dinka near Lau and Rumbek, and the latter resent the payment of tribute in consequence.

In the central district the old question of grazing

¹ See above, pp. 2 n., 40.

² See above, p. 41.

³ Lieutenant Scott-Barbour.

rights on the Bahr el-Arab has led to continual quarrels between the Dinka of the north of the province and the Rizeigat Arabs from Darfur. In 1908, the Dinka attacked the Arabs (a novel venture on the part of a negro tribe); in 1909, the Arabs retaliated, and Nyamlell post was established to protect the Dinka. Arbitration in 1912 had some success. In 1914, the Dinka raided the Golo on the Wau-Chak-Chak road. In 1915, the Rizeigat again returned to the attack. In 1917, the Dinka remained restless and fractious.

The western, the only Moslem district, remains largely unadministered. There is much smuggling of arms into it. There are numerous petty tribes, each with its sultan. In 1907 district headquarters were moved from Dem Zubeir to Raga, and in March 1916 a regular garrison was placed at Kafia-Kengi. There was a Mandala raid in 1914 on the road to Abu Gabra, which is much used by Fellata pilgrims.

The Zande tribes of the Nile-Congo divide, a fine folk, are now well in hand. Sultan Yambio and his son Mangi were hostile in 1903-4, and were attacked in 1905, when the Sultan died of wounds. Mangi made submission and remained quiet till 1914, when he broke out again and was deported to Khartum, dying there in February 1916. There were other disturbances to the peace in the Yambio district in 1914, and a secret orgiastic society, the Bir, gave cause for anxiety here in 1916 and 1917. In 1918 it was still troublesome. A small mutiny in a company of the newly-raised Equatorial Sudanese battalion belonging to the district was easily suppressed in 1914. Sultan Tembura, on the other hand, was consistently friendly from the time of the mission to his district in June 1901 to his death in March 1914, when he was succeeded by Renzi, his son.

The hopes once entertained, as by Romolo Gessi, of the potential riches of the province, though probably justified, have so far not proved to be so. Much of its ivory finds its way over the watershed, or to the Greek traders in the old Lado Enclave, and its wild rubber

has proved a disappointing failure. Very large tracts of country in the central plains between Mvolo and Dem Zubeir are infertile and uninhabited. The province has never paid its way, and the annual deficit is considerable. On the other hand, all the south-western drier ironstone lands rising to the watershed are healthy, extremely fertile, and in places thickly populated. The value of the timber in this region is enormous. Its mineral wealth is an unknown quantity, but if, as may well be probable, the Nile-Congo divide is found to contain anything like the riches discovered in other parts of the great "backbone of Africa" to the south, the prosperity of the province is assured. At present its communications are bad and its administration most difficult. Without railway facilities little can be expected in the way of mineral discoveries or general development. (see p. 84).

Strategically, the province is of importance to the control of the Nile waterway, and this dictated the Government's attitude to the Marchand Mission in 1898 and the Lemaire Mission in 1904.¹ It also supplies plentiful and admirable recruits to the Sudan army alike from its Zande and from its Dinka and other negro tribes. Geographically, too, it belongs to the Sudan—however costly a possession—and to the Sudan only.

Darfur.—Incorporated in 1916. Its population is estimated to be a little over 1,000,000;² capital, El Fasher. The northern deserts in this province are barren, arid regions, capable of producing little beyond camels for the transport of merchandise and produce of the agricultural districts, which stretch from east to west across the centre of the country. Farther south and south-west (sixty miles from El Fasher) are the uplands of Jebel Marra, said to be

¹ See above, pp. 31 and 33.

² Meyer (Convers. Lexikon) states that the highest estimates place it at 1,500,000.

fertile and well watered. The wild Baggara, or cattle-owning Arabs, roam the plains of the west. The Masalit country, and the western districts generally, are rich in pasture lands, and maintain a large stock of cattle and sheep.

Here, as elsewhere in Africa where no permanent waterways exist, the economic and social progress of the country will largely depend upon the construction of railways (see p. 84), which are obviously desirable also on strategic grounds.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

THE northern Sudan, roughly north of 10° north latitude, is exclusively Moslem (Sunni); the southern predominantly pagan. The distinction corresponds to one of race. The Arabs, Beja, and Nubians (Barabra) are Moslems to a man, always liable to become the prey of fanatical excitement. Among the negroid population of the south Islam has made scarcely any progress, except to some very slight extent recently among the inhabitants of the western Bahr el-Ghazal, on the French frontier, and at Wau. But Mohammedan propaganda has always been, and remains, languid among the peoples regarded by the Arabs for long years as material for enslavement rather than for conversion. Neither have the southern Sudan tribes shown any desire to embrace Mohammedanism. If, e.g., a Shilluk journeys north and returns to his folk a convert to Islam, he is regarded as a degradation to his tribe.

Thus the southern Sudan remains almost entirely pagan—virgin, if not very promising, soil for cultivation by the Christian missionary. Only the fifth element in the Sudan population, the Nuba, is divided between Mohammedanism and paganism, Islam having made some progress in the northern hills, and even reputed pagan hills, such as Dilling, having come recently under Moslem influence. But the great majority of the Nuba are still pagans, and magic (especially for rain-making purposes) plays an important part in

their ceremonies. The native religion is said to grow more vague, superstitious, and debased the farther south one proceeds.

(a) *The Northern Sudan; Mohammedanism*

Ever since the Mahdia the danger of fanatical outbreaks has been persistent. A list of abortive risings has already been given (p. 42). Constant watchfulness and instant action on the part of the Government are still needed, though the danger recedes with the spread of education in the northern Sudan and the increase of prosperity. Mahdism is not yet totally extinct as a faith, and the ignorance of superstitious credulity is easily excited, especially among the Baggara. It is but a step from latent belief in Mahdism to active revolt against government.

The constant tendency of Mohammedanism to create minor sects (*Tarikas*), as apart from the four main Sunni divisions of Islam, is also visible in the northern Sudan. Such sects are not necessarily disloyal. Thus the *Morghani* in the eastern Sudan were loyal in the Mahdia. The *Khatmia* sect exercises to-day a widespread influence from Kassala, and was similarly loyal. At present two brothers, Ahmed and Ali, are heads of the family, but they are not on good terms with one another. The former was educated by the Dervishes, the latter under Government influence. The *Ahmedia* sect has to-day a following among the fanatical Danagla—to whom the original Mahdi belonged. Its leader is Mohammed Abdul Mutal, who is connected by marriage with the Senussi and by blood relationship with the Idrisi of Asir (Arabia). *Senussi* influence in the Sudan reached low-water mark with the failure and death of Ali Dinar in Darfur, where alone it had made some way. A small sect found at Sinkat (Red Sea province) in 1915 has tenets akin to those of the notorious *Wahabi* Tarika, which in the Hejaz has not been very well disposed to the Sherif of Mecca. But its founder, Mohammed Madi, was removed to Egypt, and, in view of the passive fatalism

of its creed, the sect is probably not dangerous. The difficulty in dealing with all such sects is their elusive character. Orthodox Mohammedanism dislikes them, and thus no leader of a sect can be officially recognised as such by the Government. As their adherents wear no distinguishing mark, so much the greater is the need for official vigilance. Large numbers, too, of Mecca pilgrims from West Africa—Fellata, Takruri, Hausa—pour annually into the Sudan, and many remain as permanent settlers, the estimated number in 1912 being 16,000. They are splendid and cheery workers, and are encouraged by the Government. But their religious zeal makes them extremely fanatical, and in this respect they need watching.

The policy of the Sudan Government has always been, and remains, that of encouraging Islam in all its legitimate modes of expression. It has built and maintained many mosques all over the country. Christian propaganda and proselytism are forbidden in the northern Sudan. Christian churches and schools are allowed only in Khartum city, and the greatest precautions are taken to make it clear to the inhabitants that the attendance of children at such schools is voluntary. In the Gordon College itself Christian students are a very small percentage of the whole number. Outside Khartum no Christian missionary is authorised to preach in any part of the northern Sudan, but there are missionary schools at Khartum, Khartum North, and Omdurman. In all Government schools and colleges teaching of the Koran and vernacular Arabic are marked features of the work. The loyalty of the Ulemas and leaders of Mohammedan thought through the country on the outbreak of the war with Turkey at the end of 1914 was a natural consequence and due reward of the Government patronage of Islam in the northern Sudan. The early Government pledge of non-interference with any man in the exercise of his religion has been loyally kept. The Khartum Cathedral, built from the design of Mr. Weir Schultz,

in memory of Charles George Gordon, is a handsome and substantial red-sandstone structure, eminently suited to cope with the exigencies of a tropical climate.

(b) *The Southern Sudan; Christian Missions*

The religious and magical beliefs of the greater tribes of the southern Sudan (especially the Bari, Burun, Dinka, Golo, Shilluk, and Zande) are of the greatest diversity and interest. Among these peoples the Government encourages Christian missions, and has allotted strict geographical limits or "reservations" to the different churches, viz.:—

- (1) The Austrian Roman Catholic Mission (headquarters, Khartum), west of a line drawn along the Bahr el-Ghazal to Meshra el-Rek, and thence to the Nile-Congo Divide. Stations at Lul and Tonga on the White Nile, Wau, Kyango, Mbili (all in Bahr el-Ghazal province), and at Dilling (originally established 1874). The Mission was temporarily suspended in 1916.
- (2) The Church Missionary Society, in the country east of the above line (from 1905). Stations: two in Mongalla province and one at Yambio (Bahr el-Ghazal province).
- (3) The American Mission to the Shilluk. Station: Doleib, on the Sobat (founded 1902).
- (4) Sudan United Mission to the Dinkas (founded 1913). Station: Melut, east of the White Nile in Upper Nile province.

The medical work of all these missions is productive of obviously good and immediate results. Actual conversions have hitherto been very few in number. The hope for the future resides with the children, and with the children only. The insistence on the duty of monogamy is here, as in Uganda, a great hindrance to the spread of Christianity. Among the Zande a secret religious society, the Bir, with undesirable rites, continues to cause trouble.

(2) POLITICAL

The origin of the present system of government has already been described (p. 31). The condominium of Great Britain and Egypt, established by the Agreement of January 19, 1899, gave the Sudan a form of government in most respects autonomous.

The supreme military and civil command is vested in the Governor-General, who is appointed by Khedivial decree on the recommendation of the British Government, and is removable only by such decree and with the consent of that Government. In the discharge of his legislative and executive power he is (since January, 1910) assisted by a Council, created on the analogy of the Executive Council of the Governor-General of India, consisting of four ex-officio members and from two to four others appointed by him. He can overrule the Council's decision. All laws—Sudan Ordinances—are the decisions of the Governor-General in Council, issued by him as proclamations. These have to be notified to Cairo, but are independent of any power of objection or amendment by the Egyptian authorities. Appointments to and promotions in the Sudan Government Service and all military matters are excluded from the competence of the Council. Other matters for formal decision by the Governor-General in Council are the annual budget and all supplementary credits, and in general all administrative and legislative concerns submitted by the various departments, or those which the Governor-General himself wishes to refer to Council. In other matters which come up for discussion the Council acts as an advisory body to him.

Except for the Department of Irrigation and for one measure of financial control (the Sudan budget is submitted to Egypt for approval and audit), Khartum is practically independent of Cairo. No Egyptian law, ordinance or ministerial decree applies to the Sudan unless by the Governor-General's proclamation. Decentralization is the keynote of Sudan government. The

Provincial Governors have great latitude of action, and possess the widest powers. The annual reports from the Governor-General incorporate those from the various departments of administration and from the Provincial Governors, and are forwarded to the British High Commissioner in Egypt, who then sends them, with a covering note of his own, to the Foreign Office in London.

The higher officials (the Governor-General himself, the heads of departments, and the Provincial Governors and Inspectors) are British, and the majority have been Army officers. The Civil Service is recruited (up to 1914) by nomination of candidates from the Universities of Great Britain and Ireland. The choice of these rests ultimately with the Governor-General, who also nominates the Provincial Governors and the Provincial Inspectors (the latter from the ranks of the Civil Service).

The Mamurs (police officers and magistrates of districts into which the provinces are divided) are Egyptian or Sudanese officers. Their employment in these responsible positions has been generally justified. Increasing use is made of Sudanese for minor administrative and clerical posts under Government.

There is a comprehensive system of jurisdiction based on the Sudan Penal Code (1899), the Code of Criminal Procedure (1899), and the Civil Justice Ordinance (1900). By the provisions of the last-named Ordinance Mohammedan law (Mekhema Sharia) is applied in many cases where the parties concerned are Moslems. The higher judges and magistrates are British, but Mohammedan law is administered by *kadis* in special Courts (Appeal, Provincial, and District), who are paid by Government and are under the supervision of a Grand Kadi. It is one of the most important branches of the work of Gordon College to educate young natives for the position of local kadi. The work of the Mohammedan law courts is constantly increasing, as is the confidence reposed in their decisions by the Moslem inhabitants of the country.

Throughout the country tribal law and custom are administered by native sheikhs and chiefs recognised or appointed by Government. There is always appeal from their decision to a Government official, and they may not impose any capital sentence. But within these limits the Government, so far as is possible, refrains from interference with the application of tribal codes, which are often elaborate. Customary law is definitely recognised "so far as applicable and not repugnant to justice, equity, and good conscience" (a familiar principle in Eastern government).

Though the political conditions of the Sudan still require that the military element must, alike in personnel and method, wield a preponderating influence in the Government, yet the civilian administration tends to acquire an ever larger share. The employment of the native element in the Administration is also increasing, thanks to the steady policy and encouragement of the Government.

(3) EDUCATIONAL

Hitherto the Government system of education has been confined to the peoples of the northern Sudan. Its extension to the Nuba and negroid peoples of the south has not yet been possible.

To-day the schools and educational institutions which come directly under the central authority of the Sudan Education Department fall into five classes:—

(1) *Elementary Vernacular Schools* (the "*Rate-aided Kuttabs*").—These are graded into two classes: first (in towns) and second (village schools). They are staffed by native teachers trained at Gordon College and paid by Government. Age of admission, seven to ten years. Elementary Arabic and arithmetic, and, where possible, reading and writing are taught, but not English. In some provinces these schools are partly supported by a small voluntary rate. Parents who do not contribute are expected to pay small fees for their sons' first two years' schooling. The *kuttabs* are a

notable success. In 1913 there were 28 first class and 21 second class schools, educating some 4,000 boys. One such school for fifty girls was established at Rufaa (Blue Nile province) in 1911. There were also, in 1916, girls' schools at Dongola, Merowe (Merawi) and Kamlin, numbering 35, 20, and 44 girls respectively. The number of *kuttabs* has been steadily increasing. In 1916 there were 56, with a total number of about 4,375 pupils.

(2) *Primary Schools*.—Instituted for the education of the sons of Government employees and of natives of higher social standing than the bulk of the population. They are eight in number (at Khartum, Omdurman, Halfa, Berber, El Obeid, Atbara, Wad Medani, and Suakin). Age of admission, eight to eleven years. Qualifying entrance examination (all except the Khartum school have preparatory sections). Fees, 300 pt. a year. There is a boarding-house at the Khartum school. English is taught, as the intention of these schools is to train native boys to fill junior positions in Government employ, on the railways, &c.

(3) *The Upper School, Gordon College*.—A secondary school for boys who have completed their primary course. Training, intended to last four years, is either literary (for candidates for future employment under the Department of Education as teachers, translators, &c.) or scientific (for those to be employed in the Departments of Public Works, Irrigation, Survey, and Railways). The number of pupils in the school in 1916 was 60.

(4) *The Training Colleges*.—Two in number, one at the Gordon College, the other at Omdurman. The former is for sheikhs' sons, mainly to educate them to be kadis in the Mohammedan law courts. They must have been at a primary school or in the corresponding preparatory section at Gordon College. Age of admission, twelve years. Boys must be of good birth and specially recommended as suitable. The number of pupils in 1916 was 52. The latter college is intended for training teachers for the *kuttabs*. The course lasts

three years. The number of pupils in 1916 was 50.

(5) *Instructional Workshops*.—For the technical education of boys who have attended a *kuttab*. They are three in number (at Gordon College, Omdurman, and Kassala). The workshops are staffed by British managers and assistants with Egyptian artisans to help them. Age of admission, 14 years. Length of course, 5 years when possible. Subjects taught: carpentry, smiths' work, fitting, machine-running, masonry, pottery, cotton-ginning, &c. The number of pupils at the three workshops in 1916 was 154, 53, and 35 respectively.

The total number of pupils under instruction by the Education Department was 4,118 in 1911 and 5,226 in 1913, 5,000 of these latter being Moslems. Affiliated to the Gordon College are the Wellcome Government Research Laboratories, where investigations are carried on in connection with human, plant, and animal diseases, and with the economic products of the country. A Central Research Farm has been organised at Khartum North, under the auspices of the Education Department, for the furtherance of agricultural research and education. Laboratories have been built for the study of agricultural botany, physiology, and bacteriology. Comparative field experiments with such staple crops as cotton, wheat, and lubia are supplemented by the study of plant introduction, seed selection, horticulture, experimental forestry, and market gardening. The geological survey, the antiquities service, and the natural history museum are also attached to the Education Department. From the opening of Gordon College at Khartum (on November 8, 1902) to the present day the system of public education in the northern Sudan, of which that college is the very keystone, has developed on lines carefully thought out. Alike, the system and its administration are altogether admirable. The whole welfare of the country, both present and future, is bound up with it.

GENERAL OBSERVATIONS

Summary of Progress. The European War

Twenty years have passed (1918) since the reconquest of the Sudan. In this short space of time much progress has been made. There have been instituted systems of administration, both central and local, of jurisdiction, and of education, and a civil service. Peace has been secured and order maintained. Fanatical outbreaks have been instantly checked. Slavery has been suppressed. No enemy has attacked from outside. The rebel Sultan of Darfur has been slain and his country annexed. Intertribal warfare has been greatly diminished. Friendly relations have been constantly maintained with neighbouring administrations. Only in the Nuba Mountains and in the Nuer country are military expeditions still needed, and these on no large scale. The administration has not yet fully penetrated to the south-eastern and western extremities of the country. The state of the Abyssinian frontier is one of constant unrest; and the work of pacification is thus not yet fully complete. But by far the greater part of the Anglo-Egyptian Sudan is now a land at rest. Perhaps for the first time in the whole history of the country, a man's life is now secure against violence, and his property against injustice and extortion. Much remains to be done, but the experience of the years 1898-1918 suggests no change of method or temper in the administration. The needs of the Sudan are obvious. Capital is wanted for many schemes, first and foremost for railway extension. Labour is hard to find—for Arab dignity is the product of many generations accustomed to the mastery of slaves; and negro inertia is content with a minimum of comfort if it may enjoy repose. Education may be widely extended. A Government is needed in Abyssinia strong enough to keep the peace on its borders. The Civil Service is too short-handed. Economic development lags far behind its possibilities. But progress, in all respects, has been

far more rapid than was believed possible in the early days of the period, and there is no room in the Sudan for impatience, irritability, or ill-considered haste.

The final test of fifteen years of work came with the outbreak of the European War, and especially Turkey's share in it at the end of 1914. The loyalty of the Arabs, the quiet of the negroes, might then well have been shaken. Both were rooted in contentment and stood firm. Martial law was proclaimed at Khartum on November 14, 1914, and an emissary from Enver Pasha, sent to tamper with the officers of the army, was captured at Port Sudan. Neither this nor the declaration of the British Protectorate over Egypt, on December 18, 1914, caused any excitement. The threat of invasion to Egypt both from east and west produced a crop of alarmist rumours, but no open disaffection, save in Darfur, and the peril passed away. Memories of former Turkish iniquities in the land were still vivid. The religious authorities, the Ulemas of Khartum and through the country, always sympathetically treated, honoured, and consulted by the Government, had no interest in any holy war on behalf of the Sultan of Turkey or of a traitorous and deposed Khedive of Egypt.

The truth of Sir Reginald Wingate's words was certain: "We English have spared no pains and expense to improve the lot of the people in every way." The Sudan is more than ever vital to Egypt for the latter country's security and the control of the water of the Nile. But the regeneration of the country since 1898 has brought peace and prosperity to the Sudan itself, as well as safety and wealth to Egypt.

¹ Speech to the Ulemas at Khartum on November 8, 1914, on the outbreak of the war with Turkey.

IV. ECONOMIC CONDITIONS

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) *Roads, Caravan Routes, Paths, and Tracks*

IN the tropical regions of the southernmost portions of the Anglo-Egyptian Sudan communication is confined to a network of native bush-paths and tracks, human portage being almost the sole means of transport. Over the remaining and far larger area desert conditions prevail, and road communication is effected by means of riding and baggage animals travelling over caravan routes. In certain districts, notably in the provinces of Bahr el-Ghazal, Mongalla, and Kassala, and the southern part of the province of Kordofan, roads have been made and wheeled and motor transport introduced.

The general scheme of road communication in the Sudan is governed by both military and economic considerations, the object being to maintain a well-defined system of roads adequately provided with water. Across deserts the routes necessarily lie between wells and water-holes. The following are some of the main cross-country caravan and trade routes:—

The Darb el-Arbain (i.e., forty days' road), between El Fasher (Darfur) and Assiut (Egypt), a distance of 1,000 miles. The normal time taken is 32 marching days (31 miles a day), and 8 resting days spent at the wells and oases. This route passes through the natron deposits of Lagia and the oases of Selima and Kharga.

It is little used except by smugglers, and should not be attempted without guides.

Korosko to Abu Hamed, 240 miles across the Dongola bend of the Nile. At Murat Wells this route is joined by the Halfa-Murat road (110 miles). Before the construction of the railway this was the main road between Egypt and the Sudan.

Korti to Metemma and Shendi, 176 miles, used by date caravans from Dongola.

Debba to Khartum, 210 miles, used by date caravans between Dongola and Omdurman.

Debba to El Obeid, 362 miles, connecting the Dongola province with Kordofan, also used mainly by date caravans.

Berber to Suakin, 241 miles, connecting the Nile valley with the Red Sea. As a trade route this has been superseded by the railway.

Berber to Kassala, 246 miles, connecting the Nile valley with the Kassala province *via* Atbara.

Kassala to Khartum, 205 miles. This route has been improved to make it fit for motor and wheeled traffic.

Kassala to Tokar and Suakin, 297 miles, connecting Kassala with the Red Sea.

Kassala to Keren and Massawa (Eritrea), 240 miles. Beyond Keren, 150 miles from Kassala, either the Italian railway or wheeled transport can be used. This is the main trade route between the Italian colony of Eritrea and the Sudan.

Kassala to Gedaref, 130 miles.

Gedaref to Gallabat, 94 miles.

Gallabat to Lake Tsana *via* Chelga, 90 miles.

The last three routes named are trade routes to Abyssinia. Gedaref is connected with the Blue Nile at Singa, 170 miles distant, and Gallabat is also connected with the Blue Nile by 150 miles of road.

Renk to Roseires, 130 miles, connecting the White and Blue Niles.

Roseires to Dunkur (Abyssinia), 140 miles. The Abyssinian-Sudan frontier is crossed about half-way.

Gallabat to Dunkur, 80 miles.

El Dueim to El Obeid, 155 miles, connecting Kordofan with the Nile, but now superseded by the railway.

El Obeid to El Fasher, 446 miles, connecting Kordofan with Darfur.

El Obeid to Talodi, a Government post at the foot of the Nuba Mountains, 275 miles.

Talodi to Tonga, on the White Nile, 101 miles. This road can be used by motor and wheeled traffic.

Meshra el-Rek to Wau, 107 miles.

Shambe to Wau, 262 miles. Both this and the previous route have been improved to admit of wheeled traffic.

Shambe to Yambio (Bahr el-Ghazal) *via* Mvolo and Meridi. During the dry weather carts drawn by oxen and mules are used along this road. Beyond Yambio, to Tembura, human portorage is the only possible means of transport.

Rejaf to Aba (Belgian Congo) *via* Loka and Yeï in the old Lado Enclave, 147 miles. This is the main trade route from the Upper Nile to the Belgian Congo, and both motor and ox-cart transport are available along it.

Rejaf to Entebbe (Uganda) *via* Nimule on the Nile and Butiaba on Lake Albert. From Rejaf to Nimule, 150 miles, is a 5 to 8 days' march. Thence a small steamer runs to Butiaba, 165 miles, 136 of which are on the Nile and 29 on the lake. From Butiaba to Entebbe, 180 miles, is a 10 days' march. The alternative method of making this journey is by motor road to Lake Kioga, thence by rail, 40 miles, to Jinja, and thence by lake steamer to Entebbe. For various reasons it is easier to travel from Uganda to the Sudan than in the reverse direction. Porters in Uganda are easily obtained, as the natives, unlike the inhabitants of the Sudan, are accustomed to carry loads. Unless arrangements are made beforehand, the traveller from the Sudan usually has to remain at Rejaf until porters can arrive from Nimule or even from Entebbe.

Transport Animals.—The camel is the most useful animal for transport purposes north of about 12° north latitude. Large numbers of donkeys and mules are also used, and these are indispensable in the hilly regions. In southern Kordofan bulls are used for riding, and merchandise is carried on pack-oxen. The horse also is bred and used for riding purposes in Kordofan, in parts of the Dongola province, and in the northern portion of the Gezira (between the White and the Blue Niles), but its incapacity to travel long distances without water detracts from its utility. Ponies and country-breds are to be obtained near the Abyssinian border. The principal horse-owning tribes in the Sudan are the Homr and the Messeria-Baggara in southern Kordofan. Some of the horses bred by the latter are trained to travel, in an emergency, as much as 60 miles without water.

The chief breeding grounds of the camel are to be found in the Nubian desert (between the Nile, north of Berber, and the Red Sea), and in the Kababish and other districts in southern Dongola, also in the Hadendoa country, in the Red Sea province, and in northern Kordofan. In these districts a better breed of camel is produced than the slow transport animal of Lower Egypt. The average camel load is 360 lb., and the average daily distance a baggage camel will travel is about 20 miles. Camels on the march usually require watering every third day.

Mules are only obtainable from Abyssinia, or from Gedaref, Gallabat, Roseires, and Itang; they are suitable for pack-transport, but not for draught work.

Donkeys are to be bought in most parts of the country. The usual donkey load is from 110 to 150 lb., and if the whole journey is not long, progress can be made at the rate of 20 miles a day. The Sudan donkey does both riding and baggage work, but the Abyssinian animal objects to being ridden. Pack-oxen are used in southern Kordofan and in northern Bahr el-Ghazal. They are docile animals of the hump-backed species, and can carry from 150 to 200 lb.

(b) *Waterways*

Of primary importance in the life of the Sudan, as a means alike of communication and of irrigation, is the *Nile*,¹ which, with a total length of about 3,470 miles, is the longest river in Africa and the second longest in the world. Issuing by way of the Ripon Falls from Victoria Nyanza (Lake Victoria) in Uganda, at an altitude of more than 3,700 ft., it follows in the main a northerly course until it reaches the Mediterranean at Damietta in Egypt. For more than three-fifths of its course it flows through the Sudan.

For purposes of easy reference the Nile is usually divided into three sections: the Upper Nile, from the source to Lake No; the White Nile, from Lake No to Khartum; and the Main Nile, formed by the union of the Blue Nile and the White Nile, from Khartum to the sea.

(i) The *Upper Nile*, known to the natives as *Bahr el-Jebel* (river of the mountains), enters the Sudan at a point just south of Nimule, the first Anglo-Egyptian Sudan post. Below Nimule the river narrows and becomes a series of foaming torrents among rocks and boulders in the Fola Rapids and the Bedden Rapids for a distance of nearly 100 miles to Rejaf, whence it is navigable by large steamers to Khartum, a distance of about 1,100 miles. The river passes the old stations of Gondokoro on the right bank, Lado (28 miles from Rejaf) on the left, and Mongalla, 21 miles farther down, on the right bank. It then flows on to Bor (116 miles below Rejaf); and thence by many channels through a swampy region to Shambe, 128 miles

¹ There are considerable discrepancies in the estimates of the distances on the Nile as given by various authorities. The figures here given are for the most part taken from the tables in *The Anglo-Egyptian Sudan*, edited by Lord Edward Gleichen, except those relating to the cataracts, which are from *The Physiography of the River Nile and its Basin*, by Captain H. G. Lyons.

farther on, continuing through the *sudd* region (see below, p. 75), an expanse of papyrus and swamp vegetation with some stretches of open water, to Lake No (496 miles from Rejaf and 612 miles from Khartum), where it is joined by the Bahr el-Ghazal.

(ii) The *White Nile*, known to the natives as the *Bahr el-Abiad*, or white river, owing to the colour of its water at all seasons, flows from Lake No in an easterly direction, being joined after 65 miles by the *Bahr el-Zeraf* (river of giraffes), a stream which, formed by an overflow of the Bahr el-Jebel near Shambe, offers little outlet for trade but contributes considerably to the volume of water in the White Nile.

Thirty-one miles beyond the confluence of the Bahr el-Zeraf is that of the Sobat; five miles below which is the military post of Taufikia, and, seven miles lower still, Malakal (right bank), the administrative centre of the Upper Nile province. Forty-five miles below Malakal is Kodok (left bank), better known by its former name of Fashoda, and 161 miles beyond is Renk (right bank). At Jebelein, 60 miles farther on, a series of rocky reefs across the river makes navigation perhaps more difficult than at any other spot. A channel has been buoyed, but it is desirable that a passage should be dredged between the rocks. Below Kosti and just above Goz Abu Guma, which is 46 miles below Jebelein, 192 miles from Khartum, and 324 miles from the mouth of the Sobat, the Khartum-Sennar-El Obeid railway crosses the river. Some 70 miles north of this bridge is El Dueim, the old river port of Kordofan, whence it is 125 miles to Khartum. The Nile as it nears Khartum is over a mile wide, with an average depth of $6\frac{1}{2}$ ft.

The principal navigable tributaries of the White Nile are the Bahr el-Ghazal and the Sobat. The *Bahr el-Ghazal* is permanently navigable for a distance of 150 miles only, from Meshra el-Rek to Lake No. It has several important tributaries, the chief of which is the *Jur*, which joins it 25 miles below Meshra el-Rek. Others are the *Jel*, the *Tonj*, the *Pongo*, the *Kuru*,

and the *Bahr el-Arab*, all of which, like the Jur, have their sources in the Nile-Congo watershed. The Jur is navigable by river steamers as far as Wau (160 miles) during the season of high water, between July and October, but even then with difficulty in the narrows, where the passage is choked with masses of floating vegetation. For the remainder of the year the channel is completely blocked. Small steamers and boats can proceed beyond Wau for a considerable distance during the season of high water, and can also under favourable conditions ascend the tributaries of the Jur, the *Sueh* and the *Wau*, for 30-40 miles.

The *Sobat* or *Bahr el-Asfar* (yellow river), of which the section from the source to the confluence of the Pibor is known locally as the *Baro*, rises in the Abyssinian highlands. It is at its lowest about the end of April. Navigation in flood time (June to December) begins at Gambela, 100 miles from the source of the river, and 355 miles from its confluence with the Nile. Forty miles below Gambela on the left bank is Itang, and 80 miles down-stream is the confluence of the *Khor Adura*, a torrential stream, navigable for a short time during the flood season. Fifteen miles farther down is the mouth of the Pibor (left bank), and upon the same bank, nearly 30 miles lower, is Nasser Post. The next important place is Abwong (left bank), another 107 miles on; 71 miles farther is the American Mission Post at Doleib Hill, only 6 miles from the confluence of the river with the White Nile. The Sobat serves as the main waterway for Abyssinian trade *via* Gambela.

The *Pibor*, the chief tributary of the Sobat, rises in the swampy plains of the Mongalla province and flows northward. At Pibor Post (Fort Bruce), 182 miles from its mouth, it is joined by the *Veveno*, and at Akobo Post by its chief affluent, the *Akobo*, which rises in the Abyssinian hills, and has a length of about 200 miles. Thirty-three miles below Akobo Post, and the same distance from its junction with the Sobat, the Pibor is joined by another large affluent, the *Gillo*

(*Gila*), which also rises in the Abyssinian highlands, and has a total length of about 200 miles. Steamers have reached the Gog rapids on the Gillo, about 130 miles from its confluence with the Pibor. As the Pibor and its tributaries derive their water chiefly from the swamps, they do not begin to rise until the middle of June.

At Khartum, or more precisely opposite Omdurman, is the confluence of the White and Blue Niles. The *Blue Nile*, which rises in the mountains of Abyssinia, where it is known as the Abbai, enters the Anglo-Egyptian Sudan at Famaka, whereafter it is called by the natives the *Bahr el-Azrak* (the blue river), on account of the clearness of its waters when not in flood. Fifty-five miles below the spot at which it enters the Sudan is Roseires (right bank), where it first becomes navigable by river steamers. Between Roseires and Khartum, a distance of about 400 miles, the river has a fall of 218 ft. The next place of importance downstream is Singa (left bank), 120 miles distant, before reaching which the river falls 97 ft. At Sennar (left bank), about 50 miles below Singa, the Khartum-Sennar railway leaves the Blue Nile to run west to Kosti on the White Nile.

Fifty-five miles below Sennar, on the right bank, is the confluence of the *Dinder*, a large tributary rising in the Abyssinian hills, which is navigable during flood time by steamers for about 130 miles, and by small boats for a much greater distance. Some thirty-seven miles lower is Wad Medani, and on the right bank, 5 miles farther downstream, is the confluence of the Rahad, the second great affluent of the Blue Nile. The *Rahad* rises in the Abyssinian highlands west of Lake Tsana, has a total length of about 400 miles, and is navigable by small steamers during flood time over practically the whole distance. Near the confluence of the Rahad is the post of Abu Haraz, some 70 miles below which is Kamlin (left bank). Sixty-five miles farther downstream is Khartum. Here there used to be a steam ferry, now replaced by an iron railway bridge

The Blue Nile begins to rise about the end of May, and becomes navigable about June 20, by which time its waters have become reddish-brown in colour owing to the large quantity of alluvium held in suspension.

(iii) Of the *Main Nile*, the part of the river between Khartum and the sea, the Sudanese section is about 950 miles in length.

For the first section, between Khartum and Abu Hamed, a distance of about 330 miles, the river flows in a northerly direction, passing Metemma (left bank) opposite Shendi, Meroe and its pyramids (right bank), and El Damer (right bank), formerly celebrated as a centre of learning. A little lower, 200 miles north of Khartum, is the confluence of the *Atbara*. This river rises in Abyssinia, has a course of about 100 miles before entering the Sudan, and flows 460 miles farther before joining the Nile. For 170 miles of its course, up to Goz Abu Rejeb, the Atbara is navigable in flood time, but navigation is dangerous on account of the timber which is floated down. The width of the bed at the confluence is 400 yds., and the river is there spanned by an iron bridge of the Khartum-Halfa railway.

Beyond the confluence of the Atbara the Nile passes Berber (right bank) and is interrupted by the El Bagara rapid. The river changes its direction at Abu Hamed and flows south-west to Korti, 179 miles, passing Merowe (Merawi) (left bank), which, though the headquarters of the Dongola province and the residence of the Governor, consists of about 30 houses only.

The river then turns west to Debba, 45 miles, then north past Khandak (left bank) to Dongola, 90 miles from Debba, and to Kerma, 34 miles lower, and finally north-east for 246 miles to the town of Halfa (Wadi Halfa). In this last section there are many ancient tombs and temples on both banks. The total distance from Abu Hamed to Halfa by river is 595 miles, whereas by rail or caravan across the desert it is only 232 miles. The Nile leaves the Sudan at Sarra (right

bank), 22 miles north of Halfa, whence it flows through Egypt to the sea.

The Cataracts.—The navigation of the Nile beyond Khartum is much interrupted by cataracts, of which there are six between Khartum and the sea.

The highest, which is about 52 miles below Khartum, is known as the Sixth or Shabluka Cataract. It has a fall of about 20 ft., most of which occurs in a little over one mile. 194 miles farther on the Fifth Cataract begins, a little below El Abadia, and about 30 miles below Berber; it is over 100 miles in length, and in this distance the fall is 205 ft. About 60 miles beyond the Fifth Cataract is the Fourth, which is 68 miles in length and has a fall of 160 ft. Between the Fourth Cataract and Kerma, at the commencement of the Third, is a stretch of 200 miles of navigable water, which is the main trade route of the Dongola province. The Third Cataract, which has two rapids, is over 45 miles in length, with a fall of 36 ft.; and about 70 miles farther on is the Second Cataract, 125 miles long, with four rapids, passing through the inhospitable region known as the Batn el-Haggar (Belly of Rocks), where the Nile falls 213 ft. Halfa is 6 miles below the foot of the Second Cataract. The First Cataract (214 miles from the Second) is beyond the Sudan frontier, between Assuan and Shellal, and has a fall of 16 ft. in 3 miles. The river passes over the great dam at Assuan; and, by means of a fine masonry canal with several locks, navigation is made possible at all seasons of the year from Halfa to the mouth of the Nile at Damietta, a distance of nearly 1,000 miles. During flood season the cataracts are navigable by those who know their peculiarities and dangers, but they are not much used except for local communication, the railway being preferred for traffic between Halfa and Khartum.

The Sudd Region.—No account of the Nile and its navigation would be complete without a description of the *sudd* (Arabic *sadd*, meaning a "block") and the *sudd* region, that is to say, the huge area of marsh,

swamp, and open water, probably about 35,000 square miles in extent, through which the Bahr el-Jebel (Upper Nile), Bahr el-Ghazal, Bahr el-Zeraf, and the lower reaches of their tributaries wind their way. It doubtless represents what is left of the bed of an inland sea, in which the water is now probably nowhere more than 8 ft. deep. The vegetation consists mainly of papyrus, reeds, and swamp grass (*panicum*), with occasional patches of ambach (see below, p. 126). The word *sudd* should strictly be applied only to that portion of the vegetation which is uprooted by wind and rising water, and floats on the surface with a quantity of adhesive mud. The slow movement of these vast masses of floating weed, and the way in which they burst into the channels, break up, or pile upon one another when an obstruction is encountered, recall the action of ice floes when the pack is breaking up.

In the hot, dry season, when the stems of the papyrus are from 10 to 15 ft. in height, the region is swept from end to end by fierce fires, lighted by natives, which keep down the growth of ambach and destroy any other tree which attempts to gain a footing. The ash and burnt stems are added year by year to the floating mass of roots and soil, until in course of time it becomes of a solid, peaty consistency, as much as 5 or 6 ft. in thickness.

In clearing away this *sudd* and reopening the channels, the first step is to cut or burn the whole of the vegetation growing on the surface; the line of the channel is then marked out for a distance of about 30 ft., and men set to work to cut downwards, with long saws and other implements, as far as possible through the sodden mass, along the sides of the block. A steel-wire hawser is then forced deeply into the cuts and secured by telegraph pole holdfasts. Finally, the hawser is attached to a steamer, and the whole block is pulled gradually from its place and allowed to float down-stream. The process is then repeated with a second block; and so the work proceeds laboriously,

until a fairway is cleared, which can be kept open by patrols.

Between 1863 and 1880, the *sudd* region was completely blocked to navigation on many occasions, especially on the Upper Nile, from Lake No to Shambe. After the battle of Omdurman, steamers were sent up-stream to investigate; and in 1899 a party was despatched with five gunboats, which succeeded in opening many miles of channel. The remaining 22 miles were cleared by another expedition in 1903.

Owing to the exertions and enterprise of the Sudan Government, the Nile is now one of the best natural waterways in the world. Navigation is possible throughout the year from Rejaf to Khartum, up the Bahr el-Ghazal to Meshra el-Rek, from Kereima to Kerma on the Dongola reach, and from Halfa to Shellal. From Khartum to Rejaf the chief obstacles to navigation have been overcome. A navigable channel passing through Abu Zeid ford has been marked by buoys; rocks near Jebelein have been removed; the sandbanks have been buoyed; and through the *sudd* region a way has been cut which it is not difficult to keep open, and is fairly easily navigated. In addition, wood stations for the steamers have been established by the Government at convenient points.

Steamer Transport Services.—The administration of the Sudan Government Railways controls the steamer traffic on the river. The chief services are as follows:—

(a) From *Khartum* to *Rejaf* there is a fortnightly service of postal steamers. The time taken is usually fourteen days up-stream and eleven days down. At Rejaf connection is made with the overland routes to the Congo, and to Uganda and East Africa. The traders in the Upper Nile region of the Belgian Congo are largely dependent upon this route.

(b) From *Khartum* to *Meshra el-Rek*, on the Bahr el-Ghazal, there is a monthly postal service. The total distance is 765 miles, and the time taken is eleven days up-stream and nine days down. During the wet

season, from July to September, when the road to Wau, the capital of the Bahr el-Ghazal province (107 miles), is impassable, the boats ply only as far as the mouth of the Jur, 25 miles from Meshra el-Rek, where connection is made with a service of smaller steamers, which go up the Jur to Wau.

(c) From *Khartum* to *Gambela*, on the Sobat, there is a steamer every month from about the end of May to the end of November. The distance is 874 miles, and the time taken is thirteen days up-stream and ten days down. A large and increasing export and import trade with Abyssinia is carried on by this route.

(d) On the *Blue Nile* there is a fortnightly service from mid-June to mid-September. This plies between Wad Medani, 109 miles from Khartum on the Khartum-El Obeid railway, and Roseires, 259 miles up-stream. The time taken is six days up-stream and four days down. There is also a tug service between Sennar, where the railway leaves the river, and Abu Nama, 94 miles up-stream. When cargo offers, this tug service is extended both to Roseires and Wad Medani.

(e) From *Kereima* to *Kerma*, a distance of some 200 miles, steamers run in connection with the branch railway from Abu Hamed to Kereima from May to October, the time taken being four and a half days up-stream and three days down. During low Nile the steamers only run as far as Dongola (170 miles), produce being shipped from Dongola to Kerma (34 miles) by native sailing craft.

(f) Between *Halfa* and *Shellal* (Egypt), a distance of over 200 miles, there is a bi-weekly service of fine passenger steamers throughout the year, and a bi-weekly intermediate service, calling at 21 stations.

In addition to these regular services, arrangements can be made for carrying cargo or passengers up the Atbara to Goz Abu Rejeb, a journey which takes eight days up-stream, but only twenty hours down; also to places on the Rahad and the Dinder, and on other rivers when the state of the water permits.

The fleet of vessels under control of the Government comprises 33 steamers, 17 tugs, 28 launches, 10 gunboats, and 329 barges, sailing craft, &c. There is extensive dockyard accommodation at Khartum North, which is the headquarters of the Sudan Steamers and Boats Department. The postal steamers have eight to ten cabins, and carry about 80 tons of freight. All the steamers are flat-bottomed, some of them drawing only 18 in. of water, and most of them are stern-wheelers. The first three gunboats, which formed the nucleus of the present fleet, were originally built for service in the Far East, but were sold to the Egyptian Government at the time of the Sudan Expedition. The barges are from 300 tons burden, mostly built of steel, and in many cases double-decked. Sailing boats are of two types: *gyassas* (Egyptian boats), solidly built, with high bows and free-board, lateen-rigged, and with a carrying capacity of about 50 tons, and *nuggers*, roughly but solidly built, without ribs, having a low free-board and a carrying capacity of from 10 to 25 tons. There are also a large number of privately owned sailing boats. On the White Nile goods and passengers or troops are carried in barges lashed alongside and in front of the steamers. Sometimes as many as four barges are "pushed" in the American fashion by the larger steamers, which also have double-decked passenger barges or *sandals* on either side.

Like other areas to the south, the Khartum region at certain seasons of the year, usually during the hot weather, is subject to a very violent type of sand-storm known locally as a *haboob*. These storms, which cause considerable damage by burying walls, railway tracks, &c., in sand, and sometimes capsize steamers on the broad reaches of the river south of Khartum, spring up very suddenly and are commonly followed by heavy rain.

During the early years of the occupation the ever-increasing trade of the country, and especially of the river-borne traffic, seemed to justify the formation of a private company, with the result that the Sudan

Development Company sprang into existence. This enterprise fulfilled its obligations and entirely justified its existence during the period of its activities. The construction of the new railway in 1911, through the Blue Nile province to El Obeid, however, robbed it of one of its most important assets, the gum trade of Kordofan, which naturally passed to the railway. The company was therefore wound up, and the Government took over its fleet of steamers and its workshops.

(c) *Railways*

The railways of the Anglo-Egyptian Sudan—amounting in the aggregate to little over 1,500 miles of track—cannot be considered extensive in comparison with the immense superficial area of the country (over 1,000,000 square miles). It must, however, be remembered that this construction has been achieved in less than twenty years, over territories which two decades ago were peopled by wild tribes and their Arab conquerors. The introduction of a novel and costly means of transport into a land which even Gordon—who knew the country and its people as well as anyone of his day—condemned as a “hopeless and useless possession,” has nevertheless proved eminently successful.

Whilst Egypt had enjoyed the benefits of railway transport for many years, the Sudan up to 1880 possessed only one so-called railway line, of 3 ft. 6 in. gauge, badly built and still worse equipped, running between Wadi Halfa and Sarras, and constructed at immense cost by the Khedive Ismail. The history of the State-owned Sudan railways opens practically with the campaign of 1884-5; and construction went on with remarkable energy and success during the period covered by that of 1897-8. From such beginnings grew up the present admirable, if somewhat limited, system.

Railway construction up to the end of 1913 represented an outlay amounting to ££. 6,806,000 and an

annual expenditure upon upkeep of £E. 450,000. Revenue from all sources reached between £E. 560,000 and £E. 600,000, and profits are steadily on the increase.

There are three lines in the Sudan: the Khartum-Halfa Railway, from Khartum to Wadi Halfa, connected with the Egyptian system by means of a fleet of steamers on the Halfa-Shellal reach of the Nile; the Atbara-Port Sudan Railway, from Atbara Junction to Suakin and Port Sudan on the Red Sea; and the Khartum-Sennar-El Obeid Railway, connecting Kordofan with Khartum, *via* Sennar and the Blue Nile.

(i) The *Khartum-Halfa Railway*, after crossing the Blue Nile at Khartum, follows the right bank of the Nile through Atbara Junction (191 miles), where it crosses the Atbara river on a permanent steel-girder bridge, of seven 150-ft. spans (built in 1911), to Berber (25 miles); thence it runs to Abu Hamed (131 miles). From Abu Hamed the line cuts across the desert to meet the river again at Wadi Halfa (232 miles). This section runs through desolate and barren stretches of sun-scorched desert. The journey from Khartum to Halfa occupies about twenty-four hours; restaurant and sleeping cars are provided.

The main line was completed to Khartum North (Halfaya) in 1899. The construction of the big eight-span iron bridge which carries the line over the Blue Nile to the Khartum Central Station was not finished until 1909. An important goods station, with extensive customs stores, &c., has been built on the river bank at Khartum, close to the confluence of the two Niles and opposite Khartum North, the headquarters of the Steamers and Boats Department of the Government Railways. Its spacious quays and landing stages enable all the river-borne traffic from Omdurman and up and down river to be dealt with efficiently. The general offices and workshops of the Sudan Government Railways are at Atbara Junction.

From Abu Hamed a branch line, completed in 1905,

runs to Kereima (145 miles), in connection with a service of river steamers from Kerma and Dongola. An older military branch line, completed in 1897, from Halfa to Kerma, along the right bank of the Nile, no longer exists. From what is known as No. 6 Station in the desert, about half-way between Halfa and Abu Hamed, another short branch line, 28 miles in length, runs to Um Nabardi gold mine in the Atbai district.

(ii) The *Atbara-Port Sudan Railway*, completed in 1905, has a length of 305 miles. At Sallom Junction 22 miles from Port Sudan, a modern harbour equipped with all the latest appliances which was opened for shipping in 1909, the railway is joined by a short line of 25 miles from Suakin, 30 miles south of Port Sudan.

The first ninety miles of the journey from Port Sudan is through the hills, and at Summit Station an altitude of 3,000 ft. is reached; thereafter the run is on a gradual down-hill grade to the Nile. The line has no gradient steeper than 1 in 100, and no curve sharper than $17\frac{1}{2}$ chains radius. The journey from Port Sudan to Khartum occupies about twenty hours.

The building of a railway linking the Nile valley with the Red Sea has proved to be of enormous importance to the development of the Sudan, since it obviates a journey by rail and steamer of nearly 1,500 miles, from Khartum to the Mediterranean, involving no less than four trans-shipments of goods and passengers.

(iii) The *Khartum-Sennar-El Obeid Railway* runs along the left bank of the Blue Nile to Wad Medani (109 miles), where it connects with the Blue Nile steamer service, and thence to Sennar (59 miles). Before this section of the line was finished it was estimated that the traffic would justify the running of two, or at the most three, trains a week. This estimate, however, proved to be very much lower than the number actually required.

At Sennar the line leaves the Blue Nile and crosses the Gezira, the plain between the two Niles. At Rabak,

one mile above Kosti, and 238 miles by rail from Khartum, it crosses the White Nile by the Kosti bridge, which was built by an English firm. It then continues westward to El Obeid in Kordofan, another 192 miles, which place it reached in 1911. The construction of this portion of the line was of considerable difficulty, the country over which it passes, especially between Kosti and the terminus, being full of scrub and scattered trees.

From the first the railway was a paying concern, as the natives quickly realised the benefits which its opening conferred upon them. For years they had been content to float their produce down the Nile on flimsy rafts of reed and bamboo, and it would not have been surprising had they hesitated long before making the outlay necessary to secure transport by the new and more rapid means. Gum-arabic from the Kordofan province, to the extent of thousands of tons yearly, now reaches Khartum in a day and a half by rail, as compared with a fortnight's transport by camel, or the long camel and river journey *via* El Dueim.

The gauge of the Sudan Government railways is 3 ft. 6 in. As yet all are single tracks. English engine-drivers are employed on the expresses. There are four important bridges, viz., the Atbara, the Blue Nile, the White Nile, and the rolling-lift bridge connecting the two sides of the harbour at Port Sudan. There are few culverts and no gradients exceeding 1 in 100. Through bookings on the Egyptian as well as the Sudan railways are in operation both for passengers and goods.

Projected Railways.—The following are among the extensions contemplated or under consideration by the Sudan Government:—

(1) From Thamiam, a railway station 124 miles from Port Sudan, to Kassala, a total distance of 214 miles. This may at some future time be extended to Gedaref.

(2) From Suakin to Tokar, a distance of 56 miles, to serve the cotton districts. Tokar cotton at present has to be brought to the coast by camel transport.

(3) From Rahad, on the Khartum-El Obeid line to El Fasher, *via* El Odaiya. The distance from Rahad to El Odaiya is 171 miles, and from El Odaiya to El Fasher *via* Sharafa is 304 miles. It is impossible to prolong the line direct from El Obeid, because to the west of El Nahud and along the Darfur frontier there appears to be a belt of sand-dunes, eighty miles in width, with deep depressions and switchback slopes, known locally as *Gozland*.

A further project, for which no survey has yet been undertaken, is the extension of the El Odaiya line in a south-westerly direction along the old caravan route to Kafía-Kengi in the north-west of the Bahr el-Ghazal province. It has been discovered that the Nile-Congo watershed is suitable for a railway along its whole length. If a railway to Kafía-Kengi were constructed, and linked up with one along the Nile-Congo divide to Lake Albert, it would go far towards the completion of the Cape-to-Cairo railway route. There is little doubt that this would be the most feasible route, if not the only possible one, avoiding the *sudd* region.

Before either of these latter schemes is carried into effect it is probable that another short link in the rail-and-steamer Cape-to-Cairo transport facilities will be constructed, namely, that between Rejaf, the southern limit of steam navigation from Khartum, and Nimule, the northern limit of navigation from Lake Albert. The intervening section of the river, something less than 100 miles, and all within Sudan territory, consists of unnavigable water and the Fola rapids.

(d) *Posts, Telegraphs, and Telephones*

There are 118 post and telegraph offices in the Sudan. Many places on the railway or in reach of waterways are served by travelling post offices, the railways dealing with ordinary and registered

correspondence and parcels, the steamers with all branches of the postal business, as well as with telegrams at certain stations. There are telegraph offices near the railway stations at Halfa, Abu Hamed, Atbara, El Damer, Shendi, and Khartum. Letters can be posted on the trains. The mails take nine days normally between Khartum and London, and the service is twice weekly, as also is that between Khartum and Cairo, which takes four days. The mail-boat for the Bahr el-Ghazal leaves Khartum on the sixth day of each month; that for Rejaf on the sixth and the twenty-first of each month. There are monthly posts between Tembura, in the Bahr el-Ghazal province, and both the Belgian Congo and Ubanghi-Shari. The mail service in the Sudan is very efficient. Telegrams are accepted for certain places where no telegraph office exists, a special charge being made for delivery by native runner. There are about 4,777 miles of telegraph line, and nearly 10,000 miles of overhead wire, of which 676 miles are on railway poles.

Nasser and Gambela (Abyssinia), both on the Sobat river, are connected by wireless with the Sudan telegraph system at Malakal, on the White Nile. At the new military post of Kereinik, on the western frontier of Wadai-Darfur, there is a wireless installation.

With the exception of a universal system of telephones along the railway lines, the telephone service is limited to the towns of Khartum, Khartum North, Omdurman, Port Sudan, Suakin, El Obeid, Halfa, Berber, and Dongola. The provincial circuits include the provinces of Halfa, Berber, Dongola, Red Sea, and White Nile.

(2) EXTERNAL

(a) Ports

The chief Red Sea ports on the Sudan coast are Port Sudan and Suakin.

Port Sudan was completed and opened by the Khedive in 1909. The harbour has a good entrance two cables wide. It is protected from all winds, and

there is good anchorage in an average depth of 10 to 14 fathoms, with 5 fathoms off the permanent quays. The rise and fall of the tide is about 3 ft. Vessels can enter and leave the port at any time of day or night. There is room in the outer anchorage for several vessels: the largest vessel which has entered was of 16,909 gross tonnage. There are five quays, each 410 ft. long, and further up the harbour are two subsidiary quays, unprovided with cranes, where vessels up to 420 ft. in length can be berthed. There is also a 60-ton floating steam-crane, and a similar 15-ton crane for medium lifts.

Electric light is installed throughout, and the hauling and lifting plant worked by electricity is very complete. There are four electric coal transporters capable of dealing with 300 tons of coal per hour. The rolling bridge across the harbour is opened and closed by electricity, and the dockyard workshops are fitted with electrically-driven machinery.

All dues are charged on the Suez Canal tonnage, and pilotage is compulsory. There are large customs warehouses, a well-equipped modern hospital, and a quarantine station with disinfecting and hospital blocks. There is also a floating apparatus for disinfecting ships. Condensed water can be supplied to ships at 150 millièmes per ton on board.

Port Sudan town and harbour cost £E. 866,000 to build and equip. Practically all the imports and exports pass through it. In the first four years of its existence the external trade of the Sudan doubled in value, mainly through the use of the new Atbara-Port Sudan railway, but greatly assisted by the facilities at Port Sudan, which have made the harbour attractive to important lines of passenger and cargo steamers, which now call there regularly. In 1916 Port Sudan was entered by 286 British vessels, with an aggregate tonnage of 632,280, and 31 foreign vessels, with an aggregate tonnage of 59,619.

The old harbour of *Suakin*, which during the Expedition of 1884-5 accommodated as many as 34

vessels, has been almost entirely superseded by Port Sudan. Owing to the coral reefs on either side of the narrow entrance channel, Suakin is a difficult harbour to enter, and could never be made safe to enter at night. There are no appliances for loading and unloading. The port still carries on a small local trade.

Smaller harbours, used by sailing craft, are *Trinkitat* and *Akik* to the south of Suakin, and *Mohammed Gul* and *Haleib* to the north of Port Sudan:

(b) Shipping Lines

The principal companies calling at Port Sudan are the Khedivial Mail Steamship Co., the Austrian Lloyd, the Union-Castle Mail Steamship Co., the British India Steam Navigation Co., the Clan, Bucknall, Harrison, City, Hall, and Ellerman Lines, F. C. Strick & Co., and the Società Nazionale di Servizi Marittimi. Nearly all these maintained a service at regular intervals before the war.

(c) Cable and Wireless Communications

The Eastern Telegraph Company has a cable connecting Port Sudan with its main cable at Suakin.

There is a wireless station at Port Sudan, with a normal range of 250 nautical miles.

(d) Air Routes

There are serious difficulties in the way of the establishment of long-distance aerial routes through Tropical Africa. Practically the whole country south of the Sahara desert zone is covered with long grass, bush, or forest, in which no aeroplane, as at present constructed, could depend on landing with any degree of safety, or, having landed, could be certain of rising again. There are, moreover, soft ground and the mists of the wet season to contend against, as well as the thick dust-laden atmosphere of the *harmattan* season on the west coast, and the still thicker smoke-laden

atmosphere of the dry season, in both West and East Africa, when the bush is fired by the natives.

The Anglo-Egyptian Sudan lies, of course, on the direct overland route between Egypt and South Africa; and the British Air Ministry has discussed the possibility of inaugurating an air service to the Cape, provided with aerodromes at intervals of about 200 miles. By following alternately the Nile and the railway line, no difficulty need be experienced from Cairo to Khartum, a distance of 1,200 miles, or to Kosti, 175 miles farther south. Similarly, no difficulty arises in South Africa, along the railway from Cape Town to Broken Hill, or to Sakania, on the Rhodesia-Katanga frontier, or farther on to Elizabethville, in Katanga, 2,400 miles from the Cape. Aerodromes are already in course of construction along these two sections of the route. It is the intervening section, through Equatorial Africa, which constitutes at present the chief difficulty. The direct route would be Kosti-Malakal-Shambe-Rejaf-Koba (at the north end of Lake Albert)-Kasindi or Katwe (Lake Edward), and thence to Usumbura (Lake Tanganyika), or on to Kigoma and Abercorn. From the south end of Tanganyika the route would be south-west, across Lake Mweru, to the Lufira river and the Katanga railway, which would be followed south to Elizabethville; or the airman might make his way south-east to Lake Nyasa and thence *via* Blantyre, Beira, and Salisbury, to the Cape-to-Cairo railway at Bulawayo.

The alternatives to this direct route suggested by the Air Ministry¹ are as follows: (1) From Khartum, up the Blue Nile to Roseires, thence south, along the Abyssinian frontier, to Gambela and the western shore of Lake Rudolf; (2) from Roseires to the Sobat, thence to Gondokoro, near Rejaf; (3) from the Nile to Port Sudan, thence to Aden, and, *via* Addis Abbaba and Lake Rudolf, to the Uganda Railway; and (4) from

¹ *Geographical Journal*, Vol. LIII, No. 5, May 5, 1919.

the Uganda Railway across the Central Railway to the south end of Lake Tanganyika. None of these routes, however; appears to be feasible at the present time.

(B) INDUSTRY

(1) LABOUR

(a) Supply; Emigration and Immigration

According to the value of its contribution to the general prosperity of the country, the population of the Sudan may be roughly divided into three classes. The first consists of the primitive and unsophisticated natives of the southern districts, who so far have little economic value, and in most cases do not repay the cost of administration; the second includes the nomad and pastoral sections of the "Arabicized" population, who contribute, indirectly as local transporters, and directly by the sale of their animals, to the general welfare; while the third comprises the urban and agricultural population, native and foreign, to whose enterprise and labour the prosperity of the country is mainly due.

To the first class belong practically the entire population of the Bahr el-Ghazal, Mongalla, Nuba Mountains, and Upper Nile provinces, 14 per cent. of that of Darfur, and 28 per cent. of that of the White Nile province. In all, 54 per cent. of the total population of the Sudan belongs to this class.

The numbers in the second class are estimated to amount to about 10 per cent. of the total population; but, as in most Oriental countries, particularly where the population is nomad, it is difficult to obtain an accurate census. The true Arabs, of whom this class is largely composed, have never been inclined to work; from time immemorial they have been accustomed to supervise the labour of slaves; and in the Sudan of to-day, from which the slave-trade has been abolished, their energies are confined in the main to camel-breeding.

ing and cattle-raising, or, as in Kordofan, to transport work.

The population composing the third class is mainly riverain, except in Darfur, from which, as it has only lately come under the Sudan administration, no accurate statistics are yet to be obtained; in Kordofan, where, except in the south, there are no rivers; in Kassala, where the inhabitants live at a distance from perennial streams; and in the Red Sea province, composed of hills and maritime plain. In all, 36 per cent. of the population of the Sudan belongs to the third class.

The average density of population in the Sudan is $3\frac{1}{2}$ per square mile, but certain provinces are more closely populated than others. *Halfa* province is practically a desert, intersected by some 250 miles of the Nile, with a narrow fringe of cultivated and irrigated land along the banks of the river. The entire cultivated area is only 31 square miles, while the population, urban and agricultural, is 90,000, or 2 per acre on the cultivated portions. The inhabitants of this province are Berberines. Many of them enter domestic service in Egypt rather than cultivate their lands or work at home. There is therefore a continual emigration, which militates against the increase of the population.

The *Dongola* province is also mainly desert, but has, like Halfa, about 250 miles of river running through it. Its climatic conditions are also similar. Its cultivated area is about 146 square miles (of which 75 per cent. is dependent on artificial irrigation, 1 per cent. on rainfall, and 24 per cent. on inundation, that is, basin irrigation), while the agricultural population works out at 1.16 per acre. The people are industrious and seldom migrate.

In *Berber* province the climatic conditions are similar to those of Dongola; it is watered by 200 miles of the Nile, and also by the Atbara. In the summer there are torrential rains, with water depressions in the desert east of the Nile, where from time immemorial

dura (millet) has been grown, and whither the population migrates *en masse* during the season to sow and reap crops grown without the drudgery and expense of working the primitive *sakia* and *shaduf* (see p. 117). Seventy-five per cent. of the population of Berber are engaged in agriculture, and the remaining 25 per cent. in camel-breeding, transport, and cattle-raising. The people seldom emigrate, but there is a certain amount of immigration of Arabs from across the Egyptian border. The cultivated area is about 130 square miles (80 per cent. artificial irrigation and 20 per cent. rainfall). The agricultural population works out at 1·17 per acre. In this and other provinces north of Khartum the foreign population is chiefly mercantile.

In the *Red Sea* province the climate is quite different from that of the Nile regions. The hills are frequently surrounded by mists and heavy clouds, which are precipitated as rains in the winter, and burst into violent storms in the summer, when the Khor Baraka becomes swollen and inundates some 50,000 acres of land at Tokar. Sixty-five per cent. of the population is employed in agriculture, and 25 per cent. of the remainder in camel-breeding, transport, or cattle- and sheep-raising. The cultivated area covers 85 square miles (8 per cent. rainfall, 92 per cent. inundation), and the agricultural population amounts to about one person per acre only. The province, therefore, is mainly dependent upon outside labour for the cultivation and picking of the cotton crop. The resident population at Tokar is about 2,000, but during the cotton season the number is increased to 10,000. Of this total, 5,000 are drawn from the population of the province, the remaining 5,000 being West Africans (Hausa, Bornuese, and Fellata) who, passing through the Sudan on their way to Mecca, seize this opportunity of obtaining the wherewithal to pay for their passage across the Red Sea, and to accomplish their pilgrimage. Piece-work being unpopular, a daily wage of from 3 to 5 piastres ($7\frac{1}{2}d.$ to 1s.) per day is paid. The picking is done by boys and girls.

The "Arabicized" population of this province is Hamitic, not Semitic, and regards labour as less derogatory to its dignity than formerly. The well-known Hadendoa tribe ("Fuzzywuzzies") have even been employed on bridge-building work for the railway. The foreign population are engaged in seafaring and mercantile occupations, and a certain number of Arabians from the hills east of Jedda, on the Arabian coast, are employed as dock labourers. As the two chief ports are situated in this province, a certain amount of migration and movement is bound to occur. This, however, is confined to the passage of merchants and Arabs from the opposite shores of the Red Sea, and to and from Mecca.

Of the *Kassala* province, 279 square miles are under cultivation (artificial irrigation 30 per cent., rainfall 60 per cent., and inundation 10 per cent.). Eighty-one per cent. of the population is said to be available for labour (agriculture), which gives offly 0.4 person per acre. Supplementary labour is, therefore, very necessary, and is drawn from the same sources of supply as in the Red Sea province, with the addition of a few Abyssinians. About half the province lies south of Khartum, and has therefore a larger acreage under rainfall crops than those provinces which lie north of the capital.

The *Khartum* province, although the smallest of the political divisions (5,000 square miles), has the relatively large cultivated area of 208 square miles—all under artificial irrigation. The population is mainly urban, but to some extent agricultural (1 per acre of cultivated land). As Khartum, the capital of the Anglo-Egyptian Sudan, and also the large towns of Omdurman and Khartum North, are situated in this province, a large foreign element is attracted to it, chiefly to engage in trade. The labour of West African settlers is available.

The provinces south of Khartum, both climatically and ethnographically, are different from those north of it. Their populations—at any rate south of 10° north

latitude—are mainly negroid. With few exceptions the rainfall is sufficient, so that cultivation entails but little labour in comparison with what is necessary in districts irrigated by artificial means.

In *Kordofan* province the area cultivated amounts to about 284 square miles—all dependent upon rainfall. Sixty-three per cent. of the population is engaged in agriculture (1·2 persons per acre). The remaining 37 per cent. is occupied in cattle-raising, camel-breeding, transport work, or gum-collecting. In *Darfur* province also all the crops depend upon rainfall.

Bordering the Khartum province, and to the south of it, are the *Blue Nile* province and the *White Nile* province. With the exception of Khartum these are the most densely populated and best cultivated provinces. The Blue Nile province depends almost wholly upon rainfall, while of the White Nile province 21 per cent. is artificially irrigated, and the rest is dependent upon rainfall. The people of the White Nile province are intelligent and by no means unfriendly. The province comprises a considerable portion of the Gezira. Cultivation up till now has been entirely dependent on the rains, or on the Nile flood, which in places has extended (e.g., in 1898 and 1906) from six to ten miles inland from the true banks of the river. At times the crops are excellent, and the people avail themselves of any opportunity to hoard their harvests, local requirements for as much as three years having been supplied by a single harvest. Cattle-raising is a standing industry among the people, but, as the land is subject to long and severe droughts, the revenue derived from this pursuit varies greatly. Horse-breeding, also, is encouraged among the Arabs, and an annual horse show has been organized.

The conditions in *Sennar* province, which borders the Blue Nile, are much the same as those in the White Nile province. Only 5 per cent. of the area of cultivation is artificially irrigated. These conditions will change when the Gezira irrigation scheme is fully developed.

The three provinces of the Blue Nile, White Nile, and Sennar are, as it were, the granary of the central Sudan, and, as the population is on the increase and the Arabs are gradually becoming adapted to agriculture, a prosperous future is in view. Moreover, these provinces benefit from their proximity to the three large towns of Khartum, Omdurman, and Khartum North.

In the provinces of *Bahr el-Ghazal*, *Mongalla*, *Nuba Mountains*, and the *Upper Nile* the inhabitants, with the exception of the more intelligent and industrious natives of the western Bahr el-Ghazal, are primitive, indolent by nature, and with few wants. As labourers for development schemes they are of little use. When communication with the outside world becomes easier, and when cloth, beads, and other European articles become more familiar to them, their wants will increase, and they will realise the necessity of working in order to obtain the means to buy the things they need. In West Africa thriving native industries have sprung up under precisely this stimulus; and an instance of much the same process is to be seen in the Lower Sudan provinces, where the Arab camel-men are obliged to work in order to obtain money to buy gold ornaments for their women. The demand is so great that native jewellers have found it difficult to maintain a sufficient supply.

With regard to the supply of native labour as a whole, there remains much to be done in its organization and development. It has had to be supplemented from outside sources. Labourers have been brought from Upper Egypt on short contracts for Government work of various kinds, and the great majority of the dock labourers employed at the Red Sea ports are Arabs from the opposite coast of the Red Sea. These men are hardworking and frugal, but show little or no inclination to settle in the Sudan. The West Africans, as already mentioned (p. 91), furnish a migratory supply of labour; several hundred families come yearly to the western districts of the Bahr el-Ghazal from over the

border, and find employment in carrying ivory for merchants. The value of a negro woman being very much higher in the northern Moslem countries than in the south, the majority of the women accompanying these parties remain in the Sudan.

(b) *Labour Conditions*

A labour bureau was inaugurated in 1908. Its headquarters are at Khartum, where it works in co-operation with the governors of the provinces. Reports on the working of the scheme and the registration of Sudanese labourers show that the bureau is succeeding in its main object, namely, to increase Government control over the labouring population. This is especially the case in Khartum and in other large centres of population. The report for 1914 states: "The supply of unskilled labourers during this year has been fully equal to the demand, and the services of the Labour Bureau in this respect have in consequence been little utilised. The demand for the supply of skilled labourers has exceeded that of past years, particularly in the case of private companies, several of whom have engaged the greater part of their workmen through the medium of the Bureau."

The total number of Sudanese casual labourers registered throughout the country in 1914 was 11,443, and of *mugadamin* (gangmen) 515. Twelve gangmen and 527 labourers had been registered in the course of the year. The average daily wage for these casual labourers was $3\frac{1}{2}$ to 4 piastres ($8\frac{3}{4}d.$ to $10d.$), as in previous years. A scheme to assist ex-soldiers of the Egyptian Army to obtain civil employment had been put in force, and the bureau had been successful in obtaining situations as watchmen, storekeepers, &c., for a number of ex-soldiers who were too old for manual labour.

Reports in 1914 from various provinces called attention to the fall in the rate of wages. At Kassala the rate fell as low as $2\frac{1}{2}$ piastres per day, but rose on the commencement of the rains. In the White Nile pro-

vince the highest rate of wages reached during the year was 5 piastres per day, during the period August to October inclusive, and the lowest $3\frac{1}{2}$ piastres, during the period January to April. In the Maatuk district, which suffered greatly from the failure of the crops, labour could be obtained between April and August at 8 millièmes per day. In the Blue Nile province the price of labour dropped lower than it had ever done before, and in some parts actually fell to the abnormally low figure of $1\frac{1}{2}$ piastres per day. It is stated that in ordinary years during the rains the price of labour generally reaches 10 piastres per day, but in 1913, although the rains were good and the demand for labour consequently great, the daily wage never exceeded 6 piastres.

Reports in 1919 stated that labour in the Sudan was growing scarce, and that wages were correspondingly increasing. According to a report from the Blue Nile province, wages in many places reached as much as 45 piastres per day. In Rufaa the small merchants closed their shops and worked as manual labourers. One good result of the shortage of Sudanese labourers has been the employment of small Arab boys throughout the province in grain cultivation.

(2) AGRICULTURE

(a) *Products of Commercial Value*

In the northern provinces of the Anglo-Egyptian Sudan only the country lying close to the Nile and its tributaries is as a rule cultivated; in the rainfall zone, south of about 12° north latitude, especially in the tropical Upper Nile provinces, practically all the land could be made productive, but as yet little has been done to induce the natives to grow more than a sufficiency for their own requirements.

The principal *vegetable products* may be classified as follows: grain crops, oil and fodder crops, cotton and other fibres, gums, rubber, dates, medicinal plants and drugs, and other products.

Grain Crops.—The *large millet* (*sorghum, dura, dhurra, aish*) is the staple grain food of the Sudan and the crop grown most extensively, 61·7 per cent. of the total cultivated area being devoted to its production. Its cultivation might be increased to any extent. It is grown on irrigated holdings, rain land, and areas flooded by the annual rise of the Nile. There are many varieties of *dura*, each suited to some particular locality or conditions of soil and climate. Its albuminoid nutrient ratio is higher than that of wheat, and its fat-content is specially high, being 3·3 per cent., as against 1·2 per cent. in wheat. It is valuable as a substitute for wheat and other cereals in poultry and cattle food, a fact not sufficiently appreciated in the United Kingdom. The natives brew an intoxicating drink, in appearance rather like pea soup, from fermented *dura*. The chief market for this grain is Omdurman, during the months of April and May, when prices are usually at their highest—about £6 3s. to £6 10s. per metric ton.

A cleaning machine was erected in 1914 for experimental purposes at the Moghren Quays (Khartum) to deal with sesame and *dura*, and was in great demand early in the winter, when the export of these products was possible. There is no doubt that other machines could be utilised.

The *lesser or spiked millet* (*dukhn*) is the second most important grain crop of the Sudan, occupying 25 per cent. of the whole cultivated area. Cultivated chiefly as a rain crop, but also on irrigated holdings, it is the species most frequently grown in Kordofan. In 1916 over 10,000 metric tons of this cereal were exported to Arabia.

Wheat (*kamh*) occupied only 2 per cent. of the total cultivated area up to 1916, when efforts were made by the Government to increase the area under this crop both in Egypt and in the Sudan. It is grown chiefly in the Dongola province on irrigated holdings. The crop represents only 1 per cent. of the whole grain production of the Sudan, but, when the Gezira

irrigation scheme (see below, p. 120) has been carried out, it should be one of the most important rotation crops in that region. The types of wheat already grown appear to possess much the same qualities as the higher grades of Indian wheat. On the Gezira experimental station at Tayiba yields of over 50 bushels per acre have been obtained. The total yield of wheat in the Sudan in 1916 was estimated at 5,500 tons. One result of the war has been to demonstrate beyond question the value of the Sudan to Egypt as a source of food supplies. In 1917, in order to augment these, it was decided to put 20,000 acres in the northern Sudan under wheat as soon as possible by means of pump irrigation.

What little *maize* is grown is chiefly on irrigated holdings. The production for export could be increased to almost any extent. Maize is scarcely likely, however, to become popular locally, since the people are accustomed to millet flour, which requires less cooking and seems to be more easily digested.

Barley is grown to a small extent only, chiefly on irrigated land, and mainly in the Dongola province, to supply local requirements.

Oil and Fodder Crops.—*Sesame* (*simsim*) occupies about 5 per cent. of the cultivated area, and, as in other parts of tropical Africa, is grown chiefly as a rain crop. It gives a good return, and the small seeds yield over 50 per cent. of oil, which is used locally for cooking purposes.

Ground-nuts (*ful Sudani* or Sudan beans) are grown everywhere in the Sudan, but mainly in the tropical areas. They contain a valuable edible oil. The export is at present small.

The *castor-oil plant* (*ricinus*) can be grown almost anywhere in the Sudan, and thrives with the luxuriance of a weed. The oil is extracted by crushing and boiling, and is used by the natives for anointing the skin.

Leguminous crops succeed well in the Sudan. *Lubia*, a splendid fodder, produces a heavy crop; its beans are

used for food both for men and for animals. *Lucerne* and *bersine* thrive well. *Cow peas*, *lupins*, *chick peas*, &c., are cultivated mostly on the river banks in the northern Sudan during the low-water season.

Cotton and other Fibres.—Although cotton occupies only about 2 per cent. of the total area under cultivation, it is the most important product of the country from an economic point of view. Centuries ago a trade in raw cotton was carried on between the ancient kingdom of Sennar and Abyssinia. In more recent times, during the rule of the Khalifa, taxes in the Blue Nile district were paid largely in the shape of goods manufactured from locally grown cotton.

It has been said¹ of the Sudan as a whole, not merely of the Anglo-Egyptian Sudan : "Cotton has been grown by the natives as long as we have known anything about the Sudan; both in Nigeria and on the Nile. There is absolutely no reason why the Central and the Eastern Sudan should not be among the greatest cotton countries of the world."

Native-grown cotton, of which some 8,000 bales were exported from the Sudan in 1912, could not, however, compete with the scientifically cultivated product of Egypt unless the producers were supervised and instructed in the most modern methods. With this object in view, the Government has established experimental farms, and has placed under supervision the district of Tokar, where cotton has long been grown. In 1912 the Sudan Cotton Ordinance was passed. This decree regulates the importation and supply of cotton seed, through the Director of Agriculture, provides for special licences for ginning factories, and insists upon the clean picking of the cotton and the grading of the seed according to quality. It also empowers the governors of provinces to establish such regulations as may be requisite to meet special local conditions, and

¹ Kumm, *From Hausaland to Egypt*, 1910.

provides for the fencing of machinery, protection against fire in factories, notice of accidents, &c.

One great enemy of the cotton crops is the pink boll-worm, which in 1913 caused more damage than all the other cotton pests put together. It is the larva of a small moth (*Gelechia gossypiella*), which burrows into the seed, feeds upon it, and develops within it. As a preventive a regulation has been made that all premises where cotton seed is stored during the period in which the moth emerges from the chrysalis (May 1 to August 1 in Egypt) shall have wire netting or other protection over all apertures through which the moth might fly into the open.

The cotton-growing districts of the Sudan fall into four classes: areas under flood irrigation in Tokar and Kassala; the Gezira; areas north of Khartum; and areas entirely dependent on rainfall.

Areas under flood irrigation.—*Tokar* is situated about 56 miles south-east of Suakin. The flood water supply comes partly from the highlands of Eritrea and partly from the Kassala province. The principal river is the Khor¹ Baraka, which is in flood from about July to September, the maximum flow occurring between the middle of July and the middle of August. The extent and direction of the inundations on which the cotton crop depends for irrigation are themselves dependent on the course, at present entirely uncontrolled, of the Baraka when in flood.

Sowing takes place in August or September, so soon as the surface of the soil becomes dry enough. Picking begins at the end of December and continues until May. The average yield is about 400 lb. per feddan,² containing about 31·5 per cent. of lint. The quality of Tokar cotton is very good, and the colour satisfactory. Samples have been valued at $\frac{1}{4}d.$ per lb. higher than Egyptian cotton of the same grade.

The whole of the cotton crop in this district, amount-

¹ Khor = a stream which ceases to run above ground during the hot season.

² Feddan = 1·088 acres.

ing annually to over 8,000 tons of seed cotton, must pass (by regulation) into the Government cotton market at Tokar, where it is graded officially into four separate classes and afterwards weighed. No cotton is allowed to leave the market until it has been branded with its grade and the bales have been duly sealed. It is then sold by auction and sent by camel transport to Trinkitat harbour, where it is loaded into sailing vessels and taken to Suakin, a voyage of from one and a half to two days. There it is ginned and exported. No unginned cotton is allowed to leave the Sudan, except by land to Abyssinia and Eritrea.

Cotton-growing at Tokar could be considerably developed, at a comparatively small outlay, by adopting the following measures: (a) the control of the Baraka flood water in such a manner as to ensure a fixed and developed course; (b) the establishment of a local ginning factory; and (c) the construction of a railway line to Suakin. Should such a scheme be adopted, a permanent annual output of over 25,000 bales of lint might be expected.

In the *Kassala* district the conditions are similar to those in Tokar. The River Mareb, draining the highlands of Abyssinia and Eritrea, and the Khor Gash flood the country between July 7 and September 15. The annual crop is estimated at about 560 tons.

Here, too, there is the possibility of very great development. When the flood waters of the Khor Gash have been regulated, over 120,000 acres of suitable land could be put under cultivation, and the output of cotton could be raised to over 20,000 bales per annum, with the possibility of a far larger production in the future. Such developments, however, would be premature unless Kassala were linked up by railway with other centres; but that will shortly be accomplished by the projected railway of 214 miles to Thamiam, on the Atbara-Port Sudan line.

The output of cotton at Tokar during the period of nine years ending in 1916 is shown in the following table:—

Seed Cotton.				Ginned Cotton.
Season.	Yield in tons.	Price per ton.	Total value.	No. of bales. ¹
		£ s. d.	£	Bales.
1907-1908	3,981	12 9 0	49,563	7,022
1908-1909	2,843	19 10 3	45,718	4,133
1909-1910	4,361	34 10 0	150,454	7,693
1910-1911	6,912	21 19 6	151,891	12,193
1911-1912	4,982	19 2 10	95,364	8,788
1912-1913	5,077	23 7 2	118,590	8,957
1913-1914	2,936	20 15 8	61,020	5,168
1914-1915	9,035	12 15 8	115,497	15,937
1915-1916	5,692	20 11 0	116,970	10,060

¹ One bale weighs 400 lb.

The *Gezira* (Arabic for island), the district between the Blue and White Niles, is an ideal cotton-growing region. It is a flat, triangular plain, with Khartum at its apex, and the railway connecting the two Niles at its base. Its area is about 4,000,000 acres. It consists of fine alluvial soil, and, since the slope of the land from the Blue towards the White Nile is scarcely perceptible, no expenditure for levelling is involved; it would appear only to require irrigation to become one of the most fertile areas in the Sudan. A scheme for the irrigation of the *Gezira* is at present under consideration (see below, p. 120). Should it be realised, the annual crop of cotton from the first 500,000 acres brought into cultivation is estimated at not less than 10,000 bales of high-class Egyptian cotton, with the prospect of the production increasing to 250,000 bales within 10 or 15 years, and with further possibilities in the future. Besides this, it would be possible to grow some thousands of tons of grain and to rear large numbers of cattle and sheep. The total value of the cereal produce likely to be raised has been calculated at over £2,000,000 per annum.

The Sudan Plantations Syndicate, in co-operation with the Sudan Government and the British Cotton

Growing Association, has carried out trials on experimental farms with excellent results. It has its own farms at Barakat and Zeidab, and also works on behalf of the Government a farm at Tayiba. These farms are irrigated by water pumped from the Blue Nile, and the rotation of crops has been cotton, wheat, millet, beans, &c. In 1912 the cotton was valued by Liverpool merchants at $11\frac{1}{2}d.$ per lb., the price of "fully fair" Egyptian cotton on the same date being $10\frac{1}{4}d.$ In 1915 the average yield of cotton at Tayiba and Barakat was over 500 lb. to the acre, and the area under cultivation exceeded 4,300 acres. The Sudan Plantations Syndicate has a ginnery and baling press at Wad Medani, turning out over 1,200 bales per annum. The company has done much to prove the suitability of the soil of the Gezira for cotton-growing and to illustrate the best methods of cultivation.

The report of the Sudan Plantations Syndicate for the year ending June 30, 1917, states that the issued share capital remained at £135,000, and the debenture capital was likewise unchanged at £57,000. The crops from the three stations handled at the ginning factories in 1916 and 1917 were as follows:—

							1916.	1917.
							Bales.	Bales.
Barakat	...	...	...	...	...	...	1,687	1 956
Tayiba	...	...	...	...	...	...	1,010	1,432
Zeidab	...	...	...	...	...	...	2,080	1,631

The prices realised were highly satisfactory. Under an agreement entered into with the British Cotton Growing Association, 2,050 bales were purchased in Tokar and sold in Great Britain. The profit and loss account for the twelve months, after deduction of all outgoings, showed a net profit of £14,838, which, added to the balance of £9,676 brought forward from the previous year, brought the total credit balance to £24,514.

Areas north of Khartum.—Along the banks of the Nile at Zeidab, Fadlab, and Darmati, in the Berber

province, the Sudan Plantations Syndicate has pumping stations and a ginnery. Here 4,000 feddans are under cotton, but, owing to the prevalence of cold nights during the cotton season and other climatic conditions, this area is not nearly so suitable as the Gezira for cotton-growing.

There are other smaller estates near Khartum, the crops from which are ginned at the Gordon College ginnery in Khartum. The College also has attached to it an experimental farm at Khartum North, with powerful floating pumps on the Nile which supply water for irrigation purposes to the farm and also to other properties.

Areas dependent on rainfall.—Rain-grown cotton is confined to the districts south of the Gezira, chiefly Renk, Mellut, and Kodok, on the White Nile, and to the southern portion of the Kassala province. Although the American species is the best for sowing, some rain-grown cotton from the Sudan is considered better in quality than "middling American." Rain-grown cotton is cultivated by natives almost exclusively, and, since the introduction of the Sudan Cotton Ordinance, it is hoped that the picking and the separation of the boll and lint may be carried out in a more satisfactory manner than formerly.

The following table shows the total export of cotton from the Anglo-Egyptian Sudan during the years 1911-16 and the proportion contributed by the Tokar district and other places:—

Year.	Total Export.		From Tokar.		From other places.	
	Bales.		Bales.	Per-centage of total.	Bales.	Per-centage of total.
1911	22,823		12,193	53·4	10,630	46·6
1912	15,000		8,788	58·6	6,212	41·4
1913	12,830		8,957	69·8	3,873	30·2
1914	9,435		5,168	54·8	4,267	45·2
1915	23,765		15,937	67	7,828	33
1916	16,219		10,061	62	6,158	38

There is also an export of *cotton seed*, which contains an oil used for culinary purposes, for making edible fats, and for soap-making. The export amounted in 1914 to 3,012 tons, valued at £12,509, and rose in 1915 to 8,244 tons, valued at £33,376.

Cotton-seed cake is a by-product made from the pulp and débris left after the seeds have been crushed for the extraction of the oil. Decorticated cotton-seed cake is much used in Germany for feeding cattle, but is not in general use in Great Britain. Another by-product is *cotton-seed wax*.

Many *other fibres* are grown by the natives of the Nile provinces of the Sudan as rainfall crops in districts which are extremely unlikely ever to be in demand for cotton-growing. At present these are cultivated for native use only, but some would be of considerable commercial value if grown in sufficient quantity or cultivated as regular field crops so as to yield fibre of standard length and quality for the European markets. If it were not that the "retting" and other processes of preparation have to be carried out whilst the leaf-blades are fresh, and require costly machinery, the cultivation of these plants might be encouraged to almost any extent as a native industry, the raw material being bought by the Government or by private firms at a fixed price and machined on the spot.

Bow-string *hemp* is produced from the long fleshy leaves of the *Sansevieria guineensis*, which grows wild throughout the Bahr el-Ghazal and Mongalla provinces. The wild plants, however, are so widely scattered that the fibre cannot be profitably exploited. The plant can be readily propagated, and large waste areas of sandy bushland could be planted with it at very small cost. The plants begin to yield their crop of leaves two years after planting. Samples of plantation-grown *Sansevieria* fibre from Mongalla have been valued at £30 per ton.

Indian *jute* (*Corchorus capsularis*) has been grown experimentally at Kodok, on the White Nile, with success. In June 1911 a sample of 70 lb. was valued

in London at £24 per ton, the price of the best Calcutta jute in the same year being £25 per ton. The jute plant of the Sudan is *Corchorus olitorius*, and it is commonly cultivated for its leaves, which are used as a vegetable as well as for fibre. This plant has been reported as occurring in a wild state over extensive areas in the vicinity of swamps and islands on the White Nile. It was there found growing to a height of 6 ft., and the natives were retting it for rope-making.

Hibiscus (probably *esculentus*) was also met with in the same locality under similar conditions. This plant, the cultivated *okro*, is a tall, erect shrub, attaining a height of twelve feet or over, with a single, unbranched stem. The fibre is about 5 ft. 6 in. long.

Hibiscus cannabinus (*till*), the *Deccan hemp* of commerce, grows wild, and the fibre is used by the natives for rope-making. It is a tall, weedy shrub, 9 to 14 ft. in height. This plant could be extensively grown in the Mongalla province, the natives undertaking its cultivation, while the retting could be done by Government or private enterprise. Amongst other wild species of *Hibiscus* is *Hibiscus sabalariffa* (locally *karkadé*), a tall, erect shrub yielding a good fibre known in commerce as *Rozelle hemp*.

Crotolaria striata also grows wild. It produces a good fibre of commercial length, and its cultivation offers no difficulty.

Kapok, the floss from the seed-pods of *Eriodendron anfractuosum*, so successfully exploited in the ex-German African colonies as a plantation tree, could probably be grown to any extent in the Sudan south of about 12° north latitude. The fibre is used for upholstery, for making life-belts, and for many other purposes, and the wood for making pulp.

Sisal (*Agave rigida*) has been grown successfully from plants obtained from Eritrea. Neither copious irrigation nor a very rich soil is required for its cultivation.

The *deleib* palm (*Borassus flabelliformis*) yields *palmyra*, a brush-making fibre, while its leaves, and also those of the *doum* palm (*Hyphaene thebaica*), are used for making baskets and mats.

The Dead Sea apple tree, or *ushar* bush (*Calotropis procera*), which grows wild all over the Sudan, especially in the northern and north-eastern parts, also produces fibre, which has been priced as high as £24 per ton, and is used for stuffing cushions, &c. The yarn closely resembles cotton yarn, and the wood makes the best charcoal. Strong but coarse fibre can be obtained from the stems of the *banana* plant. Attempts have been made to exploit the *papyrus* rush (*Cyperus*) which covers many acres in the *sudd* region of the Upper Nile. The stems of this plant contain fibre and pulp suitable for paper-making, while the floating peat-like mass formed by its roots, together with those of other water plants, can be used as a substitute for coal. The supply of rush is almost unlimited, and although hitherto financial and technical mismanagement has prevented the success of schemes for its exploitation (see below, p. 137), it is probable that in the end its value for paper-making, if not for fuel, will be generally recognised.

Gums.—The *sant* tree (*Acacia arabica*) flourishes over large areas in the Sudan, both wild and in plantations. It yields a valuable timber, its bark and seed-pods can be used in tanning, and the gum which exudes from its stem has long been an article of commerce. The tree requires a sandy, ferruginous, well-drained soil and a short rainy season; both these conditions prevail in the province of Kordofan, which on that account, and also owing to its railway facilities, has become the chief centre of the gum industry. Large areas of acacia forest in Kordofan still remain untouched, but the extension of the railway to El Obeid has encouraged the natives to collect gum in the western parts of the province. There is also a considerable gum trade at Gedaref, and a certain amount is collected in the Gezira.

The best gum, pale in colour and highly viscous, is known locally as *hashab geneina*, and is obtained from grey-barked trees, privately owned and grown in a plantation (*geneina*). At the beginning of the dry season, usually in December, the collector makes an incision on the under side of the principal branches of each tree of three years or more, and then tears a narrow strip of bark upwards for two or three feet. In a few days gum begins to exude, and hardens into pear-shaped lumps, which the collector knocks off after about 60 days. The exudation continues till May or June, when the rains begin. The trees remain productive for 15 to 20 years, but are at their best between the ages of 8 and 12 years.

The gum from wild *hashab* trees is known as *hashab wadi*. It exudes naturally, is rather dark in colour, and is of less value than *hashab geneina*.

An inferior gum, known locally as *talh*, is obtained from acacias with red and white bark.

All these gums are soluble in water, can be mixed to form mucilage, and belong to the type known commercially as gum arabic. Their industrial uses are numerous. The finest kinds are used in the clearing of liqueurs, the finishing of silk, and the preparation of water colours; other good grades are employed in confectionery and pharmacy, in the preparation of textiles and paper, in calico printing, and in certain dyeing processes; while the cheaper sorts are used in the manufacture of stationery, matches, and ink.

There are various other gum-producing plants in the Sudan, notably *Sterculia cinerea*, which yields an insoluble, flaky gum similar to tragacanth and known as Tartar gum. Considerable quantities could be collected if a market could be found.

Rubber is collected in considerable quantities from vines (especially *Landolphia owariensis*) growing wild in the Mongalla, Bahr el-Ghazal, and Kordofan provinces. A British company has obtained a lease of the rubber-collecting in the province of Bahr el-Ghazal. The vines are cut down and dried, and the bark is then

separated, crushed, and washed, after which the rubber is collected and blocked.

As a plantation product rubber has not hitherto been a commercial success. The Para rubber tree (*Hevea brasiliensis*) thrives and yields well in the Upper Nile provinces, but, owing to the necessity of skilled labour for tapping, the need of machinery in the collection and preparation of the rubber, and the advisability of having white supervision, Para rubber is never likely to bulk largely as an export from the Sudan. The Ceara rubber tree (*Manihot glaziovii*) has for years flourished on the Kagulu experimental farm near Yei, in the Mongalla province, west of the Nile. This tree is extremely hardy and quick growing. It has been grown successfully and inexpensively on waste land by German planters in East Africa (see Tanganyika, No. 113 of this series, p. 68), and the same procedure might well be adopted in the Sudan. In the Upper Nile provinces there are many miles of bushland suitable for this purpose, and, with judicious encouragement by the Government, together with a fixed price for the produce, irrespective of market fluctuations, the cultivation of Ceara rubber might become a very extensive and lucrative native industry. The *Manihot*, although it grows luxuriantly at Kagulu and in many parts of the Upper Sudan, is not, in the ordinary sense of the word, a plantation tree, for under no system or method of regular tapping yet discovered will it survive and continue to give a yield for more than a few years. Money spent upon it as a plantation tree is wasted.

Dates are the chief fruit of commercial value in the Anglo-Egyptian Sudan. The palms (*Phoenix dactylifera*) are extensively cultivated in the Halfa, Dongola, and Berber provinces, on holdings along the river banks, artificially irrigated and privately owned. In most of the oases in the desert a wild variety is found. The Sudan product is a dry date, the best qualities being obtained from the Sukkot district in the Halfa province. Egypt is the chief market, but there is also

a large local demand, since dried and pressed dates form one of the chief foods of the nomad Arabs in the desert. Sudan dates are not suitable for export to Europe, as Algerian, Tunisian, and other soft dates are there preferred as dessert fruit.

Medicinal Plants and Drugs.—The chief medicinal plant is *senna* (*Cassia acutifolia*), which grows wild in the northern part of the Sudan, particularly in the Berber and Halfa provinces, and is also fairly extensively cultivated. In 1914 the price per ton was £20, and in 1916 it rose to £60. The product from the cultivated plant fetches somewhat less than that obtained from the wild plant, but it still brings the cultivator as much as £40 per acre. The *senna* is exported in a clean state to France and England.

Henbane, colocynth, datura, and other drugs grow wild in the Sudan, and, if in demand, could be obtained in quantity. Colocynth pulp is baled before exporting.

Other Products.—Wild *coffee* of promising quality is to be found in several places in the Mongalla and Bahr el-Ghazal provinces.

Sugar-cane is grown in Berber on irrigated holdings, and its cultivation might be largely extended. At present sugar is of little importance as an export.

Tobacco was at one time extensively grown in Egypt, and had a high reputation, especially for cigarettes. The Khedivial Government, however, found it more profitable, from the point of view of revenue, to import the dried leaf and export manufactured cigarettes. Cultivation was therefore abandoned, and leaf was imported, mainly from Greece, but also to some extent from Turkey. Subsequently the cultivation of tobacco became a Turkish monopoly, and in 1890 the Khedivial Government decreed that none at all should be grown in Egypt. The Anglo-Egyptian Sudan followed suit by an agreement in 1904. The monopoly remained in force until Turkey declared war and Egypt became a British Protectorate.

During 1917, when Thessaly and Anatolia—two of the chief tobacco-growing districts—were closed to

trade, small quantities of tobacco leaf were imported into Egypt from China and Havana. Since then a certain amount of inferior Indian tobacco has been imported for mixing.

Recently (1918) negotiations have been taken up between the Egyptian Ministry of Agriculture and the Ministry of Finance with the object of selecting areas for experimental tobacco cultivation, and it is anticipated that a revival of the industry will take place both in Egypt and the Sudan. The Upper Nile provinces, by reason of their fertility, climate, and the absence of frost—which is particularly injurious to the tobacco plant—should be specially suited for growing tobacco. Practically all the negroid tribes raise their own tobacco, and the plant may be seen on the outskirts of every village.

By a decree of January 24, 1914, import duties became leviable on tobacco, of whatever origin, brought into the Sudan.

The importance of the tobacco industry to Egypt, and its probable value to the Sudan, if it were revived and encouraged, may be estimated from the figures showing the revenues derived by the Egyptian Government from the import of tobacco leaf and the export of cigarettes. In 1898 the tobacco revenues amounted to £E.1,081,000. The export of cigarettes, chiefly to Germany, the best customer at that date, and to Great Britain, reached over £200,000,000 sterling in 1897, and in 1898 Cairo exporters alone attained the same figure.

Vegetable ivory is obtained from the kernel of the fruit of the *doum* or *dum* palm (*Hyphaene thebaica*). The nuts are collected in large quantities, and the ivory is used for the manufacture of cheap buttons and other small articles. There is much waste in the manufacturing process, and, to make the most of the possibilities offered by this trade, it will be necessary to import suitable machinery.

Live-stock and Animal Products.—A great part of the Sudan is a pastoral country, and the main occupa-

tion of its people, both Arab and negroid, is the raising of cattle, sheep, and goats. Of late years much has been done by the Government to gain the confidence of the chief negroid cattle-owning tribes in order to carry out measures for controlling the movement of cattle and stamping out animal diseases. Already the native welcomes the veterinary inspector, and is learning to doctor his cattle himself. His reluctance to sell is also being gradually overcome as he realises the use of money. The improvement of stock by breeding and the export of chilled and frozen carcasses to Europe are questions only of time and capital.

For the present, the Egyptian market provides a good opening for trade, and live-stock (pre-eminently sheep) forms one of the principal exports from the Sudan to Egypt. Over 20,000 cattle were sent thither, *via* Halfa and the Nile, in 1915, and more than 87,000 sheep and goats. The total number of cattle exported between January and October 1918 amounted to 31,782 head, and of sheep to 151,712 head, as compared with 18,518 head of cattle and 101,597 head of sheep during the corresponding period in 1917. In the province of Berber alone between 17,000 and 18,000 sheep are exported monthly from El Damer, the centre of the trade.

In the Bayuda desert immense flocks of sheep and goats are owned by the Hassania and other wandering Bedawi tribes. The Shilluk are considerable sheep-owners, but they seldom kill for meat. The natives purchase their wives with both sheep and cows, the latter especially being sought after. In Darfur the sheep carry little wool, but among the Zaghawa there is a species with long and curly hair, and the late Sultan, Ali Dinar, had large flocks of sheep of this description. The tribes of Kordofan are rich in the possession of sheep. In the south of this province there is a small, active breed which carries more meat in proportion to its size than the ordinary Arab breeds. Even the meanest of the village Arabs own small flocks of sheep and goats, as well as donkeys and some cattle.

Among tribes of the Bahr el-Ghazal, as also among the Dinka of Bor (Mongalla), a wife costs from 40 to 50 iron hoes or 20 to 30 sheep and goats. The Nuer own considerable numbers of beasts, which, like various other tribes, they rarely kill for meat; but they are too much afraid of their thieving neighbours in Abyssinia to make much parade of their possessions. The Selim Baggara tribes keep large numbers of sheep, but few cattle. The Dinka of the White Nile are similar in this respect, and pay their herd tax partly in kind and partly in money. The tribes of the Khor Gash, in Kassala, inhabiting a district which lies at an elevation of 1,735 feet, keep great herds of sheep and horned cattle, which they water every alternate day at the wells. The Atbai (Berber province) is regarded as one of the best grazing grounds in the Sudan, not only for sheep and goats, but also for camels.

On the White Nile, at Renk, the inhabitants own many sheep and goats, and at Shawal, Abu Lahm, and Aba Island the pasturage is said to be very rich. Round Omdurman large flocks of cattle and sheep wander at will among the rich grasses which cover the mud flats and islands as the river falls. There is little doubt that the live-stock industry of the Anglo-Egyptian Sudan is one of great potential importance, not only for the people, but for Government revenues.

Dependent upon the live-stock industry are the export of *hides* and *skins*, and the manufacture of native *leather*. Goat and sheep skins are chiefly used in the latter industry, the principal tanning materials employed being *sant* bark and pods (*Acacia arabica*), *mudus* bark (*Parkia filicoidea*), and *abu surug* bark (*Prosopis oblonga*). There is a considerable export of untanned hides and skins, principally to Great Britain and Egypt. Among these figure a certain number of camel skins.

The export of *wool* from the Sudan is insignificant, the sheep being for the most part of the species without wool. Some experiments in the breeding of sheen for wool are in progress by the Veterinary Department.

Even in Egypt so little attention is given to breed that the process of shearing scarcely pays, and the wool is scraped from the fresh-cured skin. Wool from the neighbourhood of the Red Sea coast is much coarser than that from other parts, and is mainly utilised for carpet-making and for army blankets.

There are many large *wild animals* in the Sudan, and an appreciable part of the revenue is derived from licences to kill big game.

The sale and export of *rhinoceros horns* have been prohibited since 1916. The black rhinoceros was found as far north as the Gash in 1880; a few still remain on the Setit, Rahad, Dinder, and Blue Nile; on the Bahr el-Jebel and Bahr el-Arab, and in the Bahr el-Ghazal province they are less scarce. The white rhinoceros is still to be found in considerable numbers in the western Bahr el-Ghazal, chiefly along the Nile-Congo divide. The destruction of the latter species is prohibited, but many are speared by the natives.

Ivory has always occupied an important position among Sudan products. It comes chiefly from the Upper Nile provinces, but there is also a large transit trade. The elephant is found on the Setit, from which river during the rainy season it ranges as far north as the Gash; also on the Upper Atbara, the Rahad, the Dinder, and the Blue Nile. It ranges across the Gezira in small numbers, and becomes more plentiful again along the Upper Sobat, the Pibor, and the Bahr el-Jebel, in the Bahr el-Ghazal province, and along the Bahr el-Arab as far north as Kalaka. The ivory from these southern swamp and grass districts is much larger than that of the Blue Nile and Abyssinian frontier—the tusks scaling up to 150 lb. or more—but it is softer, and for this and other reasons is of slightly less value. No organised effort to capture and train adult African elephants has been made, and attempts to rear the young on cows' or goats' milk or farinaceous substitutes have generally failed. The export of immature and cow ivory is forbidden. Hippopotamus teeth also figure among the ivory exports.

Ostrich Feathers have hitherto formed one of the staple products of the country. Practically all the export is obtained from wild birds. The chief market for the feathers is at El Nahud, in Kordofan, and the best qualities are said to come from the northern parts of that province. No great advance is likely to be made in the feather trade until circumstances favour the establishment of breeding farms. A successful experimental farm has been carried on by the Government for some years at Khartum.

Beeswax is collected by the natives and sold in a crude state to European and other traders, who clarify and strain before exporting it. Most of that exported from the Sudan comes from Abyssinia, *via* Gambela, and the eastern districts of the Sudan. In the drier ironstone districts of the Bahr el-Ghazal, towards the Nile-Congo watershed, unlimited quantities of honey and beeswax could also be collected, for here, as in other bush-covered countries annually subject to grass fires, almost every tree has some hollow or hole in it of which the bees take advantage. Every tenth tree would seem to have honey bees in it, or a nest of the little "eyefly" bee, which, though the smallest species in the world, seems to produce almost as much wax as the honey bee. The market value of Sudan beeswax is about £10 per cwt.

(b) *Methods of Cultivation*

Native Methods.—Methods of cultivation, especially in the Upper Sudan, are still primitive. The chief agricultural implement is the hoe, the type most generally in use being the long-handled push hoe, with a half-moon blade. Seeds are sown in holes dibbled into the soil with a curved and pointed stick, which is long enough to enable the operator to carry on his work without suffering from the fatigue of a bent back. Various small knives are used for harvesting the *dura*,

which, when cut, is carried to a threshing floor in the fields and beaten out by women or trodden out by cattle, the stalks being kept for fodder during the dry season. On irrigated holdings the value of manure is not overlooked. Primitive ploughs or harrows are in use in some districts. In spite of attempts on the part of the Government and private enterprise to introduce more up-to-date mechanical and labour-saving devices, little advance has been made in this direction. Probably in no country in the world is the cultivator more conservative and less willing to adopt modifications in his antiquated methods.

The native, however, thoroughly understands irrigation, and has learnt by centuries of practice to be very exact in levelling operations, the making of channels, and the training of water upon the irrigated patch. Even here, however, he has much to learn as to the use of labour-saving devices (see below, p. 117).

The Locust Pest.—A serious difficulty with which the Sudan farmer has to contend is the annual appearance of swarms of locusts, sweeping the country over which they pass bare of vegetation. It is the mature insect, in the flying stage, which does the greatest damage to crops, for at the larval or "hopper" stage the locust prefers to feed on the leaves of bushes. When the bushes are entirely covered, however, the rest of the hoppers cluster round the *dura* stalks and do considerable damage. The horde of hoppers travels at regular times, usually from 7.30 a.m. to 10 a.m. and from 3.30 p.m. till sunset. The course of advance is always with the wind, and if the wind changes during the siesta period the march is resumed in a new direction.

This regularity of movement makes it easier to attack the pest in the hopper stage than later. The Government has taken active measures to abate the nuisance, and the services of the officers of the Entomological Section of the Education Department at Khartum are always at the disposal of local authorities. As soon as the hatching of a swarm is reported, officials are sent to place food impregnated with poison across the path

likely to be taken. The number of separate swarms is so large, however, and simultaneous reports are made from so many different districts of a province, that it is hard work to secure general destruction of the pest. Moreover, the local natives are slow in coming to the assistance of the locust officers.

Irrigation.—Almost the only water-lifting devices used by the natives are the ancient bullock *sakia* or Persian wheel, built entirely of wood, with an endless chain of earthen pots; and the *shaduf*, with a long weighted lever worked by manual labour, and a goat skin, hauled up and down by donkey or mule. Iron *sakias*, which can be worked by a single animal and give a double output of water, have failed to become established, owing to lack of mechanical knowledge and suitable materials for repair. Iron bearings for the old wooden *sakias*, giving freer movement and therefore greater output, have fared little better, for the absence of the groaning noise made by the wooden bearings prevented the owner at a distance from knowing whether the *sakia* was working or not. The amount of water that can be raised to any height by either the *sakia* or the *shaduf* is inconsiderable, and the area commanded is small. Irrigation by such means is restricted to a comparatively narrow strip of land along the river bank, and the average native holding worked in this way extends to about ten acres only.

From the point of view of irrigation the Sudan may be divided into four zones—the northern, the Gezira, the southern, and the Red Sea and Kassala zones. The first two are practically dependent upon artificial irrigation, the third relies upon rainfall, and the last depends upon natural inundations.

The *northern zone* comprises Khartum and the provinces north of it. Here artificial irrigation is carried on along the river banks by means of two systems: either by canal irrigation, which necessitates the lifting of water from the river during the whole period of the growth of the crops, or by basin irrigation, by means of which certain blocks of land, having a surface level

lower than that reached by the river in its annual rise, receive in one heavy flooding sufficient moisture to mature a grain crop. Where canal irrigation is carried out the date palm is prominent, and most native holdings have a considerable number of trees, from which excellent returns are obtained, and beneath which grain and fodder crops and vegetables are grown. Basin irrigation on anything like a large scale is confined to the Dongola province. Here wheat is the principal crop, but some barley and green fodder are also cultivated.

The *Gezira zone* comprises the great plain between the White and Blue Niles, consisting of alluvial deposit ("cotton soil") instead of the dry sand so universally encountered in the country north of Khartum. In making this region productive nature would appear to have accomplished one-half of man's work for him by levelling millions of acres which, in the near future, when, by man's ingenuity and labour, water for irrigation purposes is forthcoming, will become white with cotton. It is in connection with this locality that the Government are maturing irrigation schemes upon which great hopes are based. The *Gezira*, in fact, admittedly holds out as fine prospects for cotton growing as any locality within the British Empire (see also p. 102).

The *southern zone* comprises that portion of the Sudan south of about 12° north latitude, where approximately North African and Saharan conditions give place to a region of abundant rains, upon which all agricultural effort depends. Variations in the amount and distribution of the rainfall being very considerable from year to year, the cultivator of the soil has little sense of security, and consequently small encouragement to adopt intensive methods of farming. Nevertheless, owing to the almost universal fertility of the soil, surprisingly rich crops are obtained.

In the *Red Sea and Kassala zone* irrigation depends upon the overflow of the Khor Baraka when in flood. This river, rising in the highlands of Eritrea, comes

down in July–September as a torrential stream, irrigating during a normal season 50,000 acres of cotton-growing lands at Tokar. The area under cultivation, however, depends entirely upon the extent and direction of the overflow, which is very variable. In 1912 the area flooded was 44,000 acres, as against 54,000 in 1911, the highest on record. Occasionally the river has broken away to the east, and the flood water has been lost on rough ground far outside the area allotted by the Government for cotton cultivation, with the result that the crop has been a failure. Attempts on a small scale to divert the flood into certain courses have been fairly successful; but, until the Khor Baraka is scientifically controlled (see p. 100), no great improvement can take place. The native in this district is anxious to use European ploughs and modern methods of cultivation, but it is not difficult to understand his aversion to any expenditure that would be fruitless should the flood water not irrigate his land.

The Khor Gash and the River Mareb are usually in flood between July 7 and September 15, and the conditions in Kassala as regards the uncertainty of the overflow are similar to those in Tokar. Engineering works are contemplated from which much improvement is expected.

Projected Irrigation Schemes.—The Anglo-Egyptian Sudan has witnessed the consummation of a number of engineering triumphs in connection with the conservation of water supplies since the country was released from a reign of terror less than twenty years ago and reopened to the world under British rule. There are now under consideration additional irrigation, storage, and reclamation schemes, having for their object either the provision of an abundant water supply to non-irrigated districts, by means of a masonry storage dam, or the reclamation of wide areas of land which at present are more or less useless. The most important of these are a scheme for the irrigation of the Gezira plain by means of the Blue Nile; a project for impound-

ing the waters of the White Nile for the benefit of Egypt; a scheme for a Bor-Sobat canal to avoid the waste of water in the *sudd* region; works to control the flood waters of the Khor Gash and the Khor Baraka; and the development of irrigation in the Dongola province.

The *Blue Nile irrigation scheme* is by far the most important, and has been under consideration in one form or another for nearly twenty years. The undertaking has for its object the irrigation of the great Gezira plain by means of a dam to be constructed on the Blue Nile and a main supply canal through the Gezira.

The dam is to be built at Makwa, a few miles south of Sennar, while the canal will take off above the dam and is intended for the irrigation of an initial 300,000 acres. The dam has to pass a discharge of 53,000 cubic ft. per second in a river whose serrated gauge diagram shows that it is subject to great and sudden fluctuations; and, in order to supply the feed canals, a head of water of 52 ft. is required. For the dam to be of sufficient strength to support the strain of such a head it is essential that it should be based upon rock; the Makwa site, 180 miles from Khartum, fulfils this requirement, and is the nearest suitable spot available.

The main canal (in connection with which a considerable part of the initial digging has been finished) will lead to a point at which the water will be delivered to about 300,000 acres. One part of this area may lie fallow every year, and one be put under green crops, leaving not less than 100,000 acres for cotton. Since cotton grows well as a winter crop in the Sudan, winter water only is required for its cultivation; so that it is possible to obtain a sufficient local supply without detriment to the irrigation requirements of Egypt.

The revised estimate of the cost of the dam amounts to £E. 1,750,000; but, in view of the rise in the price of

materials and the increased cost of labour, further consideration will be necessary to estimate the actual cost under existing circumstances. The cost of the main canal, to supply sufficient water for the irrigation of 300,000 acres or more, would be considerably above £E. 580,000.

The *White Nile scheme* is intended to control the waters of that river for the benefit of Egypt. It comprises a reservoir dam and a spill-water channel, the former being of the more immediate importance.

The dam, which would be built at Jebel el-Auli, would be capable of holding up an adequate summer supply for Egypt, and, if raised to a sufficient height, could impound, when necessary, excessive flood waters, for subsequent release into the main channel of the Nile. The reservoir thus formed would coincide with the White Nile valley behind the dam for at least as far up the river as Renk. Under normal conditions this section of the river already acts in each flood season as a reservoir for a distance of about 250 miles above Khartum. The flood in the Blue Nile comes down from the Abyssinian mountains early in the summer and, owing to the steep gradient of the river-bed, has such a force that, when it meets the more sluggish White Nile, it actually dams back the latter, and monopolises the channel below Khartum for some distance. Then, as the Blue Nile begins to fall, the pent-up flood of the White Nile breaks in and often produces a kind of second flood in Egypt. This impounding of the waters of the White Nile when the Blue Nile is in flood is shown by the discharges of the former river at El Dueim. During May and June the discharges at El Dueim and at Taufikia are about equal. As the Blue Nile rises the discharge at El Dueim first remains stationary, whilst the river continues to rise, and then in August diminishes as the Blue Nile flood strengthens. In October the discharge increases rapidly as the flood effect of the Blue Nile passes.

The design of the White Nile dam is described as being comparatively simple. The maximum head of water required is 11 yds., and no complications are anticipated regarding waterways or sluices. The cost has been estimated at about £E. 1,500,000, though, in view of the recent great increase in the price of labour, this cannot be regarded as final.

The spill-water channel would run through the central portions of the Gezira, from the Blue Nile above the Makwa (Sennar) dam, in order to conduct excessive flood water to the White Nile valley reservoir, which it would enter some way above the Jebel el-Auli dam. Its construction might be postponed until the completion of the Makwa dam makes it possible to excavate by dredging.

The *Bor-Sobat canal project*.—The volume of water in the White Nile, at least above the confluence of the Sobat, remains fairly constant at all seasons and under all conditions, no matter what the rainfall in the Upper Nile region and along the Nile-Congo watershed may be. It would be much larger if the supply from the Bahr el-Ghazal, with its many large tributaries, and from the Upper Nile were not wasted by evaporation and absorption in the *sudd* region (see above, p. 75), which acts as a natural reservoir. It has been computed that, at the point at which the river leaves this region, the volume of water is 50 to 80 per cent. less than that at the point of entrance. The discharge at Mongalla is estimated at from 20,000 to 70,000 cubic ft. per second, whereas, at the point at which the river enters Lake No, it is said to be only about 9,000 to 10,000 cubic ft. per second.

A possible remedy for this would be the cutting of a channel due north from Bor to near the mouth of the Sobat large enough to carry the entire summer discharge of the Upper Nile. Such a channel would practically be a straight canal, about 210 miles in length, and would reduce the distance for steamer transport between its two extreme points by more than one-half. This great work has been for some time past

under detailed consideration, and, if it were carried out, it is probable that over 1,000,000 acres of the Sudan in the *sudd* region could ultimately be reclaimed for cultivation. The originator of the scheme¹ proposed to utilize the material excavated from the canal as an embankment for a railway, which would serve as a link in the Cape-to-Cairo line. In recent years, however, the main channel of the Upper Nile from Shambe to Lake No has been cleared of *sudd*. The enormous expense of cutting the proposed canal would therefore appear to be unjustifiable, unless there were some danger of the waterway becoming again unnavigable.

An alternative, apparently, is the regulation of the main river-channel passing through the swamp region; but, even if this could be effectively accomplished, the results would be more uncertain than those of the canal. Regulation of the river above the *sudd* region could be secured by building a small dam at the outflow from Lake Albert, which then would have enormous capacity as a storage reservoir. It is realised that, if the Bor-Sobat canal were constructed, the control of the flood water in the White Nile would be difficult unless the Lake Albert dam were also constructed.

On the *Khor Gash* and *Khor Baraka* flood water control works have been already begun in conjunction with the Kassala and Red Sea railway extension; £E. 300,000 having been allowed for the control works in addition to the sum allotted for the construction of the railway.

For the development of basin irrigation in the *Don-gola province* it is proposed to continue the conversion of the remaining basin lands into perennial irrigation lands, either by building a barrage or by extending the right to pump water from the Nile, a right which hitherto has been retained exclusively by the Egyptian Government in order to safeguard the water supply of Lower Egypt.

¹ Sir William Willcocks, K.C.M.G

The Irrigation Service of the Egyptian Public Works Ministry exercises control over all matters concerning irrigation in both Egypt and the Egyptian Sudan. For convenience of administration the Sudan has been divided into four inspectorates. These are the Blue Nile division, in which are the Makwa dam and the Gezira canalisation; the White Nile and Upper Nile division, which includes the White Nile dam and all dredging and draining works in the *sudd* district; the Main Nile division, to which, among other works, belongs the development of the basins in the Dongola province; and the Kassala and Tokar division, which includes the areas commanded by the Khor Gash and Khor Baraka. The permanent staff comprises a director-general, and, in addition to an inspector, each division has either a director of works or from two to four assistant directors. Temporary staffs are engaged as required.

(c) *Forestry*

The Anglo-Egyptian Sudan contains no real forest, that is, no moisture-conserving rain-forest comparable with the evergreen timber forests of western and central Equatorial Africa. There are, however, strips of "gallery-forest" in valleys and *khors* in some of the upland districts on the east and south, towards the Abyssinian highlands, and also along the Nile-Congo watershed.

The Sudan regional area, including the Anglo-Egyptian Sudan, is botanically the bush region lying between the virgin forests of the Congo and the West African coast to the south, and the Sahara desert zone to the north. Along many of the rivers there are large trees or gallery-forest; on the ironstone plateau open bush and here and there areas of bamboo; in the low-lying parts papyrus swamps; in the Bauchi hill country and in Adamawa open grassland, and round Lake Chad, in Wadai, Darfur, and Kordofan, thin bush, scrub-covered country, and acacia bush. "Bush"

is grass country with trees and bushes scattered more or less thickly over it. Bush vegetation is of a much drier type than that found in evergreen forest, and very few of the species to be found in the one are represented in the other; it is, in fact, the halfway stage between forest and desert. What is often spoken of as "forest" in the Sudan is really bush in which the trees are larger and more numerous than elsewhere, as, for example, at some places along the banks of the White Nile and in the Bahr el-Ghazal. The nearest approach to a timber supply is probably in the western Bahr el-Ghazal region.

In about the latitude of Khartum, as the traveller proceeds southwards, acacia thorn trees begin to take the place of camel thorn and low desert scrub, increasing generally in number and size to about 10° north latitude. These trees cover immense areas of country in Darfur, Kordofan, Sennar, Kassala, and the Red Sea provinces, and also fringe certain parts of the Nile; and where the word "forest" is used it frequently refers to these gum-tree districts. A forest ordinance was enacted in 1912 which dealt largely with the cutting down of *hashab* (gum) trees in areas which had formerly been cultivated and to which the natives wished to return. Grass fires, started by the natives for purposes of hunting, for facilitating communications, or for grazing purposes after the rains begin, frequently do great damage to the gum forests of Kordofan and Kassala, and in the Sennar reserves; but these are now dealt with more promptly than formerly and the destruction caused by them has been much reduced. The staff employed on the important work of conserving the forests in Kordofan consists of two inspectors, seven forest rangers, and thirty forest guards, all mounted.

In southern Kordofan, as in many areas farther south, the *baobab* tree (*Adansonia digitata*) is a common feature of the landscape. Attention has recently been called to the value of baobab fibre for paper-making, in the preparation of explosives, for

making twine and rope, and as a substitute for cotton and silk. A concession has recently been granted to a company in Portuguese East Africa for the exploitation of this tree; and it may well be that in course of time an industry may be developed in the Sudan.

In the Dar Hamar and Dar Homr districts, where wells are few and far between, the inhabitants depend for their water supply in the dry season upon their *tebel*di tree water-tanks. These huge stemmed trees are very liable to become hollow, and can easily be scooped out and filled with water. Some are even self-filling during the rains and the water stored in them remains sweet throughout the hot weather. The *tebel*di trees are a highly prized form of private property, which is either rented or bought, and their possession often occasions bitter disputes. The populations on the Dar Hamar caravan route make a living by selling to travellers water stored in this way.

In the *sudd* region (see p. 75), practically no trees exist, except the ambach (*Herminiera elaphroxylon*), which reaches a height of from 10 to 15 ft. It usually grows in several feet of water and forms dense thickets of spiny branches and tangled stems, the latter being sometimes 3 ft. in diameter. The wood when old is very light and corky. The sticks and poles, though light, are fairly durable, and are used by the inhabitants for building and for making rafts, canoes, &c.

The dry ironstone lands of the south-west, sloping upwards from the swamp regions to a height of 2,000 to 3,000 ft. at the Nile-Congo watershed, are covered with heavy bush, the trees in which become finer and more numerous towards the divide. The best of this country extends along the watershed, throughout the whole length of the Bahr el-Ghazal province, and contains an almost inexhaustible supply of African mahogany (*Khaya senegalensis*) and other timber trees, of which the commonest are the *lulu* or shea-butter tree (*Butyrospermum*)—the fruit which produces the

butter being known as the "Sudan date," the *abu surug* (*Prosopis oblonga*), *mudus* (*Parkia filicoidea*), *higlik* (*Balanites aegyptiaca*), *ardeib* (*Tamarindus*), balsams, large acacias, and other bush species. The mahogany tree is to be found in both forest and bush. Most of this ironstone region of the western Bahr el-Ghazal is extremely fertile, especially that near the divide, which in places is thickly populated with natives of above the average level of intelligence, physique, and industry. If a railway were constructed the district would probably become prosperous and important.

The White Nile forests consist mainly of belts lining the banks of the river and its tributaries, and are composed chiefly of *sant* and, in a lesser degree, of other species of acacia. From Goz Abu Guma to Lake No the forest is composed chiefly of *higlik* (*Balanites*), *siddir* (*Zizyphus*), *dabkar* (*Crataeva religiosa*), and acacia of various kinds.

The Blue Nile forests, north of 12° north latitude, have a composition similar to those of the White Nile province. To the south, however, a change occurs, the most abundant trees being *silag* (*Anogeissus leiocarpus*) and the Sudan ebony (*Dalbergia melanoxylon*). *Suba* (*Combretum*), *leyun* (*Odina*), *homeid* (*Sclerocarpa*), *inderab* (*Cordia crenata*) also occur, together with species of acacia. *Talh* (*Acacia seyal*) occupies large areas inland from both banks.

Along the whole length of the Upper and White Niles the necessity of obtaining wood-fuel for the steamers has resulted in considerable depletion in those areas where the bush approaches the river banks, but very little of the wood used for this purpose could have been put to other uses.

In the *sudd* region there is no fuel of any sort to be obtained, and it has occasionally happened that steamers imprisoned there for a length of time have been obliged to burn their deck fittings in order to avoid starvation. There is a long stretch between Attar wood-station, near the mouth of the Bahr el-Zeraf, and Kanisa (about 400 miles), through

which it is necessary for steamers to carry a large amount of firewood.

(d) *Land Tenure*

Under the Egyptian Government titles to land in the Sudan were in a state of confusion, which during the Dervish regime became greatly intensified. Of their own free will or under the orders of the Khalifa, many cultivators left their homes. Their holdings were either deserted or taken up by others; and when, on the country being freed from oppression, the original owners began to return, boundaries had become obscured and disputes were inevitable. The Mohammedan law of inheritance, by which properties are subject to subdivision among the frequently numerous offspring of the patriarch, was an additional cause of complication.

Since the British occupation, the Legal Department of the Sudan Government, by means of a land settlement ordinance providing for registration and cadastral surveys, has done much to substitute order for confusion. All disputes are now settled on the spot. Titles to land are registered, and practically no land can be bought until it has been registered and surveyed. One of the objects of the ordinance is to provide an equitable basis of taxation for such land as is taxable. All waste lands are claimed as Government property, unless the contrary can be proved.

(3) FISHERIES

There is a considerable native fishing industry carried on at Port Sudan and Suakin. The oil sardine (*Sardinella longiceps*), which is tinned for food and used in India as a source of oil, as well as other species of *sardinella*, occurs in the Red Sea; and there are other kinds of small fish which collectively are termed sardines. These form the food of the larger surface-feeding fish such as the *bayado*, the

sirroe and the *barracouta*, which are most in request for the market, and run to 40 lb. in weight. There are many clupeid (herring-like) fish in the harbour of Port Sudan, and outside, which also are marketable; the best known of these is *Harengula punctata*.

Salted fish is a recognised article of commerce; 216 tons were exported to Egypt in 1914, and 296 tons in 1915. The export includes salted freshwater fish from the White Nile near Khartum. The chief demand for salted fish is from the Egyptian Copts.

The Red Sea *pearl-shell* fishery is of long standing. In former times, pearls only were fished for, but the indiscriminate way in which the oysters were collected ruined the industry. The present fishery is on a small scale, and concerned in the main with pearl-shell (mother-of-pearl) only, though a few pearls are still found. The Sudan pearl-oyster (*Meleagrina margaritifera*) is a species allied to, but distinct from, the more famous Ceylon pearl-oyster (*M. vulgaris*). Unlike the latter, the Red Sea oyster is a solitary species, individuals occurring singly or in small groups over the pearling grounds—a fact to be taken into account in any attempt to establish an industry of commercial importance.

The present industry is carried on chiefly between Suakin and Jibuti. The shells are obtained in comparatively shallow water by native divers unprovided with apparatus. The market price is about £80 per metric ton. Oyster-breeding begins in April and attains its maximum in May or June. The trade movement of oyster shells in Sudan ports is about 200 tons per annum, which no doubt could be largely increased should a demand arise.

A biological investigation into the marine resources of the Sudan Red Sea littoral was undertaken by the Khedivial Government in 1904. Among the practical results of this work were the prohibition of the collection of shells less than 12 cm. ($4\frac{3}{4}$ in.) in diameter; the establishment of breeding grounds for increasing the number of oysters; and proposals for the cultiva-

tion of mother-of-pearl "seed" oysters as an article of food. The Ceylon pearl-oyster is found in the Red Sea, and young specimens are eaten at Suez as a substitute for the true edible oyster, which occurs in certain areas, but is difficult to collect on account of its solitary habits. Experiments have been made with a view to increasing the size and number of these oysters. Observations on the habits of certain shell-destroying fishes were also made.

Among other shells of commercial value found in the Red Sea are those of a fish with six fin-like projections (*Pteroceras lambis*), which sells for about £E. 12 per ton; the pegtop shell (*Trochus*), £E. 15 per ton; a large kind of clam shell (*Tridacua*), £E. 10 per ton; and many species of cowrie or porcelain shells (*Cypreae*), £E. 14 per ton.

Sponges are found off Khor Dongonab, on the reefs near Suakin, and in other parts of the Red Sea. Biological conditions are reported as favourable, but the quality of the sponges is not considered so good in the markets as that of sponges from the Mediterranean.

Several species of sea cucumber, used in the preparation of *bêche-de-mer* (trepang), a favourite article of diet among Chinese and other Eastern peoples, are to be found in the Red Sea, but there is no export from the Sudan. Black coral (*yusur*), used for ornamental purposes, is fished for. Edible and shell turtles occur in small numbers.

(4) MINERALS

In general, the surface of the Anglo-Egyptian Sudan north of 12° north latitude consists of old sedimentary sandstones and clays overlying a bed of older crystallines, which are an extension of the underlying rocks of the Abyssinian plateau. These crystalline rocks—chiefly granite, gneiss, and schists—appear on the surface in many places, especially on the east and south frontiers, and in Kordofan. They form the backbone of the principal mountain ranges and outcrop

as isolated rocks and boulders chiefly in the plains of Sennar and Darfur. In Sennar, red granite predominates, mixed with greenstone and mica-schist; in the Nuba Mountains, Darfur, and Bahr el-Ghazal, grey granite; and on the Nile-Congo watershed, granite and gneiss. From the Jebel Marra (Darfur) a dyke of white quartz runs west for 30 or 40 miles. In the Nile basin, the cataracts are caused by transverse ridges and reefs of these hard metamorphic rocks coming to the surface through the eroded sandstones of the river-bed. Over the greater part of the western and central Sudan, south of 13° north latitude, the crystallines are covered by the Nubian sandstone, containing occasional ferriferous beds; but, further south, this is replaced by a ferruginous conglomerate, forming on the surface a rich red earth—the so-called swamp ore—and continuous with the great ironstone and laterite tableland of equatorial Africa. The Nile-Congo watershed is an arm of this ironstone plateau, with occasional outcrops of granite, gneiss and quartz.

The geological section of the Sudan Department of Education undertakes geological surveys and investigations, mine inspections, and the collection of geological specimens. It also issues publications and bulletins, the first of which¹ was published in 1911; from this most of the information given below is derived. The mineral resources of the country, however, are far from being fully explored, and a comprehensive survey would no doubt more than repay its cost.

Alum is obtained in the oasis of Shabb, where there are said to be large deposits.

Antimony is found in the Jebel Marra, near El Fasher, in Darfur.

Coal does not seem to exist in workable deposits, though a lignite of poor quality has been found close to the surface in Dongola province.

Copper is found at Hofrat el-Nahas, situated about

¹ *Notes on the Mineral Deposits of the Anglo-Egyptian Sudan.*

one mile to the west of the River Umbelasha, a tributary of the Bahr el-Arab, on the boundary between the provinces of Darfur and Bahr el-Ghazal. The mines consist of a large number of shallow pits covering an area of about half a square mile. In places the ore crops up in exposed ridges. Natives have probably worked the deposit for centuries; and copper, in the form of rings weighing from 10 to 12 pounds, or in small ingots, was at one time an article of barter in Darfur and western Kordofan. Selected specimens of ore brought in in 1913 assayed 14 per cent. of pure copper. During the Mahdist revolt, the workings were abandoned, but the mines are far from being worked out. The question of transport, however, is a difficulty.

Gold used to be mined all over the Sudan north of Berber (18° north latitude), and there are at least eighty-five important old workings which can, with certainty, be ascribed to the ancient Egyptians, or to the Arabs before the tenth century A.D.

About twelve prospecting licences had been issued up to 1918, and several attempts have been made in the last twenty years to reopen some of the old workings. However, on account of the difficulties of transport and the absence of water in sufficient quantities, only two concessions are at present being worked—one at Gabait, in the Red Sea province, and the other at Um Nabardi, in the province of Halfa, between Halfa and Abu Hamed, about 28 miles north-east of No. 6 railway station.

The holders of the Um Nabardi concession are the Sudan Gold-Field Company. This company was formed in 1904, and began operations at Um Nabardi in 1908. By the end of 1917 it had crushed 168,893 tons of ore, yielding 86,622 ounces of fine gold, with a value of £363,815, the average yield of the quartz being 10.26 dwt. of fine gold per ton. The profit in 1916 was £19,074, but in 1917 there was a decline, and in 1918, for the first time since 1910, the working of the mine resulted in a loss (£1,337). The quartz milled

in 1918 amounted to 20,880 tons, and the total production of bar gold was 12,419 oz., equivalent to 11,248 standard oz. The company has constructed a light portable railway from No. 6 station on the Khartum-Halfa railway to Um Nabardi.

In the Fazogli district (Blue Nile) there are alluvial deposits which have been worked by the natives for centuries, but the best gold washings of this region lie on the Abyssinian side of the frontier. No figures are available, but it is unlikely that more than 200 oz. of gold dust are produced annually by the Sudan native workings. Small deposits also exist at Tira Mandi in the Nuba Mountains and are worked by natives, but the yield is insignificant.

Graphite is reported to exist in the Bongo river district of the Bahr el-Ghazal province. Samples of impure graphite from the Yambio-Meridi road, in the southern Bahr el-Ghazal, have been received at Khartum.

Gypsum and *alabaster* exist in enormous quantities on the Red Sea coast, forty miles north of Port Sudan. The beds in which the gypsum occurs form hill ranges upon the coastal plain, and the large island of Makawa is composed entirely of these. Some of the beds are 30 feet thick; but the clearest, whitest and purest varieties are found in smaller beds, from 2 to 12 feet thick. There are few good harbours near the deposits; Khor Dongonab, 100 miles north of Suakin, is perhaps the best. The absence of sweet water on the maritime plain is a drawback to working. Gypsum has also been found in the Jebel Abiad, about one hundred miles from the Nile, west of Khandak, in the Dongola province.

Iron.—The Tokar district has yielded samples of massive specular iron ore. Masses of iron ore, forming ironstone mountains, exist in the Bahr el-Ghazal and Upper Nile provinces. Among the Nubian sandstone series, highly ferruginous beds occur. The most important found hitherto occur near Wadi Halfa. These are described as existing in the form of lenticular

deposits, two to five miles in length, and generally of a distinctive oolitic character. A bed of highly ferri-ferous sandstone is reported as underlying a great mass of intrusive basalt or dolerite in the Jebel Alarambia, near Kerma, in the Dongola province. In the Bahr el-Ghazal, Mongalla, and Upper Nile provinces, the rocks are generally covered by a ferruginous conglomerate associated with a lateritic formation. The rivers and streams expose it admirably, and in places between Rumbek and Mvolo, for instance, the thickness is as much as 50 ft. Usually, the surface consists of red loamy soil strewn with boulders of different sizes, and supporting a dense growth of forest and grass. In places, however, the ferruginous conglomerate forms isolated patches of considerable size, so bare of soil that only a scanty supply of short grass succeeds in growing. In the Bahr el-Ghazal province alone, the iron ores cover an area of nearly 31,000 square miles, of which the thickness varies from 3 to 16 ft., but may be much greater in places. The blackening of rocks is a peculiar feature of the conditions obtaining in the arid regions of the northern Sudan. * This appears to be due to the presence of moisture, which brings the iron to the surface and deposits it there on evaporation. In areas formed of Nubian sandstone, this chemical action produces a crust which extends over wide areas, but is seldom more than a few inches in thickness. Many travellers have been misled by the appearance of these crusts, and have described the rocks as volcanic. The existence of this peculiar surface action renders it difficult to differentiate the inter-stratified ores from the crust.

In the south and west of the Sudan, the natives have for many years smelted iron, utilising charcoal and clay furnaces about 3 ft. high, with portable goat-skin bellows. Soft iron, apparently of very good quality, is produced, and is distributed among the natives all over the Sudan in the form of weapons, tools, and ornaments. The principal tribes at present engaged in smelting and smith-work are the Jur, around

Mvolo; the Anuak, on the Sobat; the Aliab, on the west bank of the Bahr el-Jebel; and the Bongo, around the Bahr el-Arab. The Arabs smelt iron at Nahud, in western Kordofan, and at several villages in the east of Darfur, employing a highly ferruginous clay and sand found in pockets in the red sand formations of the district. The well-known iron works at Um Semeima and the Jebel Haraza, in Kordofan, have been neglected since the Mahdist revolt. Along the Nile-Congo watershed, which in places is composed almost entirely of ironstone, occurring in porous lava-like shelves, there are many old workings, notably near the source of the Bekki river. At the present day, almost every village has its smelting furnace, which, however, is only used when the local or travelling blacksmith is sent for or makes one of his periodical visits.

Lead has been found in Darfur; and it is reported that the deposit is now being worked.

Limestone and *marble* occur in many places. The deposit at Shereikh is the most important one now being worked.

Natron exists in the Wadi Natrun, 280 miles west of Debbre, on the Darb el-Arbain road. The purest deposit is found in a seam from half to two inches thick, just below the surface sand, and the best working is a little west of the Jebel Kashaf.

Salt.—In the arid regions, many of the desert gravels are salt-bearing, particularly in the Butana, east of the Blue Nile, between Rufaa and Khartum, where the natives have for many years made a living by extracting salt from the surface gravels. North of Khartum, salt is extracted wherever these gravels are found; and impure, yellow-coloured salt of local manufacture can be found in nearly every market town. Many of the natives seem to prefer it to the pure white imported varieties. Salt occurs in beds of considerable size in the Selima oasis and the lagoons on the Red Sea coast at Ras Roweiya, where some abandoned salt workings containing a large supply—the results of the process of evaporation during several years—have been reopened.

In the Upper Nile provinces salt is much more difficult to obtain in most localities; and white European salt is raised to the status of a currency—one trade spoonful for an egg, six for a chicken, and so on. In some districts porters are paid in white salt for their day's work. Except when deposits or salt lakes occur, the only form of salt available is the dirty brown material extracted from a lye obtained from burnt water-weeds, banana stems, &c.

(5) MANUFACTURES

With the exception of crude *iron-smelting* to make soft iron implements in the Upper Nile region, and *gold-crushing* in the Northern Sudan, there are no metallurgic industries of commercial importance. The only native *textile* industries are the weaving of *damur*—a soft, loosely woven cotton stuff—and the “retting” or preparation of various fibres for making ropes and nets. A considerable amount of artistic work is done in silver and gold and in leather for camel saddles, &c., entirely for local demands. Some rough *pottery* is made. Kawa (White Nile province) is the centre of a native boat-building industry.

A local production of *cement* may be developed to a limited extent in connection with irrigation and other engineering projects. In former days, notwithstanding the length of transport, cement for works in the Sudan was imported from England. The outbreak of war, however, compelled the engineers to consider the possibility of making cement in the country. They were fortunate in finding suitable beds of limestone and other requisite materials. Later, the enormous increase in the cost of coal made the burning of these materials a serious problem, and experiments have been made which justify the belief that timber found in the Blue Nile region, reduced to charcoal, will form an effective substitute for coal, so that cement can be manufactured locally without any other import than that of the machinery required.

When some of the enormous potential energy constantly running to waste over the cataracts and falls of the Nile and its tributaries is used for the production of electric power, it is to be hoped that the manufacture of agricultural *fertilizers* will become an extensive industry in the Sudan. The matter is now under the consideration of both the Egyptian and the Sudan Governments.

It is probable that in the near future extensive commercial activities may begin in the *sudd* region, when difficulties of transport have been overcome. The stems of the papyrus have been reported to be suitable for paper-making, and the peat-like *sudd* itself may also prove to be of considerable commercial value, probably chiefly as fuel. In April 1912 a concession for the exclusive manufacture of fuel (*suddite*) from *sudd*, within a specified area, was granted to a company, which built a factory on Lake No, and imported machinery for making briquettes of *sudd* and coal dust. The company, however, which included in its schemes the formation of a subsidiary company for the manufacture of paper or the export of pulp, was ultimately liquidated. The original experiments which led to the enterprise seem to have been made by two Germans.

(6) POWER

With the exception of the town lighting of Khartum, Omdurman, and Port Sudan, and the electric installations of the Railway and Steamers Department at Khartum North—all carried out under Government supervision—there are no electric industries or power works in the Sudan. Few other countries possess greater potential water-power resources, such as, for example, the five cataracts between Khartum and Halfa; the falls and rapids at many spots on the rivers flowing from the Abyssinian highlands; the falls and rapids at several places in Bahr el-Ghazal, notably on the Sueh and Wau rivers; and the Fola and Bedden rapids of the Upper Nile between Nimule and Rejaf.

(C) COMMERCE

(1) DOMESTIC

(a) Principal Branches of Trade

The domestic commerce of the Anglo-Egyptian Sudan consists chiefly in the collection, for the purpose of export, of the products of the country already enumerated (see above, pp. 96-115). There is also a certain amount of purely internal trade in such products as well as in rough pottery of local manufacture and in the various articles which are sold in the bazaars. At the ports and larger towns there are Greek and, in smaller numbers, Syrian and Indian merchants, who deal in goods imported from Europe, Egypt, and Abyssinia.

(b) Towns and Markets

The three towns of Khartum, Khartum North, and Omdurman, at the confluence of the White and Blue Niles, together form the headquarters of the trade of the Sudan. *Khartum*, which lies in the angle formed by the two rivers, had in 1917 a population of about 23,000. The capital of the country and the seat of Government, it is a largely Europeanised town, with wide streets and fine buildings. It contains many shops and stores, but its market (*suk*) is smaller and more expensive than that of Omdurman, with which town it is connected by a Government-owned ferry. There is also a steam tramway.

Khartum North (formerly called Halfaya¹) lies on the right bank of the Blue Nile, opposite Khartum. There are Egyptian army barracks, a customs-house, and storehouses and workshops, including the headquarters, workshops and dockyard of the Steamers and Boats Department of the Sudan Government Railways. There is a large and extending market. The population of the town in 1917 was about 16,000.

Omdurman, situated on the left bank of the main river, opposite the mouth of the Blue Nile, covers an

¹ There is a village still bearing that name four miles to the north.

area four to five miles in length by one mile in breadth, and had in 1917 a population of about 60,000. In the last twenty years it has been converted from an unplanned network of twisted lanes to a town with open spaces and good streets, where many of the leading merchants of the country have their head offices. Omdurman has a very large market and is the centre of the ivory and cattle trades. Until the railway was extended to Kosti and El Obeid it was also the centre of the gum trade.

The chief grain markets in the Blue Nile district are at Singa, Wad Medani, Hassa Heissa, Messelemia and Managil, and, on the White Nile, at El Dueim and El Geteina. The markets for sesame in the eastern Sudan are at Singa, Mafaza, and Gedaref, and in the western Sudan at El Obeid, Kawa, and Kosti. The chief cotton markets are at Tokar, in the Red Sea province, and Wad Medani, in the Blue Nile province. The principal gum markets are at El Obeid, Um Ruaba, and El Nahud in Kordofan, and at Kassala and Gedaref in Kassala province. El Damer, in Berber province, has a thriving sheep trade. Nahud is the centre of the ostrich-feather trade. The chief centres of the date trade are in the Halfa and Dongola provinces, at Tangassi (Dongola province) and other local markets.

El Dueim, on the White Nile, lost much of its importance as a produce market after the railway was carried to El Obeid, in the adjoining province of Kordofan. Many prominent El Dueim merchants transferred their businesses and their residences to El Obeid. Houses in El Dueim to-day realise rather less than 30 per cent. of their former value, while more than three-fourths of the business premises seem to be untenanted. The markets of the town, like those of El Geteina, Kawa, and Kosti, are now owned and conducted by the Government, instead of being leased to native contractors.

El Geteina, on the White Nile, is a large village, divided into two parts, and forming the headquarters

of the district. It is about 80 miles distant from Khartum by road.

El Nahud, in Kordofan, the centre of the ostrich-feather trade, contains about 7,500 inhabitants, including Greeks, Syrians, Arabs, and pure negroes. The town has now become of increased importance, owing to the fact that the whole of the commerce from Darfur—the most recently acquired Sudan province—passes through it; a well-attended cotton and cattle market is periodically held there.

Goz Abu Guma, the headquarters of the district of that name, stands on the right bank of the White Nile, opposite the island of Wurelat, which makes its appearance in the river during the months of January and February. The eastern channel, opposite to Goz Abu Guma, dries up completely during the rainless season.

Kawa (White Nile province), a large village on the right bank of the river, is the official residence of a British inspector. At this point the river-steamers take on wood for fuel. Kawa appears to be a thriving and busy little place, and the centre of a native boat-building industry; a large and well-attended market is held there at frequent intervals. All around there is cultivation on an extensive scale. The steamers procure their wood from the so-called forests of the vicinity, and, as no new trees are being planted, it can only be a question of time before the woods disappear.

Kosti (White Nile province), like *El Dueim*, has lost some of its importance since the extension of the railway to *El Obeid*, but it remains a busy place and a commercial centre. It lies on the east bank of the Nile, some 190 miles from Khartum, with which it is connected by railway. The Murkas comprise about fifty different villages, and, ordinarily, the population is between 7,000 and 8,000. During the rainy season, however, the inhabitants dwindle to a few hundreds, for all who can do so leave the town in order to cultivate their small plots of land, whole families and villages working together vigorously. At that period of the

year Kosti becomes a dead place; even the permanent Egyptian officials finding little to do, while the Europeans choose this season for their annual leave.

There are few buildings of any note in the town; but the former grass-and-straw-built mosque has given place to a more substantial, square-shaped erection of cut stone, with battlemented walls, the foundations resting upon inverted arches. The most remarkable feature about Kosti, however, is the fine swing bridge which crosses the Nile a few hundred yards below the town. It is considered to be one of the best of its kind.

The river-station of *Taufikia* (Upper Nile province), which is some 510 miles from Khartum, forms the distributing centre for the important trade of the Sobat, Bahr el-Ghazal, and Bahr el-Zeraf. There are native barracks built of brick, and several other Government buildings. It was at this spot that Sir Samuel Baker, the famous explorer, made his headquarters in 1865, and he then named his settlement *Taufikia*, after his patron the Khedive Tewfik.

(c) Organizations to promote Trade and Commerce

The interests of the producers and of trade generally are carefully fostered by both the central and the provincial Governments. A Central Economic Board was set up in 1906; its members, who are heads of departments and other civil servants, are appointed by the Governor-General, but it elects its own president. The functions of the Board are largely advisory. Under reference from the Governor-General, or on the initiation of individual members, it considers and reports on questions relating to commercial production and economic development. It has power to invite the attendance of, or communication from, officials and others, but possesses no executive authority. There is a Commercial Intelligence Department of the Board which compiles information and publishes annual reports and periodical bulletins:

Practically all the principal economic products of the country have been the subject of preliminary or complete scientific examination by the Wellcome Tropical Research Laboratories at Khartum, or by the Imperial Institute in London. The latter also furnishes commercial reports on Sudan products generally; and there are other agencies that do the same.

There is a Sudan Chamber of Commerce, established at Khartum.

(2) FOREIGN

The value of the foreign trade of the Anglo-Egyptian Sudan during the years 1907-1917 is shown in the following table :—

Year.					Exports.	Re-exports.	Imports.
					£	£	£
1907	...	...	...	...	449,329	47,015	1,604,137
1908	...	...	...	...	515,938	37,079	1,892,798
1909	...	...	...	...	673,902	60,941	1,775,957
1910	...	...	...	...	977,621	57,958	1,931,426
1911	...	...	...	...	1,376,958	74,894	2,273,949
1912	...	...	...	...	1,373,119	92,657	1,967,429
1913	...	...	...	...	1,185,186	93,655	2,109,776
1914	...	...	...	...	1,020,260	87,986	1,891,494
1915	...	...	...	...	1,577,981	130,315	1,704,250
1916	...	...	...	...	2,288,403	227,112	2,661,468
1917	...	...	...	...	3,490,565	238,616	3,102,117

It will be seen from these figures that progress has been steadily maintained. In 1913, which may be taken as a fairly representative year, exports constituted 35 per cent. of the total volume of trade, imports 62 per cent., and re-exports 3 per cent.; the re-exports thus amounting to nearly 5 per cent. of the imports.

Although the year 1917 shows, as compared with 1913, a marked increase in values, this is not due to a proportionate increase in the quantities, but rather to

the rise in prices resulting from war conditions. Only with respect to five articles of export, however, was there a positive decrease in quantity, and in three of these five cases there was also a decrease in value; in the other two cases—undressed skins and senna—the fall in the quantity exported was accompanied by a rise in the total value. Taken as a whole, the amount of the exports has risen, as well as their value, but not to the same degree. On the other hand, in the case of imports, the increase in value was accompanied by a general diminution in quantity.

With the exception of *dura* (large millet) and mother-of-pearl shell, the prices of all commodities have increased. The price of *dura* in 1913 was exceptionally high, on account of a poor yield synchronising with a strong demand from Egypt.

(a) Exports

Gum is the principal commodity exported from the Sudan, representing, on an average, about 30 per cent. of the total exports. Of rather more than 15,000 tons exported in 1913, France took nearly 24 per cent., Great Britain and Germany 18 per cent. each, the United States 13 per cent., Belgium 7 per cent., and Egypt 5 per cent. In 1917, when enemy countries of course received nothing, practically the entire export of gum went to Egypt and Great Britain, the former taking 47 per cent. and the latter 45 per cent. Egypt has always been to some extent a distributing centre for Sudanese produce *en route* for foreign countries, and although since the opening of the Atbara-Port Sudan Railway in 1906 the majority of the exports from the Anglo-Egyptian Sudan have been despatched by way of the Red Sea, during the war the practice of sending goods through Egypt was to some extent resumed. Thus, while no gum whatsoever is produced in Egypt, and all that is required there is imported from the Sudan, in 1916 £E.300,000 worth of the commodity, equivalent to 40 per cent. of the Sudanese export, figures among the exports of Egypt.

After the gum the next most important export is *ginned cotton*, of which 22,000 bales were exported in 1917. The figures for earlier years have been given elsewhere (p. 104). The proportions going to countries other than Great Britain and Egypt are very small, and have decreased considerably during the war. What is taken by Egypt is re-exported as part of the Egyptian produce. For the last few years more than half the total Sudanese export has gone direct to Great Britain. A small quantity of unginned cotton is exported to Abyssinia.

There has of recent years been considerable development in the export trade in *live-stock*. Although small quantities go to neighbouring countries and to Malta, Egypt is the only important customer, and before long it is clear that she will be almost entirely dependent upon the Sudan for her meat supply. She cannot continue to drain her own resources by slaughtering local stock without seriously hampering agricultural interests, and the position of the Sudan, with its great extent of pasture land, makes that country her obvious source of supply.

The destination and quantities of *raw hides and skins* exported before and during the war are shown in the following tables :—

(i) *Untanned Hides*

Destination.	1918.	1914.	1915.	1916.
	Kilos.	Kilos.	Kilos.	Kilos.
Egypt	23,477	69,500	353,608	435,868
Great Britain	60,556	163,004	66,185	222,255
India and Aden	52,912	160,428	—	3,570
France... ..	120,610	188,223	8,485	5,050
Italy	—	36,843	245,405	45,753
Eritrea... ..	—	58,577	440,361	31,436
Greece... ..	2,437	12,888	31,697	—
Austria	112,872	69,996	—	—
Germany	19,410	33,289	—	—
Other countries	10,973	1,090	2,510	—
Total	403,247	793,338	1,148,251	743,932

(ii) *Untanned Skins of Sheep and Goats*

Destination.	1913.	1914.	1915.	1916.
	Units.	Units.	Units.	Units.
Egypt	59,882	81,034	91,677	141,876
Great Britain	122,962	200,529	100,931	174,642
France	53,234	67,772	580	—
Italy	—	2,733	1,720	76
Eritrea... ..	7,964	11,524	4,890	38,477
Austria	16,186	6,459	—	—
Germany	10,991	27,650	—	—
United States... ..	99,146	71,015	66,184	6,726
Other countries	1,093	607	—	—
Total	371,458	469,323	265,982	361,797

Egypt is now setting up tanneries and making her own boots and shoes. Should the requisite machinery be set up in the United Kingdom—as has been done in Italy to deal with the Abyssinian hides obtained through Eritrea—the Sudan could be depended upon for a supply of raw material.

Sesame goes mainly to Egypt, whence large quantities are re-exported, for the most part to France, who is also, after Egypt, the largest buyer from the Sudan direct. Great Britain takes practically none of this commodity.

Up to 1914 only a small quantity of *dura* (large millet) was exported, about three-fourths of which went to Eritrea. During the war the export rose enormously, increasing from 2,000 tons in 1913 and 530 tons in 1914 to 46,000 tons in 1915, nearly 57,000 tons (30 per cent. of the total yield) in 1916 and 84,000 tons in 1917. Egypt has now become the principal buyer, taking 24,000 tons as against 19,000 tons taken by Eritrea in 1916. A small amount

of the grain has also found its way into the British market, where it is known as *dari*.

In 1915 about 9,000 tons and in 1916 about 10,000 tons of *dukhn* (spiked millet) were exported, almost all to the Hejaz. Previously the export of this grain had been negligible.

Cotton-seed is almost exclusively exported to Great Britain for oil production. The greater the output of ginned cotton the greater naturally should be the amount of cotton-seed available for export (see above, p. 105).

Ivory is exported mainly to Great Britain, which takes on an average from half to three-fourths of the total output; nearly all the rest goes to the United States. During the war the export has decreased.

Though the trade in *senna* has suffered owing to the war, it had previously developed considerably, and is capable of still greater expansion. Before the war Egypt was by far the largest buyer, but in succeeding years the percentage taken by that country has diminished, while in the export to Great Britain there has been a great increase, both actual and relative. The export to the United States, on the other hand, though representing a larger percentage in 1914 than in 1913, has steadily decreased, the total figure being much smaller in 1914 than in the previous year. Among remaining countries Germany was the most prominent purchaser.

The following table shows the distribution of the *senna* export in the years 1913-16:—

	1913.	1914.	1915.	1916.
	Percentage.	Percentage.	Percentage.	Percentage.
Egypt	73	58	61	44
Great Britain ...	2	10	34	56
United States ...	10	25	5	—
Other countries ...	15	7	—	—

The following table shows the quantities of the principal exports in the years 1911-16, and the average over the period 1911-15:—

Articles.	Units of Weight.	1911.	1912.	1913.	1914.	1915.	Average 1911-1915.	1916.
Bullocks and cows ...	Units.	21,611	15,249	10,532	11,390	23,882	16,533	15,304
Butter and ghee ...	Tons.	114	145	143	76	204	136	130
Cotton (ginned) ...	"	3,049	1,619	2,318	1,712	4,305	2,601	2,941
Cotton (unginned) ...	"	2,184	3,044	39	5	22	1,059	27
Cotton-seed ...	"	7,105	3,501	4,786	3,012	8,244	5,330	8,165
Dates ...	"	3,739	2,816	2,785	2,343	2,586	2,854	3,697
Dom palm-nuts ...	"	2,960	2,021	1,349	2,573	647	1,910	462
Dura ...	"	17,794	796	2,080	532	46,117	13,464	56,784
Gold ...	Grammes	250,868	348,004	462,467	595,828	596,186	450,671	570,795
Ground-nuts ...	Tons.	1,123	826	719	208	481	671	1,035
Gum ...	"	14,357	19,615	15,129	12,372	11,615	14,618	13,480
Ivory ...	"	100	107	125	92	60	97	78
Senna ...	"	1,000	890	810	309	691	740	434
Sesame ...	"	4,936	6,096	6,841	3,157	7,002	5,606	12,421
Sheep and goats ...	Units.	97,752	110,824	99,174	87,569	87,730	96,610	74,051
Untanned skins ...	"	413,521	400,557	371,458	469,323	265,982	384,168	361,797

(b) Imports

The article most largely imported is *cotton fabrics*, which in 1913 represented 24 per cent. of the total value of imports and in 1917 26 per cent. The price rose 48 per cent., but the quantity was only 4 per cent. larger in 1917 than in 1913. The following table shows the percentage of cotton fabrics supplied by each country:—

	1913.	1917.
	Per-centage.	Per-centage.
Egypt	51	59·5
Great Britain	28	8·5
Italy	10	1·5
India	8	30·5
Other countries	8	—

Cotton piece-goods coming from Egypt, however, are entirely of foreign origin, as the traders of the Sudan find it more convenient to buy from Egyptian importing agents, from whom they can easily obtain credit, than directly from abroad. If the table of percentages were based on the countries of ultimate origin, it would have to be reconstructed as follows:—

	1913.	1917.
	Per-centage.	Per-centage.
Great Britain	62	64
Italy	27	6
India	8	30
Other countries	3	—

Indian cotton is imported by the Indian traders (*banians*) at Suakin, whither it is brought by Bombay coasting steamers. At one time, when Suakin was isolated from the Nile valley by 300 miles of desert, local needs only were supplied in this way; but since the railway has reached the port there has been a much wider distribution of goods from India. Cotton from Italy is brought by Italian steamers calling at Port Sudan on their way to Massawa in Eritrea.

Although Great Britain at present holds the bulk of the cotton trade with the Sudan, it must be remembered that other countries, by studying the needs of the inhabitants, conforming with local customs and currency and quoting easy terms, might make a bid to capture this lucrative market.

The quantity of *sugar* imported in 1917 was 30 per cent. less than the import of 1913, but as the price had risen as much as 128 per cent., the total value was 60 per cent. higher. Practically all the sugar consumed in the Sudan (93·26 per cent. in 1913, 99·66 per cent. in 1917) is the produce of Egypt, three-fourths of it being sent by the Red Sea, the rest by the Nile. Before the war a little sugar (about 6 per cent. in 1913) came from Austria, but it was inferior in quality to the Egyptian and slightly higher in price, and had nothing to recommend it except a superior style of packing. Normally, Great Britain supplies a few cases of castor sugar only.

The import of *metal* and *metal manufactures* fell off greatly during the war, no doubt on account of the shortage of shipping. In normal times about three-fourths of this class of goods came from Great Britain. In 1917 the import thence dropped to 30 per cent. and that from Egypt rose to 64 per cent.; but it may be taken for granted that all such goods coming from Egypt were really of British origin.

The import of *machinery* has decreased a little in value and therefore, it is to be presumed, considerably in quantity. In 1913 Great Britain supplied 77 per cent.; Germany 11 per cent.; and Egypt, by re-exportation, 8 per cent. In 1917 only 18 per cent. came direct from Great Britain, while 80 per cent. was re-exported from Egypt.

Before the war all *coal* was brought from Great Britain, but in 1917 nearly half the requirements of the country were supplied by the Union of South Africa. Between 1913 and 1917 the price increased by 254 per cent., but the quantity imported remained fairly constant.

For *flour* the 1917 figures, as compared with those for 1913, show an increase in price of 85 per cent., and a decrease of 54 per cent. in quantity. The largest imports were from India and Egypt, Russia and Rumania having dropped out of the list on account of the war.

Most of the *coffee* consumed in the Sudan comes from Abyssinia, being sent to Khartum *via* the trading port of Gambela. This trade has been less harmed by the war than any other. The price rose only 7 per cent. between 1913 and 1917, while the quantity imported increased by 104 per cent. The trade, in fact, has grown steadily, but it is capable of still greater development, and Abyssinian coffee, which is of good quality, should find a European market. A small quantity of coffee is also sent to the Sudan from Brazil and Aden and a little is re-exported from Egypt.

In contrast with coffee, *tea*, which comes mainly from India, increased 80 per cent. in price and only 6 per cent. in quantity.

The value of the import of *spirituous liquors, beer and wines* declined from £E. 43,651 in 1913 to £E. 31,670 in 1917, representing 2 per cent. of the total import trade in the former year and only 1 per cent. in the latter. Seeing that the rise in the price of

these goods has been very great, the fall in quantity must have been still more marked. One cause of this has been the strict control exercised on the trade by the Government in order to prevent the traffic in drink among the natives. In 1913 Great Britain supplied (wines, spirits, and beers) 57 per cent.; Egypt, by re-exportation, 24 per cent.; Austria, Germany, Belgium, and Holland (all beers), 7 per cent.; and Greece (wines) 12 per cent. In 1917 Great Britain furnished 33 per cent. and Egypt re-exported 62 per cent., the remaining 5 per cent. being imported from Cyprus, Eritrea, France, Holland, and Italy.

The *soap* import has increased in value by 32 per cent. and in quantity by 11 per cent. The demand is naturally considerable in a country where the inhabitants wear clothing of cotton or other washable material. In 1913 Egypt supplied 73 per cent. of the needs of the Sudan, partly by re-exports, France 13 per cent. and Great Britain 10 per cent. In 1917 Egypt supplied 60 per cent. and Great Britain 39 per cent.

The trade in *empty sacks* is increasing and will presumably continue to do so with the development of Sudanese production. Not only the price but the number imported nearly doubled between 1913 and 1917. They came from Egypt and India in about the proportion of two to one before and three to one during the war.

Taking the imports as a whole, it appears that in 1917 Great Britain, her Dominions and Protectorates, furnished 92 per cent., the Allied countries 4 per cent., and the neutral countries the same. In 1913 the countries which were subsequently to become enemies of Great Britain contributed only 3 per cent. The war therefore, so far as the origin of goods is concerned, has not affected the import trade of the Sudan to any extent, and the dearth of commodities from enemy countries has had little, if any, effect.

The following table shows the quantities of the

principal imports in the years 1911-16, and the average for the period 1911-15:—

Articles.	Units of Weight.	1911.	1912.	1913.	1914.	1915.	Average. 1911-1915.	1916.
Butter and ghee	Tons.	198	214	211	176	182	186	127
Candles	"	221	186	187	176	113	177	177
Coal	"	61,096	73,575	73,064	55,358	41,779	60,974	70,695
Coffee	"	1,350	1,739	1,657	1,488	1,685	1,584	2,815
Cotton fabrics	"	4,370	3,107	3,320	2,963	4,091	3,670	4,852
Dura and dukhn (including maize)	"	—	6,326	7,759	27,345	595	—	243
Empty sacks	"	1,572	1,188	1,282	538	2,404	1,397	2,274
Flour (wheat)	"	7,510	8,272	7,904	9,481	5,503	7,734	6,752
Horses, camels, &c....	Units.	3,716	2,373	1,593	792	409	1,777	914
Iron and steel (manufactured)	Tons.	16,903	2,889	5,555	2,672	3,534	6,311	908
Petroleum	Cases.	283	150	213	130	196	194	244
Rice	Tons.	51,031	56,489	65,392	35,386	43,814	50,522	43,953
Salt	"	2,285	3,187	2,546	3,127	1,219	2,463	1,647
Soap	"	3,850	5,745	3,781	934	1,632	3,188	1,149
Sugar	"	1,049	938	956	887	885	943	975
Sugar (refined)	"	11,833	13,768	16,066	14,931	10,845	13,489	11,991
Tea	"	547	543	628	548	418	537	574
Wheat	"	480	2,600	1,727	3,779	1,626	2,042	554

(c) Re-Exports and Transit Trade

The re-exports comprise various articles of commerce originally imported from abroad, and resold to neighbouring countries.

With the exception of a certain amount of machinery, the chief item is *cotton fabrics*, which represent 34 per cent. of the total re-exports. In 1913, the re-exports of cotton fabrics amounted to £E. 20,820, and in 1917 to £E. 80,843, and they were distributed among the purchasing countries in the following proportions:—

	1913.	1917.
	Per- centage.	Per- centage.
Abyssinia	44·00	45·82
Arabia	0·40	28·37
Austria	0·30	—
British East Africa	0·40	—
Congo	16·00	3·65
Egypt	26·20	14·30
Eritrea	4·40	6·55
French Somaliland	1·50	—
Great Britain	5·00	0·05
India and Aden	0·40	1·26
Uganda	1·40	—

It will be seen that Abyssinia is by far the largest purchaser, Egypt in normal times coming second. The comparatively large proportion taken by Arabia in 1917 was doubtless on account of the presence of troops in the Hejaz.

There is a certain amount of local trade on both the northern and southern frontiers, for which Halfa and Mongalla are respectively the centres. The

trading post at Gambela (Abyssinia) also purchases from the Sudan; and there is an interchange of commodities between the two coasts of the Red Sea.

In addition to this movement of re-exports, there is a certain amount of transit trade between the Sudan and the bordering countries, with the exception of Egypt. Goods going to and from Abyssinia, *via* the trading post of Gambela, and consigned from and to countries abroad, pass through the Sudan. A small percentage of this transit trade is dealt with at Rejaf and Nimule, which are adjacent to the Congo and Uganda frontiers respectively. The principal articles of trade going into Abyssinia, *via* Gambela, in transit, are cotton piece-goods and (before the war) Maria Theresa dollars, manufactured in Austria and used as local currency.

Of the cotton piece-goods coming into Gambela in 1913, 73 per cent. were consigned from Italy and 27 per cent. from Great Britain. In 1917 57 per cent. came from Great Britain and 43 per cent. from Italy, the total quantity being 54 tons. The principal article leaving Abyssinia in transit is beeswax, which amounted in 1913 to 210 tons and in 1917 to 205 tons. In 1913 Great Britain took 71·20 per cent., Germany 24·50, Austria 2·50, and France 1·80. In 1917 the whole of this product went to Great Britain. The total value of the Sudan transit trade in 1913 was £E. 69,150, and in 1917 £E. 58,145.

Trade from Wadai in the French Sudan used to pass through Khartum on its way to Europe, but the exactions for transit through the Sultanate of Darfur, then independent, were so heavy that this route was abandoned in favour of that by the west and north, which was longer, and impracticable during the hot season. The old state of affairs may perhaps now be restored. If so, there should be an opening for British goods in the Darfur market, both for local needs and for supplying the French in Wadai. Trade in Darfur is already reviving.

(d) Customs and Tariffs

There are customs-houses at Port Sudan, Suakin, and other ports on the Red Sea coast, at Wadi Halfa on the Nile, and at various places on the southern, eastern, and western frontiers; also at the trading post of Gambela on the Baro, leased to the Sudan by the Abyssinian Government.

An 8 per cent. *ad valorem* import duty is charged on all imported goods, with the following exceptions: timber for building, coal, petroleum, liquid fuel, firewood, charcoal, cattle, sheep and goats, and the fresh or frozen meat of those animals; on all these 4 per cent. is charged. Leaf tobacco is charged 250 millièmes per kg., manufactured tobacco, cigars, and cigarettes 300 millièmes per kg. Tombac, an alloy used in making cheap jewellery, is charged 274 millièmes per oke (2.75 lb.) on the Red Sea coast, and 234 millièmes on the inland frontiers. Beer and stout pay an *ad valorem* duty of 10 per cent., champagne 25 per cent., all other wines 15 per cent., and spirits 40 per cent.

The import duty on goods originating from Eritrea, Uganda, Belgian Congo, and French Congo is 5 per cent. *ad valorem*.

There is an export duty of 1 per cent. *ad valorem* on all Sudan products. No export duty is charged on foreign goods re-exported, and a refund of the difference between the import and export duties is made in the case of merchandise re-exported within six months, provided that it can be identified. Goods in transit are free of duty, except coal and liquid fuel, on which a duty of 1 per cent. is payable.

No alcohol, cattle, firearms or ammunition can be imported or exported without a permit. Certain goods, such as ivory, gum, and rubber, are subject to royalties on leaving the Sudan. All such goods originating from Eritrea, Abyssinia, Belgian Congo, French Congo, and Uganda, on their importation into the Sudan, are

subject to an import duty equivalent to the Sudan royalty on exported produce, this being not less than the *ad valorem* import duty.

At Gambela the collection of duties is entrusted to the Sudan Government, and two British representatives are stationed there in addition to a British Consul. The Sudan Government has constructed warehouses for the storage of goods awaiting shipment by steamer to Khartum. Goods entering Abyssinia from the Sudan, in transit, pay no duty, as the duty is collected at Port Sudan on behalf of the Abyssinian Government. European goods re-exported within six months from the Sudan to Abyssinia receive a rebate of 7 per cent. on the Sudan duties, but have to pay 8 per cent. at Gambela. Sudan products pay 6 per cent., 5 per cent. for Abyssinian duty, and 1 per cent. as an export duty, and *vice versa* for Abyssinian products. If the latter pass in transit to Port Sudan *en route* to Europe 5 per cent. is refunded. The 10 per cent. export duty on all Abyssinian products passing out of Abyssinia is collected before the goods reach Gambela.

(e) *Commercial Treaties now in Force*

The foreign commerce of the Anglo-Egyptian Sudan is governed by the treaties in force in Egypt, the only treaty peculiar to the Sudan being the Customs Convention with the Italian colony of Eritrea, which was ratified at Cairo on January 2, 1902. This Convention fixes the import duty on natural produce imported into either of these two countries from the other at 5 per cent., and the export duty at 1 per cent. It further prohibits traffic in arms and ammunition between the two countries and makes the traffic in liquors dependent on permission. By agreement with the Governments of Uganda, Belgian Congo, and French Congo, the Convention applies also to those countries.

(D) FINANCE

(1) *Public Finance*

The following table shows the revenue collected each year since the re-conquest of the Sudan :—

Year.	£E.
1898	35,000
1899	126,000
1900	156,000
1901	242,000
1902	270,000
1903	462,000
1904	576,000
1905	665,000
1906	780,000
1907	923,000
1908	924,000
1909	982,000
1910	1,104,873
1911	1,236,446
1912	1,355,635
1913	1,568,352
1914	1,544,500
1915	1,500,000
1916	1,642,000
1917	1,806,000
1918	2,255,000 (estimated)

These figures indicate a steady growth in the prosperity of the country.

Up to the end of 1912 the revenue did not cover the ordinary requirements of the administration, and the budget was balanced by an annual grant in aid from the Egyptian Government. The amount of this grant varied, the highest figures being £E. 417,000 in 1900 and £E. 335,000 in 1912. The actual cost to Egypt, however, was not so high as these figures appear to indicate. For instance, in the year 1912, the last year in which the contribution was received, the sum of £E. 172,000

was refunded on account of the maintenance of the Egyptian army in the Sudan, leaving a net contribution of £E. 163,000 by Egypt in aid of the expenses of the Civil Government. Moreover, it must be borne in mind that Egypt collected and retained the customs dues on merchandise passing through Egyptian ports to and from the Sudan, which in 1912 were estimated at £E. 85,000. The Sudan Government at this period also had to bear the cost of certain services which formerly were a charge on the Egyptian budget, and to pay the *seigneurage*, a royalty on silver currency purchased by the Sudan from the Egyptian Treasury, representing in 1911 a sum of £49,000 on £200,000 worth of silver and nickel. In view of these facts, and also of the benefit accruing to the Egyptian State Railways through the carriage of passengers and goods going to and coming from the Sudan, as well as to the Egyptian postal and telegraphs administration through the transmission of postal matter and telegrams, the grant in aid can hardly be said to have been an undue tax on Egypt.

The revenue of the Sudan for the year 1913 met the ordinary requirements of the administration. The chief heads of revenue in that year were as follows:—

Provincial Receipts.

	£E.
Land Tax	167,508
Date Tax	16,380
Animal Tax	81,599
Tribute from Nomad Tribes ...	30,059
Royalties	89,897
Timber and Firewood	31,273
Traders' Tax	7,906
Miscellaneous	94,412

Departments and Services.

Customs	186,837
Steamers	147,502
Posts and Telegraphs	63,607

	£E.
Railways	553,887
Agriculture and Marts	723
Legal	10,555
General Central Services	31,779
Veterinary Department	9,255
Other Departments and Services	45,173
Total	<u>1,568,352</u>

Now that the annual receipts exceed ordinary expenditure the surplus is credited to the Reserve Fund, which fully guarantees the interest on the loans for special credits on account of public works, irrigation, &c.

(2) *Currency*

The currency of the Anglo-Egyptian Sudan is the same as that of Egypt, the monetary unit being the gold Egyptian pound (£E.) of 100 piastres (or 1,000 millièmes), of which the value in sterling is £1 0s. 6½d.

Coins in circulation are the Egyptian pound and half-pound, in gold; 20, 10, 5, and 2 piastre pieces, in silver; 1, ½, ¼, ⅛ piastre pieces, in nickel; and ⅞ piastre piece in bronze.

Silver coin is legal tender only up to £E. 2, and nickel or bronze coins up to 10 piastres. For some years gold coins have not been issued, and the gold circulating in Egypt and the Sudan is almost exclusively in English sovereigns, which are legal tender at the rate of 97½ piastres. As a temporary measure the Indian rupee has been made legal tender at the rate of 6·5 piastres.

Bank-notes are issued by the National Bank of Egypt in various denominations from £E. 0·25 to £E. 100. They are in principle not legal tender, but since the war they have been made legal tender and inconvertible. Their circulation has received an extraordinary impetus since the withdrawal of gold. The amount issued at the end of 1915 was about £E. 11,550,000,

whereas it had never before the war exceeded £E. 3,000,000.

At Gambela the Maria Theresa dollar is in use. It is 430 grains in weight, and is of the same value as the Menelik dollar (about two shillings). Its value, however, changes according to the price of silver. The Menelik dollar, which is likewise current, is coined at the capital, Addis Abbaba, in the Abyssinian Government mint, as is also the piastre, which is in much demand in small trading. Bars of salt are still used as a medium of exchange, and even blank cartridges are used as small specie.

A proclamation dated April 11, 1918, prohibits until further notice the import of gold into the Sudan in the form of coin or ingots, except under licence from the Financial Secretary of the Sudan Government, or his authorised representative.

(3) *Banking*

The chief banks with British connections are the *National Bank of Egypt* and the *Anglo-Egyptian Bank*, which conduct all the ordinary business of banking. At Gore (Abyssinia), the market-place for the trade which has its outlet at Gambela, down the Sobat to the Nile, there is an agency of the *Bank of Abyssinia*. This bank is chartered under the Egyptian laws, with a capital of £500,000, one-fourth of which is paid up. It is controlled by the National Bank of Egypt.

(E) GENERAL REMARKS

Considering that the total value of the trade in the Anglo-Egyptian Sudan amounted in 1916 to close on £3,500,000, it is difficult to realise that only sixteen years before that date the whole country was in a state of barbarism and anarchy, with practically no internal trade, except in slaves, and with no external commerce whatsoever. This change has been brought about without excitement and almost without remark.

The extension of the Khartum-Sennar railway to El Obeid increased enormously the proportions of the Kordofan gum trade, and there is little doubt that its further extension westward to El Fasher will bring about an even greater development of trade and traffic, in which French Wadai will participate.

Lying as it does comparatively close to the great markets of the Old World, and possessing an enormous area of pastoral country, there is every probability that the Sudan will become one of the great meat-supplying countries. Its meat trade with Egypt and Europe is even now very large, and there seems to be no reason why it should not be increased greatly when electric power and cold storage plants are available. Cattle and sheep raising is, indeed, one of the most promising industries of the Sudan.

Great expectations have been raised regarding the suitability of the Sudan for cotton-growing, and there is little doubt that these will in the long run be justified. The Sudan is a country of unlimited possibilities for the future supply of cotton, and may well become one of the main sources of our supply of "fine" cotton. The development of the industry can only be assured by pushing on the irrigation works and railway projects already sanctioned by the Government. In some areas—the Tokar and Kassala districts, for instance—there is sufficient labour; in other parts, however, the scarcity of labour is the controlling factor in the development of the country and of cotton-growing in particular.

In that part of the Sudan which lies far south of the recognised irrigation-cotton areas there are further possibilities of cotton cultivation under somewhat different conditions. Extensive areas of fertile country exist in the Bahr el-Ghazal and Mongalla provinces, where the rainfall is tropical, and where rain-grown cotton of good quality and similar in character to American has been already experimentally cultivated in considerable quantities. There is, in fact, every probability that, when the fertile ironstone districts

lying between the swamp region and the Nile-Congo watershed, in the southern and western Bahr el-Ghazal districts, are opened up by railway communications, large areas will be put under cotton by the natives, as has been the case in Uganda and elsewhere. Railways are the crying need of this Upper Sudan region.

Rubber is another product which has almost unlimited prospects of development in the Sudan. Ceara rubber needs no capital outlay, for *Manihot glaziovii*, from which it is obtained, can be planted in bush country which would otherwise lie waste. There seems no reason why many thousands of square miles of bush in the Sudan should not yield commercial rubber—the cheap article that is required for a thousand and one uses in every department of industry. Nor does there seem to be any reason why the whole production should not be undertaken by natives, since neither capital, skilled labour, nor machinery is needed.

Tropical Africa being unsuited for white colonization, its development must be chiefly by native agency; not by the exploitation of the native for the good of the white man, nor by allowing him to continue in his lazy habits, but by introducing to him a phase of the world's competition, and fostering a taste for European goods—mainly through the establishment of railways—and by offering him the means of obtaining money with which to satisfy his gradually increasing wants. Then the real development of the far interior of the Sudan will begin, and thriving native industries will be created, as they have been in the coastal regions and elsewhere.

As regards future railway construction, upon which the development of the Upper Sudan almost wholly depends, the most important project is the extension of the Cape-to-Cairo railway, or, as an alternative, the improvement of the existing rail and steamer transport system by the construction of a short line from Rejaf to Nimule (see above, p. 84). As previously pointed out, the most feasible Cape-to-Cairo route,

which would, moreover, develop the great cotton areas of the Bahr el-Ghazal and tap a vast supply of mahogany, is that *via* El Odaiya, in Kordofan, to Kafia-Kengi, and along the Nile-Congo watershed to Rejaf and Lake Albert. The first section of this railway would be part of the proposed extension of the Kordofan line to El Fasher, and it is worth noting that this El Fasher extension is in the direction of Lake Chad, which the Kano railway in Northern Nigeria is approaching. If a trans-continental connection between these two lines were made across French Wadai, the West African colonies would be brought within a few days' journey of Egypt.

It is doubtful if any other region of the world contains greater potential water-power than does that part of Africa along which the Cape-to-Cairo railway and air routes must run, and it is probable that most of the railways, both built and projected, in the Anglo-Egyptian Sudan could be electrified without any great difficulty.

The quickest route for sportsmen and tourists on their way to Equatorial Africa is *via* the Sudan, and it is probable that under normal conditions Khartum may become as much a tourist centre for the Sudan as Cairo is for Egypt. There does not appear to be any danger of tribal uprisings or other political trouble on any part of the western or south-western frontiers; but some apprehension has been felt as to the possibility of sleeping-sickness gaining a footing in the Bahr el-Ghazal and in part of the Mongalla province west of the Nile. This disease is prevalent in the Upper Welle district of the Congo, and the Upper Mbomu in the French Ubanghi-Shari, but along the parts of the frontier which are opposite those districts measures are taken to prevent the natives crossing to or from the Sudan.

In spite of the present peaceful conditions of the Sudan, the possibility of trouble arising on the borders of Abyssinia is ever present, owing to the incessant and unrestrained traffic in arms and ammunition with the

Sudan tribes, more particularly the Nuer. For years past the situation in the Nuer country has been disturbing, close proximity enabling the naturally troublesome tribesmen to barter their ivory, &c., for cheap arms with the Abyssinian and Galla traders who swarm there for that purpose. It is probable that, if this traffic could be stopped, the section of country occupied by the Nuer would soon become as well regulated and as peaceful as any other part of the Anglo-Egyptian Sudan. The matter is aggravated by the apparent inability of the Abyssinian Government to help in suppressing this traffic, which, moreover, has always been encouraged by German agents. The situation has not been improved by the fact that, at the outbreak of war, a military expedition which was on the point of being despatched to the disaffected Nuer district of Garjak and to the Anuak country had to be postponed. The wily tribesmen, aware of the pre-occupation of the Administration, boldly carried on their illicit traffic, and made use of the weapons thus obtained to wage further and fiercer warfare upon their more peaceful and helpless neighbours. The chief channel through which arms and ammunition enter Abyssinia, and so gain access to the Sudan, is *via* Jibuti, in French Somaliland; and the districts mainly implicated in fostering the trade directly with the Sudan tribes are those north and south of the Sobat.

APPENDIX

I

(a)

AGREEMENT BETWEEN HER BRITANNIC MAJESTY'S GOVERNMENT AND THE GOVERNMENT OF THE KHEDIVE OF EGYPT, RELATIVE TO THE FUTURE ADMINISTRATION OF THE SUDAN.

[Signed at Cairo, January 19, 1899.]

Whereas certain provinces in the Sudan which were in rebellion against the authority of His Highness the Khedive have now been reconquered by the joint military and financial efforts of Her Britannic Majesty's Government and the Government of His Highness the Khedive;

And whereas it has become necessary to decide upon a system for the administration of, and for the making of laws for, the said reconquered provinces, under which due allowance may be made for the backward and unsettled condition of large portions thereof, and the varying requirements of different localities;

And whereas it is desired to give effect to the claims which have accrued to Her Britannic Majesty's Government, by right of conquest, to share in the present settlement and future working and development of the said system of administration and legislation;

And whereas it is conceived that for many purposes Wadi Halfa and Suakin may be most effectively administered in conjunction with the reconquered provinces to which they are respectively adjacent:

Now, it is hereby agreed and declared by and between the undersigned, duly authorized for that purpose, as follows:—

Art. I. The word "Sudan" in this Agreement means all the territories south of the 22nd parallel of latitude, which—

1. Have never been evacuated by Egyptian troops since the year 1882; or
2. Which, having before the late rebellion in the Sudan been administered by the Government of His Highness the Khedive, were temporarily lost to Egypt, and have been reconquered by Her Britannic Majesty's Government and the Egyptian Government acting in concert; or
3. Which may hereafter be reconquered by the two Governments acting in concert.

Art. II. The British and Egyptian flags shall be used together, both on land and water, throughout the Sudan, except in the town of Suakin, in which locality the Egyptian flag alone shall be used.

Art. III. The supreme military and civil command in the Sudan shall be vested in one officer, termed the "Governor-General of the Sudan." He shall be appointed by Khedivial Decree on the recommendation of Her Britannic Majesty's Government, and shall be removed only by Khedivial Decree, with the consent of Her Britannic Majesty's Government.

Art. IV. Laws, as also orders and regulations with the full force of law, for the good government of the Sudan, and for regulating the holding, disposal, and devolution of property of every kind therein situate, may from time to time be made, altered, or abrogated by Proclamation of the Governor-General. Such laws, orders, and regulations may apply to the whole or any named part of the Sudan, and may, either explicitly or by necessary implication, alter or abrogate any existing law or regulation.

All such proclamations shall be forthwith notified to Her Britannic Majesty's Agent and Consul-General in Cairo, and to the President of the Council of Ministers and His Highness the Khedive.

Art. V. No Egyptian law, decree, Ministerial arrêté, or other enactment hereafter to be made or promulgated shall apply to the Sudan or any part thereof, save in so far as the same shall be applied by Proclamation of the Governor-General in manner hereinbefore provided.

Art. VI. In the definition by Proclamation of the conditions under which Europeans, of whatever nationality, shall be at liberty to trade with or reside in the Sudan, or to hold property within its limits, no special privileges shall be accorded to the subjects of any one or more Powers.

Art. VII. Import duties on entering the Sudan shall not be payable on goods coming from Egyptian territory. Such duties may, however, be levied on goods coming from elsewhere than Egyptian territory; but in the case of goods entering the Sudan at Suakin, or any other port on the Red Sea littoral, they shall not exceed the corresponding duties for the time being leviable on goods entering Egypt from abroad. Duties may be levied on goods leaving the Sudan at such rates as may from time to time be prescribed by Proclamation.

Art. VIII. The jurisdiction of the Mixed Tribunals shall not extend, nor be recognised for any purpose whatsoever, in any part of the Sudan, except in the town of Suakin.

Art. IX. Until and save so far as it shall be otherwise determined by Proclamation, the Sudan, with the exception of the town of Suakin, shall be and remain under martial law.

Art. X. No Consuls, Vice-Consuls, or Consular Agents shall be accredited in respect of nor allowed to reside in the Sudan

without the previous consent of Her Britannic Majesty's Government.

Art. XI. The importation of slaves into the Sudan, as also their exportation, is absolutely prohibited. Provision shall be made by Proclamation for the enforcement of this Regulation.

Art. XII. It is agreed between the two Governments that special attention shall be paid to the enforcement of the Brussels Act of the 2nd July, 1890, in respect of the import, sale, and manufacture of firearms and their munitions, and distilled or spirituous liquors.¹

Done in Cairo, the 19th January, 1899.

CROMER.
BOUTROS GHALI.

(b)

The "Suakin Amendment" to the Agreement of January 19, 1899.

AGREEMENT BETWEEN HER BRITANNIC MAJESTY'S GOVERNMENT AND THE GOVERNMENT OF THE KHEDEVE OF EGYPT, RELATIVE TO THE INCLUSION OF SUAKIN IN THE AGREEMENT OF JANUARY 19, 1899.

[Signed at Cairo, July 10, 1899.]

Whereas under our Agreement made the 19th day of January, 1899, relative to the future administration of the Sudan, it is provided by Article VIII that the jurisdiction of the Mixed Tribunals shall not extend nor be recognized for any purpose whatsoever in any part of the Sudan except in the town of Suakin;

And whereas no Mixed Tribunal has ever been established at Suakin, and it has been found to be inexpedient to establish any such Tribunal in that locality, by reason notably of the expense which the adoption of this measure would occasion;

¹ Art. VIII of the Brussels Act prohibits importation of firearms and ammunition into territories between 20° north latitude and 22° south latitude and extending westward to the Atlantic Ocean, and eastward to the Indian Ocean and its dependencies, &c., save under certain conditions defined in Art. IX.

Art. XC-XCV are restrictive measures concerning traffic in spirituous liquors, prohibition of importation and manufacture of such for native use in regions of this zone where either on account of religious belief or from other motives the use of distilled liquors does not exist or has not been developed.

And whereas grievous injustice is caused to the inhabitants of Suakin by the absence of any local jurisdiction for the settlement of their disputes, and it is expedient that the town of Suakin should be placed upon the same footing as the rest of the Sudan:

And whereas we have decided to modify our said Agreement accordingly in manner hereinafter appearing:

Now, it is hereby agreed and declared by and between the undersigned, duly authorized for that purpose, as follows:—

Art. I. Those provisions of our Agreement of the 19th day of January, 1899, by which the town of Suakin was excepted from the general régime established by the said Agreement for the future administration of the Sudan, are hereby abrogated.

Done at Cairo, the 10th July, 1899.

CROMER.

BOUTROS GHAIL.

II

DECLARATION COMPLETING THE CONVENTION OF JUNE 14, 1898¹ (SPHERES OF INFLUENCE IN CENTRAL AFRICA) BETWEEN GREAT BRITAIN AND FRANCE.

[Signed at London, March 21, 1899.]

The undersigned, duly authorized by their Governments, have signed the following Declaration:—

Article IV of the Convention of the 14th June, 1898, shall be completed by the following provisions, which shall be considered as forming an integral part of it:—

1. Her Britannic Majesty's Government engages not to acquire either territory or political influence to the west of the line of frontier defined in the following paragraph, and the Government of the French Republic engages not to acquire either territory or political influence to the east of the same line.

2. The line of frontier shall start from the point where the boundary between the Congo Free State and French territory meets the water-parting between the watershed of the Nile and that of the Congo and its affluents.² It shall follow in principle that water-parting up to its intersection with the 11th parallel of north latitude. From this point it shall be drawn as far as the 15th parallel in such manner as to separate, in principle, the

¹ See *Partition of Africa*, No. 89 of this series.

² This point is the source of the Mbomu river, practically on 5° of north latitude and about 27° 50' east longitude.

Kingdom of Wadai from what constituted in 1882 the Province of Darfur; but it shall in no case be so drawn as to pass to the west beyond the 21st degree of longitude east of Greenwich ($18^{\circ} 40'$ east of Paris), or to the east beyond the 23rd degree of longitude east of Greenwich ($20^{\circ} 40'$ east of Paris).

3. It is understood, in principle, that to the north of the 15th parallel the French zone shall be limited to the north-east and east by a line which shall start from the point of intersection of the Tropic of Cancer with the 16th degree of longitude east of Greenwich ($13^{\circ} 40'$ east of Paris), shall run thence to the south-east until it meets the 24th degree of longitude east of Greenwich ($21^{\circ} 40'$ east of Paris), and shall then follow the 24th degree until it meets, to the north of the 15th parallel of latitude, the frontier of Darfur as it shall eventually be fixed¹.

4. The two Governments engage to appoint Commissioners who shall be charged to delimit on the spot a frontier line in accordance with the indications given in paragraph 2 of this Declaration. The result of their work shall be submitted for the approbation of their respective Governments. . . .

Done at London, the 21st March, 1899.

SALISBURY.
PAUL CAMBON.

III

TREATY BETWEEN GREAT BRITAIN AND ETHIOPIA.

[Signed at Addis Abbaba, May 15, 1902.]

Art. I. The frontier between the Sudan and Ethiopia agreed on between the two Governments shall be: the line which is marked in red on the map annexed to this Treaty, and traced from Khor Um Hagar to Gallabat, to the Blue Nile, Baro, Pibor, and Akobo rivers to Melile, thence to the intersection of the 6th degree of north latitude with the 35th degree longitude east of Greenwich.

¹ This frontier was delimited by the Supplementary Convention of the 8th September, 1919 (see above, p. 4). The Convention adds: "It is understood that nothing in this Convention prejudices the interpretation of the Declaration of the 21st March, 1899, according to which the words in Article 3 ' . . . shall run thence to the south-east until it meets the 24th degree of longitude east of Greenwich ($21^{\circ} 40'$ east of Paris)' are accepted as meaning ' . . . shall run thence in a south-easterly direction until it meets the 24th degree of longitude east of Greenwich at the intersection of that degree of longitude with parallel $19^{\circ} 30'$ of latitude.' "

Art. II. The boundary, as defined in Article I, shall be delimited and marked on the ground by a Joint Boundary Commission, which shall be nominated by the two High Contracting Parties, who shall notify the same to their subjects after delimitation.

Art. III. His Majesty the Emperor Menelek II, King of Kings of Ethiopia, engages himself towards the Government of His Britannic Majesty not to construct, or allow to be constructed, any work across the Blue Nile, Lake Tsana, or the Sobat which would arrest the flow of their waters into the Nile except in agreement with His Britannic Majesty's Government and the Government of the Sudan.

Art. IV. His Majesty the Emperor Menelek II, King of Kings of Ethiopia, engages himself to allow His Britannic Majesty's Government and the Government of the Sudan to select in the neighbourhood of Itang, on the Baro river, a block of territory having a river frontage of not more than 2,000 metres, in area not exceeding 400 hectares, which shall be leased to the Government of the Sudan, to be administered and occupied as a commercial station, so long as the Sudan is under the Anglo-Egyptian Government. It is agreed between the two High Contracting Parties that the territory so leased shall not be used for any political or military purpose.

Art. V. His Majesty the Emperor Menelek II, King of Kings of Ethiopia, grants His Britannic Majesty's Government and the Government of the Sudan the right to construct a railway through Abyssinian territory to connect the Sudan with Uganda.

A route for the railway will be selected by mutual agreement between the two High Contracting Parties.

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MAPS

A map of Anglo-Egyptian Sudan, on the scale of 1:3,000,000 (G.S.G.S., No. 2692), was published by the War Office in July 1914. Alterations in the north-western frontier, separating Anglo-Egyptian Sudan from the territories of France and Italy, being under discussion, the frontier in this direction (as marked in the map) must be regarded as temporary.

*HANDBOOKS PREPARED UNDER THE DIRECTION OF THE
HISTORICAL SECTION OF THE FOREIGN OFFICE.—No. 99*

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I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND FRONTIERS

THE Belgian Congo is situated in the basin of the River Congo in Equatorial Africa, and lies between $5^{\circ} 20'$ north and 14° south latitude and between $12^{\circ} 5'$ and $31^{\circ} 18'$ east longitude.

Practically the whole region drains to the River Congo, and the chief means of access is from the Atlantic coast, but the Congo does not give that unity to the country which might be expected from these facts, as both it and its tributaries are in certain parts of their courses interrupted by falls and do not form good through routes. The Katanga region belongs physically to the South African plateau and has been developed as a result of the general movement towards the north, which may be seen in most of the South African colonies. The Eastern Highlands which border the Western Rift valley belong to East Africa, and the movement to bring them within the hinterland of the Indian Ocean has become pronounced within recent years. The north-eastern districts which border the Congo-Nile divide and the eastern part of the country between the Welle (Uele) and the Ituri may conceivably turn towards the Nile as they develop, and even at present a certain amount of trade takes place by that route.

The original idea in the foundation of the State was that it should include the whole basin of the Congo, but various political circumstances have restricted it within somewhat narrower limits. The frontier, as it exists at the present time, is therefore of varying character, and is in places more or less arbitrary.

To the north of the mouth of the Congo lies the Cabinda enclave, which is administered by Portugal. The boundary between it and the Belgian Congo was for long in doubt, but on July 5, 1913, it was defined by protocol. From the point (13° E., $4^{\circ} 40'$ S.) at which French, Portuguese, and Belgian territory meet, the boundary follows the Shiloango river southwards as far as its confluence with the Lukula, and then ascends the latter river to the point ($5^{\circ} 10'$ S., $12^{\circ} 32'$ E.) at which it is joined by the N'Zenze or Culla-Calla. From there a straight line is drawn southward as far as the parallel ($5^{\circ} 44'$ S.) which passes through the sources of the River Lulofe on the western slope of the plateau of Nime Chiama. The boundary then runs along this parallel westward as far as Yema ($5^{\circ} 44'$ S., $12^{\circ} 18'$ E.), whence it follows first the Lulofe and then the Venzo river as far as Mallango. Beyond Mallango a purely conventional frontier runs to the coast, which is reached about $1\frac{1}{4}$ miles north of the lagoon of Lunga.

From the Cabinda enclave to the point at which the boundary touches the Congo the line between French and Belgian territory is defined in the main by minor geographical features. By the Convention of February 5, 1885, it was agreed that it should follow the Shiloango to its sources, and then continue along the divide between the waters of the Niari Kwilu (Quilloo) and those of the Congo about as far east as Manyanga. From this point to the Congo the frontier was left unsettled, but it was resolved that it should agree as far as possible with some natural division of the land, and that it should end at a point on the navigable portion of the river between the station of Manyanga and the cataract of Ntombo Mataka. A protocol of November 22, 1885, defined part of the boundary, which follows various minor irregularities of the land.

The frontier now changes in character By the

Convention of February 5, 1885, modified by the Declaration of February 5, 1895, it was agreed that the line should follow the Congo up to Stanley Pool and then take the median line of Stanley Pool up to its point of contact with the island of Bamu, the southern shore of that island up to its eastern extremity, and again the median line of Stanley Pool and the Congo.

By the Protocol of April 29, 1887, and the Boundary Agreement of August 14, 1894, the Franco-Belgian boundary was carried from the Congo up the whole course of the Ubanghi to the confluence of its constituent streams, the Mbomu and the Welle, and thence up the Mbomu to its source on the confines of the Anglo-Egyptian Sudan.

From here the Congo-Nile watershed forms the dividing line between British and Belgian territory as far as a point situated about $2^{\circ}25'$ north and $30^{\circ}45'$ east. A delimitation commission, whose work was confirmed in 1915, carried the boundary thence by a line, partly conventional and partly determined by minor geographical features, to Lake Albert near the mouth of the Oguta.

By an agreement, now some years old, the boundary between the Belgian Congo and Uganda was carried practically down the centre of Lake Albert and along the Semliki river and its tributary the Lamia to the source of the latter. It is continued by a straight line from there to Margherita Peak, the highest point in the Ruwenzori range, and thence by another straight line to the source of the Lubilia-Chako, which it follows to Lake Edward. It then crosses the lake to the mouth of the Ishasha and follows that river and its tributary, the Muniaga, to a point from which it is carried by an arbitrary line running east to the summit of Mount Nkabwe and then more or less due south to the summit of Mount Sabinio in the Mfumbiro range, and

the meeting-place of British, Belgian, and German territory.

From the summit of Mount Sabinio the boundary between the Belgian Congo and German East Africa is defined by a Convention signed in 1911. As far as Lake Kivu, which it reaches near Ngoma, it is very irregular and can be followed only on a large-scale map. Many of the irregularities are due to the fact that in certain places all native settlements were included in German territory.

Across Lake Kivu the boundary is continued from a point between Ngoma and Kisenyi (Kisegnies) to the mouth of the Rusizi, and is so drawn as to give four islands in the lake to Belgium and four to Germany. It then follows the Rusizi to Lake Tanganyika, takes the median line of that lake to a point opposite Moliro, and terminates near this town.

Between the Belgian Congo and Rhodesia the boundary is defined by the Agreement of May 12, 1894. It runs from the extremity of Cape Akalunga on Lake Tanganyika to the right bank of the Luapula (Luvua) where that river issues from Lake Mweru. It then crosses the lake to the point at which the Luapula enters it, but is deflected in the south so as to give the island of Kilwa to Great Britain. The Luapula river is followed to the point at which it leaves Lake Bangweulu, and the line then runs directly south along the meridian of that point to the Congo-Zambezi watershed, which then forms the southern boundary as far as the meeting-place of British, Belgian, and Portuguese territory. In 1911 an Anglo-Belgian commission was appointed to survey this part of the frontier, and from the maps it prepared it appears that the Luapula crosses the stretch of the meridian in question, and that consequently some modification of the frontier will here be necessary.

Various agreements define the Belgo-Portuguese frontier, the most important of which are the Agreement of May 25, 1891, the Declaration of March 24, 1894, and the letters exchanged between the two Powers in April and June 1910. From the meridian of 24° east the boundary runs westward along the Congo-Zambezi watershed to the neighbourhood of Lake Dilolo. At this point the boundary leaves the divide and strikes the upper course of the Kasai, which then becomes the boundary as far north as $7^{\circ} 17'$ south. From this point the frontier runs westward for a considerable distance across the tributaries of the Kasai and becomes very irregular. Its general direction is westwards along the parallel of $7^{\circ} 17'$ south as far as the Chikapa, down that river to a point a little north of the 7th parallel, west to the Loange, and up that and other rivers as far as the 8th parallel. This it follows fairly closely to the Kwango, along which it runs to the north. The details of the delimitation, which was carried out in 1894, can be shown only on a large-scale map. (See Appendix No. IV.)

From the Kwango to Noki on the lower Congo the boundary was finally adjusted by an agreement of July 5, 1913. It follows approximately the parallel of $5^{\circ} 52'$ south; but, of forty-five places mentioned through which it is to pass, a number lie a little to the north and a number a little to the south of that parallel.

(2) SURFACE, COAST, LAKES, AND RIVER SYSTEM

Surface

The greater part of the south of Africa consists of a high plateau which is continued northward by the highlands of East Africa and the coastal ranges of West Africa. Between these lies the low plateau which forms the

basin of the central Congo. It is bordered on the south-east by the Katanga, a continuation of the high veldt of South Africa and Rhodesia, and on the south by the lower lands of the Angola plateau. In the east it rises to the mountains bordering the great rift in which lie Lakes Albert, Edward, Kivu, and Tanganyika, and on the north-east to a lower plateau which forms the divide between the waters of the Congo and the Nile; while on the west the low Congo plateau merges into the Crystal Mountains. To the west of these mountains lies the small coastal region.

Coastal Region.—Behind the Atlantic coast of the Belgian Congo, which is generally low and sandy, there are cliffs which form the escarpment of a low plateau. Upon this plateau are considerable areas of marsh-land, in which the rivers pursue winding and uncertain courses. Farther inland the land rises through a second sandy plateau to the region of Mayumbe, which occupies the remainder of the country north of the Congo basin and west of the Crystal Mountains. It is a hilly district, and the numerous rivers which traverse it are frequently interrupted by falls and rapids. In the valleys, and on the lower slopes of the hills, there is a more or less dense tropical forest, but elsewhere brushwood and savanna are the prevailing types of vegetation. The banks of the Congo are frequently covered with mangrove forests, while farther inland there is again savanna. The region as a whole contains considerable areas of fertile soil, and numerous plantations have been established within it.

Crystal Mountains.—These mountains run along the western coast of Africa from Cameroon to Angola. Within the Belgian Congo they form a great barrier between the coastal region and the central basin of the Congo. Their average height seldom exceeds 2,500 ft., the most conspicuous parts of the range being the massif

of Palaba and the plateau of Bangu. The former reaches its greatest height near Matadi, and the latter rises in Mount Wia (north of Tumba) to a height of about 3,450 ft. The Congo cuts its way through the mountains in a deep gorge, but, owing to the rapids in this part of its course, is here useless as a means of communication.

Central Basin.—As a whole the central basin may be regarded as a vast plateau which is raised along the margins and depressed in the centre. In the neighbourhood of the larger rivers flooding frequently takes place, and there are numerous districts in the interior of the plain which are always more or less marshy.

This region, covered as it is in many places by dense tropical forests, has only been partially explored, and comparatively little is known about the details of its surface features. It would appear, however, to reach its lowest level in the country round Lake Leopold II, where it is only about 1,100 ft. above sea-level. Elsewhere, however, as one goes from the main river towards the north, the land becomes higher and more deeply incised by the tributary streams.

Congo-Nile Plateau.—The north-east of the Congo region rises gradually into a plateau which forms the watershed between the Congo and the Nile, and that part of this divide which belongs to the Belgian Congo is drained by the Welle and its tributaries. The character of the surface in general has the form of a plateau which slopes from the east towards the west and south-west, while on the south it falls somewhat steeply towards the central basin. The country reaches its greatest elevation in the north-east, where it has a height of 3,000 to 4,000 ft. above sea-level. Here the water-parting assumes the form of a crest, and in this neighbourhood there are some considerable hills, such as Mount Barara and Mount Baginze.

In the south-east also of the Congo-Nile plateau,

between the Welle-Kibali and the Bomokandi rivers, the country is hilly and even mountainous, rising to 3,600 ft. or more at the head-waters of the former river.

To the west of the districts just described the country becomes lower and forms a series of broad plateaus more or less uniform in character. North of Niangara the surface is level or gently undulating, with an average elevation of about 2,500 ft. Here therefore the Congo-Nile divide is not a well-defined crest, although the actual water-parting is clearly marked.

To the south and west of Niangara the country retains the same general character but is somewhat lower. Among the hills which rise above the average level of the land are Mount Angba on the Welle near Amadi, Mount Madjema near Poko, and Mount Tena on the Bomokandi.

In the broad level plains which are characteristic of the greater part of this region the surface features are generally monotonous. The Welle and most of its tributaries wind their way between high banks of clayey alluvium, but the broad basins in which they flow are much too shallow to be termed valleys in the ordinary sense. Numerous rapids prevent continuous navigation, and in the intervening reaches, where the fall of the land is slight, the rivers frequently expand during the rainy season into enormous swamps. As a general rule the country north of the Welle is a savanna region, and its open character is therefore in marked contrast to the densely wooded lands in the central basin of the Congo.

Eastern Highlands.—These form the eastern border of the central basin and rise from it to the inner escarpment of the Western Rift valley. To the north of the Lukuga the mountains of Ugoma run along the northern part of the west coast of Lake Tanganyika. Farther to the north, where they border the Rusizi and Lake Kivu,

the mountains are broader on the whole, while to the west of Lake Edward they seldom exceed 6,000 ft. in height. The range finally merges into the southernmost part of the Congo-Nile divide.

Katanga.—The term *Katanga* has been assigned to a definite administrative region (cf. p. 51, *foot-note* ¹), but is here taken to include that part of the south-east of the Belgian Congo which belongs to the plateau of South Africa, and the districts more closely associated with it.

To the south of the district lies the High Katanga, which is a vast undulating plateau. In the copper-producing area near the southern frontier its height varies from 4,000 to 5,000 ft., but farther to the north it sometimes rises to over 6,000 ft. The greater part of this region is covered with thin forest.

To the north-east of the High Katanga the plateau of Kundelungu lies between the Luapula and Lake Mweru on the east and the Lufira on the west. This plateau, which has an average elevation of about 5,000 ft., possesses a gently undulating and only slightly diversified surface. Climate and soil combine to give it a steppe vegetation.

Separated from the Kundelungu by the high valley of the Lubule lies the mountain region of Mulumbe, of which large areas are covered with comparatively dense savanna. To the north of it are the Kibara Mountains, which in reality form an undulating plateau. The soil is as a rule poor, but in the valleys there are often fertile districts.

On the north-west the High Katanga is bordered by the southern border of the Biano plateau and the south-west prolongation of the Bia Mountains. The flat surface of the plateau is almost unbroken, and the rivers which originate upon it descend by steep slopes to the lowlands. The Bia Mountains, which border this plateau on the west, contain stores of tin, which

will probably give them considerable economic importance in the future.

To the north-west of the Bia Mountains, and between them and the Hakansson Mountains, lies the lowland which is generally known as the rift-valley of Upemba. Lakes Upemba and Kisali are the largest remnants of the great lake which once occupied this region, but there are, in all, about thirty-five fluvial lagoons along the course of the Lualaba, and at times of high water much of the land is converted into marsh. The soil is fertile and the vegetation rich, but the district is unhealthy.

To the east of the Kundelungu lies the Mweru-Luapula valley, where there are considerable tracts of alluvial soil. Many fertile districts exist along the course of the Luapula and to the south-west of Lake Mweru. Notwithstanding its height—over 3,000 ft.—the country has a tropical climate, and much of it is covered with forest.

On the west of Lake Tanganyika from the Luvua to the Lukuga extends the mountainous region of the Marungu, which may be regarded as a transition zone between the Katanga proper and the Eastern Highlands.

Southern Kasai Basin.—To the west of the Katanga region the land merges into the Kasai country. This region is on the whole one of the least known parts of the Congo, but its general structure is comparatively simple. From the Kasai and Sankuru rivers the land rises gradually to the plateau of South Africa. This plateau is much dissected by the numerous rivers which rise upon it and flow northward to join the Kasai.

On the plateau, where the land rises to an elevation of over 3,000 ft., the rivers usually flow in shallow depressions within which they expand or contract according to the season of the year. Their banks are often marshy, and the intervening lands are also badly drained. As they go northward the rivers cut deeper

and broader valleys, and the country, though decreasing in height, presents a more mountainous appearance, being better drained and less marshy.

Coast

In proportion to the area of the colony the coast-line of the Belgian Congo is extremely short. Its frontage to the Atlantic lies between the Portuguese territory of Cabinda and the estuary of the Congo, and is little over 20 miles in length. For shipping purposes its value is small. The coast is generally low and sandy, and the shoals by which it is fringed make it unsafe for vessels to approach very close.

For its communication with the sea the country has therefore to depend upon the estuary of the Congo, which may be considered as beginning at Boma, 50 miles from the coast. The estuary can as a rule be navigated without much difficulty, though the conditions are not ideal.

Lakes

On the eastern frontier of the Belgian Congo is the Western Rift valley, in which lie Lakes Albert, Edward, Kivu, and Tanganyika. As a general rule these lakes are bordered by lofty mountains which prevent alike the formation of good ports and the development of communication with the interior. Lake Tanganyika is at the present time of most value for navigation; on the other lakes, of which Mweru is the chief, there is little organized trade.

River System

The general characteristics of the Congo and its numerous tributaries are determined by the physical structure of the basin which they drain. Most, though not all, of these rivers rise upon the uplands surrounding the central region and descend more or less rapidly towards it. In this part of their course they tend to be

narrow, while their valleys are more or less deeply incised. Exceptions to this general rule are, however, found in the Welle district, where the tendency is for broad navigable reaches to alternate with falls or rapids, and in the Katanga, where the rift-valleys of Upemba-Lualaba and Mweru-Luapula have a structure more or less independent of the rivers which traverse them.

On reaching the central basin the velocity of the rivers is checked ; they become wide and sluggish, and in many places overflow at certain seasons of the year. The débris which they have carried down with them forms numerous submerged sandbanks, but with each flood the rivers once more pick up this material only to redeposit it elsewhere. Their channels are consequently never the same for two years in succession. In addition to this the rivers are frequently blocked by weeds and other vegetation, and in their efforts to overcome this obstacle the main currents are constantly taking new directions.

After it has collected the drainage of its vast basin the Congo carries it down from the sandstone plateau through the gorge which it has cut in the Crystal Mountains to the lowlands bordering the coast. As the difference in level is considerable its course is again interrupted by rapids and falls.

The Congo, as will be seen from the map, has countless tributaries. The largest on the right bank are the Ubanghi, which forms for a considerable distance the boundary between Belgian and French Congo, and has as its main affluent the Welle with its system of smaller rivers ; the Aruwimi (or Nowelle), which joins the Congo at Basoko ; the Lukuga, which connects Lake Tanganyika with the main stream ; and the Luvua or Luapula, which connects the Congo with Lake Mweru.

On the left bank the main tributaries are the Lomami, which pursues a course almost parallel to that of the

main stream, finally joining it at Isangi; the Ruki, which joins the Congo at Coquilhatville; and the Kasai, whose basin has been described above (p. 10), and which receives as its main affluents the Lulua, the Sankuru, and the Lukenie (Fini or Mfini) on the right bank, and the Kwango system (including the Kwilu and Kwengo) on the left.

In the upper part of the Congo and in the Kasai there are, as a result of the double rainy season, two annual floods and two periods of low water. The Sanga (whose course lies entirely in French territory) and the Ubanghi, which are the principal tributaries from the north, have floods of the Nilotic type with one period of low water in April and one of high water in October. These make their influence felt on the main river in the exaggeration of the November-December flood as compared with that of May and June.

(3) CLIMATE

The data available for a consideration of the climatic regime of the Belgian Congo are very scanty and imperfect, but they are sufficient to give an idea of its general character. At the Equator the temperature is high at all seasons of the year, and at Eala ($0^{\circ} 5' \text{ N.}$) the annual mean is about 76° F. (24.5° C.), while the range between the warmest and coldest months is only about 2° F. (1° C.). Farther to the north the mean annual temperature is somewhat higher, and at Nouvelle Anvers ($1^{\circ} 36' \text{ N.}$) it is 78° F. (25.5° C.). On the other hand the range between February, the warmest month, and August, the coldest, is about 3.5° F. (2° C.). No figures exist for places actually in the Belgian Congo north of Nouvelle Anvers, but there appears to be a further increase both in the mean annual temperature and in the mean annual range, as far north at least as the limits of the tropical forest.

To the south of the Equator somewhat similar conditions prevail. The mean annual temperature tends to increase southward and varies from 75° to 78° F. (24° to 25.5° C.). The annual range also increases and in places is as much as 9° F. (5° C.). Over this part of the central basin March is generally the hottest month.

In the Katanga, which is farther removed from the Equator and is at the same time much higher, the climatic regime is more varied. At Elisabethville the mean annual temperature is 68° F. (20° C.), while the range between October, the warmest month, and July, the coldest, is about 16° F. (9° C.). This region and perhaps some districts of the Eastern Highlands for which figures are not available appear to be the only parts of the Congo suitable for European settlement.

The greater part of the Congo falls within the belt of equatorial rains which moves backward and forward with the apparent motion of the sun. The region of heaviest rainfall is at or near the Equator, where there is a mean annual precipitation of 65 to 70 inches (1,650 to 1,780 mm.). In this region rain falls at all seasons, and although it is fairly well distributed throughout the year, there is a double maximum—one in April or May and the other in October and November.

Over the whole of the region north of the Equator the conditions are somewhat similar. As a rule the double maximum is well marked, but there is no distinctly dry season. In the district north of the Welle, however, there is very little rainfall in December and January, when the sun is well to the south. Taking the region as a whole the mean annual precipitation tends to fall between 60 and 65 inches (1,520 and 1,650 mm.), except in the Eastern Highlands, where it is less.

South of the Equator the rainfall is on the whole lower. In the central basin it is generally over 55 inches (1,400 mm.), but it decreases to the east, south-east,

and south, where the somewhat scanty records all indicate less than 50 inches (1,270 mm.). Except in close proximity to the Equator there is everywhere a well-marked dry season, and little rain falls between May and September. In the northern parts of the region there is a double maximum, but in the south this becomes much less pronounced.

(4) SANITARY CONDITIONS

Sleeping-sickness and malaria are the most serious diseases of the Belgian Congo.

Sleeping-sickness has, at one time or other, ravaged most parts of the Belgian Congo, and has probably caused a great reduction of its population. The only districts which appear to be safe are those situated at a height of over 4,000 feet above sea-level. Both natives and Europeans are liable to malaria, which is probably the chief cause of the high infant mortality which prevails.

Tick fever, filaria infection (the cause of elephantiasis), and jigger lesions are all common among the native population, while blackwater fever, which is generally recognized to be a sequel of neglected malaria, is met with. Pulmonary diseases cause many deaths among the natives, and among other diseases may be mentioned small-pox, which has at various times ravaged parts of the Congo, venereal troubles, which appear to be common, dysentery, and affections of the skin.

(5) RACE AND LANGUAGE

Race

The population consists almost entirely of Bantu negroes, similar in race to the natives of both South and West Africa. Along the northern boundary, south

of the Ubanghi and Bomu rivers, a group of peoples, the Azande and cognate tribes, and in the north-east, near the Nile, Nilotic elements, cover considerable areas, while the Watussi near Lake Kivu are of Abyssinian origin. Scattered over the whole State there are isolated groups of people of small stature, the Nains,¹ who are probably the remnants of indigenous races. The chief group of Nains inhabit the Ituri forest. The predominant people of the Azande group are the Avunguru, who are almost white in colour.

Language

There are four languages in common use: Fiote, Bangala, Kiswahili, and Kiluba. These are degenerate mixed tongues, which serve as a means of intercourse along the main arteries of communication.

The development of a *lingua franca* tends to be carried still farther, for it is asserted that Fiote and Bangala tend to merge into a single hybrid speech. As a rule identity of speech implies identity of race; but the Bakango are known to use different dialects.

Bantu race and Bantu speech, however, do not always coincide; the Bongo and Warega, for example, are Bantu peoples who do not use a Bantu dialect; the Wagenia and Bushongo, on the other hand, have a Bantu language, although they are not Bantu by race.

The whole area of the Congo State has not been fully explored linguistically, but it seems possible to group the numerous tongues as North, South, and East Bantu. North Bantu includes the languages in use along the middle Congo and the Aruwimi, South Bantu those of the lower Congo and the Kasai—

¹ The people of small stature have been called Pygmies, Batwas, Nains. The (French) term *Nain* is used here in preference to the term *Batwa* in order to distinguish these Congo pygmies from the Bushmen of South Africa, to whom the term *Batwa* is also applied.

Sankuru district, and East Bantu those which serve the people near the lakes.

On the hypothesis that the Bantu migrated from the north-east, this classification implies that East Bantu is the most archaic speech, South Bantu is intermediate, and North Bantu is farthest removed from the original speech.

The Azande have a language of their own, which has driven out those of many of the tribes whom this conquering people have largely absorbed.

(6) POPULATION

Distribution

Data are lacking for a precise estimate of the density of the population. There is some evidence that the people are most numerous in the north-east and south-west, that they tend to congregate along the banks of the large rivers and lakes, and that their numbers are either stationary or declining. It is asserted also that the natives tend to desert the country crossed by a main line of traffic.

Nomads

Only the Nains are nomads. The most numerous groups of Nains are the Mambutti pygmies of the Ituri forest ; other smaller groups of pygmy peoples occur scattered among the tribes of the east and south. All Nains are hunters, and barter meat for vegetable produce with the sedentary tribes. The Ituri Pygmies change their location in the forest in accordance with the facilities which arise for barter ; the Nains elsewhere attach themselves to the tribe which offers superior inducements to provide meat ; it is regarded as a mark of high repute for an agricultural tribe to be served by a group of Nains.

Settled Tribes

Most of the tribes have reached their present situation as a result of migratory movements which have been in progress for centuries. European influences tend to fix each tribe in the locality it occupied twenty or thirty years ago, but the migrations can hardly be said to have ceased.

One important result of these migrations is that one tribe occasionally attains a position of 'overlord' over another; there are three important instances of the domination of a more intelligent people over a more numerous, less capable folk. South of the Sankuru the Bushongo, who originally came from the Shari district in the French Sudan, maintain a dominant position among the Bakuba; the Watussi are the leading race near Lake Kivu; and the Avunguru-Azande exert a dominating influence on the Bakango, Ababua, and Abarambo of the Welle-Bomokandi district.

In recent years the demands of Europeans for labourers have introduced a new element which causes movements of the people, but not necessarily a change in the permanent home of a tribe. At Stanley Pool so many workers are needed that Bangala from the middle Congo and Batetela from the east of the upper Sankuru are employed in large numbers. When these natives are accompanied by their women the stability of the tribal settlements is disturbed.

Europeans

On 1 Jan., 1918 there were 6,266 Europeans in the Congo. 3,263 of them were Belgians, while the remainder included representatives of various nationalities. Outside of Katanga they are either Government officials, traders, miners and prospectors, or mis-

sionaries. The Government officials and missionaries are distributed throughout the country; traders are settled either at the ports or at the main collecting centres in the interior; and miners and prospectors are found in the outlying regions such as the Eastern Highlands and the Kasai region. In Katanga the Europeans, many of whom are British, are mainly connected, directly or indirectly, with the mining industry.

II. HISTORY

CHRONOLOGICAL SUMMARY

- 1485 Discovery of Congo by Diogo Cão.
- 1490–1608 Semi-Christian kingdom of San Salvador under Portuguese influence.
- 1644–1717 Period of activity of Italian Capuchins with Papal support.
- 1766–74 Abortive French Catholic mission.
- 1778 Last Italian mission to San Salvador.
- 1781–82 Failure of Portuguese Franciscans to reopen relations with San Salvador.
- 1783 Portuguese occupation of Cabinda.
- 1784 Expulsion of Portuguese from Cabinda by the French.
- 1816 Effort of Captain Tuckey to explore Congo.
- 1827–29 Survey of Congo estuary by Captain Owen's expedition.
- 1855 Activity of European business houses on Congo begins.
- 1857 Survey continued to Matadi by Captain Hunt. Dr. Bastian visits San Salvador.
- 1859–66 Portuguese occupation of San Salvador in favour of Dom Pedro V.
- 1863 Burton explores Congo to Yalala Falls.
- 1871 Livingstone reaches Nyangwe on Lualaba (Congo).
- 1873–75 Cameron reaches Nyangwe; he recognizes Lualaba as Congo, but cannot follow stream to mouth.
- 1876 Leopold II of Belgium summons Geographical Conference, which creates International African Association for exploration of Africa and repression of slave-trade.
- 1877–82 Futile expeditions of Association to east coast of Africa.
- 1878 Arrival of Stanley in Europe, after crossing Africa and descending Congo from Nyangwe to sea (1875–7).

- Leopold II creates Comité d'Études du Haut-Congo.
De Brazza, having explored Ogowe (1875-78), offers to establish French influence on Congo.
- 1879-82 Stanley in Africa as representative of Comité ; reaches upper river and makes treaties, returning to Europe August 1882.
- 1880-82 De Brazza, acting for France, establishes Franceville on Ogowe, Brazzaville on Stanley Pool ; he explores Niari Kwilu.
- 1882 Portugal opens negotiations with England to secure Congo mouth.
- 1883-84 Stanley secures Niari Kwilu valley for International Congo Association (the new name of the Comité), and makes treaties in upper Congo.
De Brazza, sent to anticipate Stanley, arrives too late.
- 1884 Anglo-Portuguese Treaty (Feb. 26) assigns Congo mouth to Portugal.
United States recognizes Association as a friendly State (Apr. 22).
Association accords rights of pre-emption to France (Apr. 23).
France and Germany declining to accept Anglo-Portuguese Treaty, Portugal suggests International Conference (May 1884).
- 1884-85 Berlin Conference (Nov. 15, 1884—Feb. 26, 1885) regulates position of Congo basin ; the Powers by separate treaties recognize the Association as a State, and it adheres to Berlin Act (Feb. 26).
- 1885 Leopold II assumes sovereignty and proclaims neutrality of State.
- 1886 Slave-traders of eastern Congo destroy station at Stanley Falls.
- 1887-89 Stanley, appointed to relieve Emin Pasha in Equatoria, secures Falls by installing Tiputipu as Vali, and brings Emin back to Congo.
- 1890 Brussels Conference regulates trade in liquor and provides better means for suppression of slave-trade.
- Agreement between State and Belgium for loan, giving Belgium right to annex in 1901.

- 1891 Agreement with Portugal as to boundary in Kwango district.
Death of Msiri and successful occupation of the Katanga.
- 1891-92 Beginning of monopolies and concessions.
- 1892-94 The Arab war ; complete overthrow of slave-traders.
Steady advance of State forces into Nile basin.
- 1894 Final settlement of boundary with Portugal.
Large territorial concessions by United Kingdom in Nile region in return for strip between Lakes Tanganyika and Edward (May 12), which, on German protest, is abandoned (June 22) ; boundary on south defined.
Modification of northern boundary by agreement with France (Aug. 14).
- 1895 Proposed immediate annexation by Belgium, subject to transfer of obligation to respect French right of pre-emption ; change of policy of King in close communication with French President, Faure ; withdrawal of treaty and renewal of expansion towards Nile.
Judicial murder of Stokes.
Outbreak of revolt of Batetela.
- 1896 Foundation of *Domaine de la Couronne* to secure funds for public works in Belgium and royal annuities.
- 1898 French and English at Fashoda ; Anglo-French agreement ; activity of Belgian officers in Nile basin.
- 1900 Suppression of revolts in progress since 1895 now nearly complete.
Creation of *Comité du Katanga* with full administrative and commercial powers.
- 1901 Annexation by Belgium definitely opposed by King, who greatly extends activity of State in exploitation.
Belgium agrees to postponement of annexation (Aug.).
Death, while in custody of State officials, of the Austrian subject, Rabinek, accused of trading in Katanga.

- Growth of public uneasiness (especially since 1898) as to maladministration of Congo, and protests against restraint of trade.
- 1903 British circular to the Powers, raising question of carrying out of Berlin Act as regards free trade and treatment of natives.
- 1904 Mr. Casement's report on atrocities communicated to Leopold II.
- 1905 Commission of Inquiry's report published (Oct. 31, 1905); it condemns in many respects the policy of the State.
- 1906 The King's reform decrees; declaration that annexation is premature, and that in annexation the *Domaine* (renamed *Fondation*) de la Couronne and other foundations must be respected.
M. Hymans's interpellation; Government undertakes to secure annexation.
Convention regarding liquor traffic; increase of duties.
Convention between King Leopold and Great Britain (May 9), which gives him only the Lado enclave for life.
- 1907 Treaty for annexation of Congo to Belgium (Nov. 28); dissatisfaction in Belgium at retention of *Domaine de la Couronne*.
- 1908 Additional Act (March 5) providing for suppression of *Domaine*.
Treaty and Act approved by Parliament; Colonial Charter voted; annexation (Nov. 15).
French right of pre-emption recognized (Dec. 23).
United Kingdom represents to Belgium conditions of amelioration of native position and freedom of trade which must be fulfilled prior to recognition by her of annexation.
- 1909 Death of Leopold II. Definite change of policy on accession of King Albert.
- 1910 Various reform decrees, including introduction of freedom of trade in three stages, and resumption by State of administration of the Katanga, which by railway connexion with the south is now opened to exploitation. Surrender of Lado enclave to Sudan.

- 1911 Arrangements for suppression of Government share in monopolies of Abir and Société Anversoise, and dissociation from Kasai Company.
- 1912 Freedom of trade extended to whole of Colony (July 1).
- 1913 From January 31 liquor traffic suppressed throughout the Colony.
- 1914 Neutrality of Colony violated by Germany ; colonial forces take part in war.

(1) THE INTERNATIONAL AFRICAN ASSOCIATION

THE evolution of the Belgian Congo from its original conception as a commercial undertaking to a recognized status among the great African Powers is the work of Leopold II, King of the Belgians. While the discoveries of Burton, Livingstone, Cameron, Rohlfs, du Chaillu, and other great African travellers aroused the interest of many different classes of individuals in Western Europe, the political potentialities of the territories lying within the basin of the Congo were as yet unrevealed to the average European, whether manufacturer, trader, or philanthropist. King Leopold II, however, who had succeeded to the Belgian throne in 1865, beheld a different vision ; and, though it is improbable that he foresaw exactly the train of events which was to lead to the creation of the Congo Free State, he grasped the political advantages attaching to the systematic encouragement of African exploration. Stanley had barely started on the journey which was to take him from one coast of the continent to the other when King Leopold resolved to utilize the generally aroused European interest in Central Africa in the creation of an African State under his own rule. On September 12, 1876, therefore, he summoned an international conference of geographical experts to Brussels. From this assembly sprang the International African

Association, which undertook not only the exploration of unknown African regions, but also the furtherance, by all means in its power, of the suppression of the slave trade and of the promotion of legitimate commerce. After lengthy discussion it was unanimously agreed that each country wishing to take part in the enterprise should form a national committee. Money was to be collected by these bodies and delegates sent to an International Commission, whose permanent headquarters were to be situate at Brussels.

This scheme, however, very soon lost its international character. In England the Royal Geographical Society preferred to form a separate African Exploration Fund, and sent out Keith Johnston and Joseph Thomson on scientific expeditions; while France and Italy followed England's example in dispatching separate expeditions respectively to the Gabun, under de Brazza, and to Abyssinia. These defections notwithstanding, the Executive Committee of the Association equipped several expeditions which were based on the East African coast. For various reasons these met with little or no success, the solitary result being the establishment of a station at Karema, on the eastern shore of Lake Tanganyika, which was shortly afterwards to be transferred to Germany.

(2) LEOPOLD II AND STANLEY

This, then, was the situation in August 1877, when news reached Brussels that Stanley had successfully completed his great journey across Africa from Zanzibar, whence he had started in 1874. On the explorer's return to Europe, King Leopold lost no time in inviting him to visit Brussels. Thereafter, events moved swiftly; and at a meeting which took place on November 25, 1878, between the King, Stanley, and certain members of the International Association, it

was decided to form a body, to be known as the *Comité d'Études du Haut-Congo*. The title-deeds of the new committee were somewhat obscure, but in effect the new body speedily superseded the International Association, adopting the title of *Association Internationale du Congo*. A great and important change in method was made by King Leopold in concert with Stanley, when it was determined to prosecute the work of exploration no longer from the eastern coast of Africa, as had previously been done, but from the west coast, up the great river from its mouth.

In accordance with the policy determined upon, Stanley was invited to return to the Congo. This he did, and spent the next four years in making treaties with the natives. By 1884, twenty-two stations had been founded on the Congo and its tributaries, while numerous expeditions, penetrating the country lying within the great bend of the river, were rapidly acquiring territory for the Association. This activity did not escape the notice of the various European Powers interested in Africa. De Brazza succeeded in establishing French influence on the northern banks of the Congo and in the Shari and Ubanghi districts; and a series of disputes arose which drew attention to the fact that the Association held no status as a sovereign Power.

(3) THE ANGLO-PORTUGUESE CONVENTION (1884)

The question came to a head early in 1884, when Lord Granville, taking advantage of claims advanced by Portugal to the Congo in virtue of its discovery centuries before, concluded a convention (February 26, 1884) with that country, recognizing both banks of the mouth of the Congo as Portuguese territory, and placing the navigation of the river under the control

of an Anglo-Portuguese Commission. Later, Great Britain suggested that this commission should be an international one.

The publication of the treaty aroused a storm, for the instrument not only threatened to hamper the operations of the International Association, but set a limit to French expansion on the Lower Congo. King Leopold, however, found his opportunity in the proposed arrangement, and began forthwith a diplomatic campaign which was to end in the recognition by the European Powers of his sovereignty over a vast territory in Central Africa. He first of all approached France, who was admittedly irritated by the menace to her new colonial empire contained in the Anglo-Portuguese Convention. An agreement (April 24, 1884) was quickly arrived at, and, in return for the recognition of the Association by its most serious rival, King Leopold caused a note to be addressed to the French Government, declaring that the Association would not cede its possessions to any Power, 'except in virtue of special Conventions which may be concluded between France and the Association for fixing the limits and conditions of their respective actions'. The note further engaged to give France the right of pre-emption, were the Association compelled to sell its possessions.

This arrangement concluded with France, King Leopold turned to the German Government, with whom he was on good terms. Bismarck was by this time committed to a policy of colonial activity. He therefore agreed to support the cause of the Association, and on May 5, 1884, the German Ambassador in London was instructed to inform the British Government that, though Germany sought no privileges on the Congo for herself, she was definitely opposed to any arrangement which might place her and other

European Powers in a disadvantageous position. Furthermore, a series of negotiations between the Imperial Chancellor and Baron de Courcel, the French Ambassador at Berlin, resulted in the establishment between France and Germany of 'perfect identity of ideas' on the subject in question. France and Germany, therefore, having joined hands, the British and Portuguese Governments gave way (June 26, 1884). Moreover, Lord Granville agreed to the proposal which shortly afterwards emanated from the Wilhelmstrasse, that this difficulty and other outstanding African questions should be submitted to an International Conference to be summoned to Berlin, with a view to the establishment of an understanding on the following bases :

1. Freedom of commerce in the basin and mouth of the Congo.

2. The application to the Congo and Niger of the principles adopted by the Congress of Vienna for the preservation of freedom of navigation on certain international rivers, principles applied at a later date to the River Danube.

3. A definition of formalities necessary to be observed in order that new occupations on the African coasts might be deemed effective.

(4) THE BERLIN CONFERENCE

On November 15, 1884, Bismarck formally opened the conference at Berlin. Representatives and experts from Austria-Hungary, Belgium, Denmark, France, Germany, Great Britain, Holland, Italy, Portugal, Russia, Spain, Sweden and Norway, Turkey, and the United States of America were summoned, and took part in the proceedings. The results of the conference were embodied in the General Act, better known as

the Berlin Act, of February 26, 1885. The importance of the Act in its political and economic aspects and in its relation to the history of African civilization, warrants a separate discussion. Lack of space, however, prevents more than the briefest outline of the principles which it formulated and their bearing on the claims of the International Association of the Congo. Freedom of trade in the Congo basin, which was geographically defined, was provided for in the widest sense, while elaborate clauses assured the protection of the natives and the suppression of slavery and slave traffic. The navigation of the Congo was declared free, and the important principle was laid down that the signatory Powers were under obligation to ensure the establishment of authority in the regions occupied by them on the coasts of the African continent sufficient to guarantee freedom of trade and transit. Briefly, the provisions affecting the Congo may be said to have placed the territories watered by the Congo river and its affluents, including Lake Tanganyika, at the disposal of the International Association, with the proviso that commercial and religious freedom should be guaranteed, slavery and the slave trade suppressed, and no trade monopolies granted. It should be added that the International Association, having no recognized status at the date of the assembling of the conference, was not formally represented at Berlin; but, the recognition taking place during the conference, the Association duly adhered to the General Act.

(5) RECOGNITION OF THE INTERNATIONAL ASSOCIATION

The position of the Association, from an international point of view, was established only after considerable negotiation with the Powers concerned. Germany was the first European Power to recognize its status

by a convention of November 8, 1884,¹ which acknowledged the right of the Association to the territories claimed. In return the Association promised to protect the property of German subjects, and to allow them free exercise of their religion and the rights of navigation, commerce, and industry. Further, these engagements extended to any cession of territory by the Association, and were to hold good, any subsequent transfer notwithstanding. Great Britain followed suit on December 16 with a similar convention, but added the very important provision that British consular officers should be allowed to hold Consular Courts for the exercise of civil and criminal jurisdiction over British subjects within the Congo area. Conventions of recognition were also concluded with Italy, Austria-Hungary, Holland, Spain, Russia, Sweden and Norway, and Denmark, while on February 23, 1885, Belgium formally recognized the Association. An agreement with France proved more difficult to arrange, but by dint of surrendering certain territories to the north of the Congo coveted by France, King Leopold persuaded the French Government to renounce their territorial claims on the south side of the Congo. Further, France promised her good offices in the dispute with Portugal. The Portuguese Government, therefore, abandoned by France and pressed by Great Britain, gave up its claim to both banks of the mouth of the Congo. On the north bank, however, she received an enclave at Cabinda which she valued especially as the origin of one of the royal titles. Further, Portuguese national honour was satisfied by the acquisition of Cape Padrone, on which the Portuguese explorer, Diogo Cão, had set up a stone pillar three hundred years earlier, and of the southern bank of the Congo

¹ The United States had already (April 10, 1884) recognized the Association as a sovereign Power.

river for nearly one hundred miles inland. The Final Act of the conference was signed on February 26, 1885; and at the same time the International Association declared, in accordance with Art. 37, its adhesion to the resolutions then adopted.

(6) KING LEOPOLD'S SOVEREIGNTY OF THE CONGO

The conclusion of the Berlin Conference set a term to the quasi-international character of King Leopold's enterprise. It was recognized throughout the conference, and soon came to be generally known, that the real negotiator of the treaties which had been formed in the name of the International Association was the King of the Belgians himself. Shortly after the conference had terminated its labours, King Leopold applied to the Belgian Parliament for authorization to accept the position of sovereign of the new-born State. This assent was accorded without much difficulty by the two Houses on April 28 and 30, 1885, but on the express condition that the connexion between Belgium and the Congo territories remained a personal one. On July 19 Sir Francis de Winton, the Administrator-General of the territories acquired by the International Association, formally announced at Banana the establishment of the State and the accession of Leopold II as its sovereign; a fortnight later King Leopold circularized the Great Powers accordingly, at the same time notifying them of the neutrality of the State as defined by the treaties with Germany, France, and Portugal.

It should be added that no question was raised on any side concerning the validity of King Leopold's action, and that the International Association was merged in King Leopold's new sovereign State without further international comment. King Leopold, having therefore assumed absolute rulership of approximately

900,000 square miles of territory, prepared to define the limits of his African kingdom. On the north the Convention of 1885, supplemented by that of 1891 with Portugal, determined the boundary of the Cabinda enclave, and, on the south, settled the frontier on the Lower Congo from its mouth to Noki, and from that point to the Kwango; thence the line follows the course of that river as far as the 8th parallel, and, dividing the Lunda country (otherwise known as the territory of Muato Yanvo), ascends the Kasai to the watershed of the Congo and the Zambezi, which it follows to the 24th meridian east.

(7) FRONTIER CONVENTIONS WITH FRANCE

The frontier with the French Congo was the subject of lengthy negotiations. It was finally laid down by the Convention of 1885, under which France acknowledged the right of the Association—now the Congo Free State—to the course of the Lower Congo below Manyanga as the boundary between her possessions and those of the Congo Free State. A further convention, signed in 1887, defined the frontier from Manyanga to the confluence of the Ubanghi with the Congo, and thence to the intersection of the Ubanghi, with the 4th parallel, which was declared the northern limit of the Congo Free State. The Free State was thus excluded from the Niadi valley, and, within certain limits, from the right bank of the Ubanghi. In return, King Leopold obtained from France a statement that the French right of pre-emption to the territories of the Congo Free State was not intended to prejudice that of Belgium, should the King declare that country his successor; he was further allowed to have quoted on the French Bourse 80,000,000 francs of the loan (150,000,000 francs) which, in 1888, he decided to float.

Notwithstanding the express limitation of the northern frontier of the Free State to the 4th parallel, the officials of the State continued to press northwards. In 1891-2 the Sultanate of Bangasso, lying beyond the Ubanghi river, was occupied, while two years later the French frontier had been pushed back by the encroachments of the Free State frontier officials to the 9th parallel.

(8) KING LEOPOLD AND THE NILE

Before, however, considering the arrangement which finally settled the Franco-Congolese boundary, it is necessary to refer to the relations of the Free State with Great Britain in the valley of the Upper Nile. Although the surrender of the Egyptian troops under Slatin Pasha and Lupton and the conquest by the Mahdi of the Equatorial Provinces had been followed in 1885 by the withdrawal of the Egyptian frontier to Wadi Halfa, the Anglo-German 1890 Convention had recognized in effect that the Sudan was still an Egyptian appanage. King Leopold, however, not choosing to conform to this view of Great Britain's claims to the district, endeavoured to obtain control of the rich province of Bahr el-Ghazal and to secure an outlet to the Nile. To this end Captain van Kerckhoven, in command of a considerable force, was dispatched to the Upper Welle, whence he made his way to the Nile and there opened up communications with the remains of the old Egyptian garrison at Wadelai. Another Belgian, Hanolet, entered the Shari valley and began to negotiate with Rabah, the bitter enemy of France, who had carved out a sultanate for himself to the south-east of Lake Chad. Finally the northern posts of Katuaka and Lifi were occupied, and, though the abandonment of these and the Nile posts had to be effected in the face of the Mahdi's advance, the latter's troops were successfully routed in a subsequent engagement on

December 23, 1894. Thus by the end of this year the whole basin of the Welle was in Belgian occupation, while a good foothold had been won in the Bahr el-Ghazal province.

(9) ANGLO-CONGOLESE AGREEMENT (1894)

When it became apparent that King Leopold projected an effective occupation of these regions, the British Government instructed its Minister at Brussels to open negotiations with a view to terminating this aggressive policy. After considerable discussion the Anglo-Congolese Agreement of May 1894 was drawn up and signed. By this instrument King Leopold recognized British supremacy in the Nile valley and in the Bahr el-Ghazal province, but in return obtained a lease of certain territory in the western basin of the Upper Nile, which virtually gave the Congo Free State possession of the province in question during the King's lifetime, and secured to his successor that part of it lying west of the 30th meridian. The Anglo-Congolese Agreement provided also for the lease by Great Britain of a strip of territory $15\frac{1}{2}$ miles in width, stretching from the most southerly point of Lake Edward to the most northerly point of Lake Tanganyika.

(10) GERMAN INTERVENTION

The importance of this lease was manifest, for under the Berlin Act navigation on Lake Tanganyika was declared free. This concession in effect was intended to constitute the last link in the chain of Great Britain's possessions in North and South Africa. King Leopold also agreed to allow the erection of a British line of telegraphs through the Free State territory. This proposal to facilitate territorial and water communication between British North and South Africa drew a vigorous protest from Germany, and the Wilhelmstrasse acted

with decision. Belgium was informed that she remained responsible for her treaty obligations of November 8, 1884, until such time as Great Britain had taken over those obligations with the consent of Germany; and the British Government was warned that the proposed lease, as the equivalent to an alteration of the frontier between German East Africa and the Free State, depended on Germany's good-will. The British Government argued in vain that Germany's claim to intervention was unjustifiable in international law; the German Government, backed by opinion in Germany, persisted, and the British Cabinet felt itself obliged to give way, the offending article being shortly afterwards withdrawn from the treaty. The rest of the Agreement remained untouched. It provided, *inter alia*, for the definition of the boundary between the Congo Free State and the British sphere to the north of the Zambezi, which, broadly speaking, constituted the frontier of the valuable mining district of Katanga and northern Rhodesia. From Lake Tanganyika this line runs in a south-westerly direction to Lake Mweru, thence following the Luapula to its issue from Lake Bangweulu; thereafter it runs along the meridian of longitude to the watershed between the Congo and the Zambezi, which it follows to the frontier of Angola.

(11) FURTHER FRONTIER AGREEMENTS WITH FRANCE AND GREAT BRITAIN

Meanwhile, France viewed with considerable displeasure the northward advance of the Free State frontier. The conclusion of the Anglo-Congolese Agreement of May 12, 1894, gave her the opportunity she desired; and she protested against this convention as restricting her march towards the Nile. The French Government also drew attention to the occupation by the Free State of Bangassou and other territories north

of the Ubanghi, contrary to the terms of the Franco-Congolese Convention of 1887, which, it will be remembered, fixed the 4th parallel as the northern limit of the Free State. A compromise was reached under the Agreement of August 14, 1894, by which King Leopold, in exchange for French recognition of the Mbomu river as the northern frontier of the Congo Free State, renounced all exercise of political influence west of 30° east longitude, and in the Nile valley north of a line drawn through that meridian to the river along 5° 30' north.

In 1899, upon France renouncing her claim to the Upper Nile territory, King Leopold again attempted to effect a permanent occupation of the Bahr el-Ghazal province. His ambition to dominate both the great rivers had led him, in 1897, to send a military expedition to the Nile valley, which occupied Rejaf on the Upper Nile. This claim, however, Great Britain was not prepared to allow. A series of negotiations was at length concluded by the signature of an Agreement on May 9, 1906, which annulled the 1894 lease and gave the King possession for life only of the Lado enclave, with the proviso that this territory should not extend beyond 5° 30' north, and should return to the Sudan within six months of King Leopold's death. This instrument also defined the boundary of the Free State with the Sudan, and provided for a lease to the King and his successors of a strip of territory 25 kilometres in breadth from that boundary to Lake Albert, including the town of Mahagi.

(12) EVENTS LEADING TO ANNEXATION

The commercial development of the Congo Free State, the administrative abuses, the monopolist persecutions, the raids and rebellions which stained its history, and the pecuniary difficulties which hampered

its progress and were the chief cause of ruthless exploitation, are outside the scope of the present sketch. It remains to give in briefest outline a chronological summary of the constitutional events which led to its annexation by Belgium in 1908. In his will, dated August 2, 1889, King Leopold made Belgium heir to the sovereign rights of the Congo Free State. Further, on July 3, 1890, His Majesty signed an agreement with the Belgian Government whereby the latter consented to advance a loan of 25,000,000 francs, in the course of ten years, on condition that, six months after the expiry of that period, Belgium should have the option of annexing the Free State with all its possessions, rights, duties, and liabilities. It was provided that, if this was not done, the debt should only be recoverable after another period of ten years, interest being paid on it meanwhile at the rate of $3\frac{1}{2}$ per cent. per annum. When the time limit expired on January 2, 1901, the actual debt had swollen to 31,850,000 francs, by the addition of a loan of 6,500,000 francs, bearing interest, which had been illegally contracted by the Congo Government with a syndicate of Antwerp bankers in March 1894, and for which the Belgian Chamber had been induced to make itself responsible in 1895.

The question of the annexation of the Congo State by Belgium formed the subject of prolonged parliamentary discussion in the Belgian Chamber. The King strongly opposed immediate annexation, while the Belgian Government, begging the question, proposed to let the debt run on without interest. Under the terms of the measure which eventually passed the Belgian Parliament in August 1901, Belgium retained the right of option, though not the right to exercise it at a fixed date. Meanwhile, the exploitation of the country continued apace, the situation being aggravated by the creation in 1896 of the *Domaine de la*

Couronne, a vast territory between the Kasai and Ruki rivers, covering about 112,000 square miles, which was treated as the private property of the King. The charges of maladministration multiplied until in July 1904 King Leopold was forced to appoint a commission of inquiry to investigate the condition of the natives, and, if necessary, to recommend reforms. The report of the Commissioners was published in December 1905 ; it went far to justify the charges levelled at the Congo administration, and bore fruit when the King signed, in 1906, a number of decrees embodying various reforms in the Government of the Free State. Leopold, however, qualified his action by intimating (June 1906) that certain conditions would attach to the Congo inheritance, among them the duty of respecting the arrangements known as the *Fondations*, by which he had provided for the establishment of the *Domaine de la Couronne* and the *Domaine privé de l'État*.

(13) CESSION OF THE CONGO TO BELGIUM

A crisis was manifestly approaching, and the special commission, known as the Commission of XVII, appointed in 1907, carried, after a severe struggle, a colonial bill, which replaced the absolutism of the King by effective parliamentary control. On November 28, 1907, a treaty was signed for the cession of the Congo Free State to Belgium. This treaty stipulated for the maintenance of the *Fondations*, but eventually, under severe pressure from Great Britain, the King gave way ; and on March 5, 1908, an additional act was signed at Brussels annulling the clauses in the treaty of cession concerning the *Fondations*. Shortly afterwards, on August 20, the treaty of annexation, the additional act, and the colonial law, were voted by substantial majorities. On September 9, 1908, the three measures passed the Senate, and on Novem-

ber 14 the Congo Free State became defunct, Belgium assuming the rights of sovereignty on the following day. A law on the government of the colony—a sort of colonial charter, separating the Congo State from Belgium, giving it a distinct financial administration, limiting the powers of officials, and securing the rights of the natives—was signed by the young King Albert and promulgated on October 18, 1908. The French right of pre-emption over the territory in question was finally accepted by Belgium under the Franco-Belgian Agreement of the same year.

The frontier between the Belgian Congo and German East Africa, originally contemplated by the Convention of 1884, was defined in 1910 as starting from the summit of Mount Sabinio, which marks the point of contact between the Belgian, British, and German territories, and as running in a general southerly direction through Lake Kivu to Lake Tanganyika. This arrangement formed part of a Protocol signed on May 14, 1910, by Belgian, British, and German representatives, in modification of the Anglo-Congolese Agreement of 1906. The Anglo-Belgian section of the Protocol suggested a definition of the limit of the Belgian Congo in relation to Uganda. In 1913–14 the question was again raised, together with that of the Belgian Congo frontier with the Anglo-Egyptian Sudan. In 1915 an agreement was finally reached and the boundary laid down from Mount Sabinio to the Congo-Nile watershed.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

(a) *Christianity*

*Protestant Missions.*¹—The beginnings of Protestant missionary effort on the Congo are to be traced to the initiative of Mr. Arthington, who in May 1877 offered the Baptist Missionary Society £1,000 as a contribution towards a project of establishing a mission at San Salvador, which had long since ceased to preserve any but formal reminiscences of its former Christian connexions. This establishment he regarded as preliminary to efforts to establish connexion with Nyangwe, a view which is interesting as showing that Cameron's researches had already convinced many that the Lualaba was none other than the upper Congo. The Society made a public appeal and obtained large subscriptions, which enabled it to select Messrs. Grenfell and Comber, who had done excellent work in the Cameroon. They finally reached San Salvador on August 8, 1878, and received a welcome from Dom Pedro. An effort to reach Stanley Pool failed, and Comber returned to England to obtain additional aid. This was accorded, and in 1879 Comber, with Crudgington, Hartland, and Bentley, arrived at San Salvador; on March 10, 1881, Bentley and Crudgington actually attained the site of Léopoldville but had to retire. With the opening up of the country, however, by the activities of Stanley, the missionaries found it possible to proceed up the river; and by 1908 they had founded nine stations,

¹ Sir H. H. Johnston's *George Grenfell* gives full accounts of part of the Mission work. See also Masoin, *Histoire*, ii. 373-95.

with 2,450 communicants, at a cost of ten million francs and of the lives of 50 of the 160 missionaries. The mission was specially noteworthy for the linguistic studies of Bentley and the explorations of Grenfell, who was especially selected by the Congo State to delimit in 1892-93 part of the Congo-Portuguese boundary.

A slightly earlier arrival at the Congo was achieved by the Livingstone Inland Mission, represented by Strom and Craven, and supported by Dr. Guinness; in 1884 it was handed over to the American Baptist Missionary Union, which by 1909 had 32 churches, with 5,000 adults and 7,000 children. Some, however, of the Swedish missionaries of the Inland Mission declined to accept the transfer, and attached themselves to the Svenska Mission (founded in 1881). In 1909 they numbered 51, with 1,800 adults and 5,000 children. In 1885 the Christian Missionary Alliance of New York began work; in 1887 the Congo Balolo Mission was founded by a former member of the Inland Mission; in 1890 the American Presbyterian Mission began work; in 1896 the Christian Disciples Mission took over a station at Bolenge from the Baptist Union; and minor work has been done by the Plymouth Brethren, who were early in the field, and by the Westcott Independent Mission.

*Roman Catholic Missions.*¹—In 1860 Livingstone had heard rumours of the persistence of the Christian faith at San Salvador, and in 1865 three emissaries of the *Congrégation du Saint-Esprit* sought to discover and revive these remains of the influence of Portugal, but their researches showed that the rumour which had reached Livingstone was ill-founded. In 1873 three further emissaries established a mission at Landana near the mouth of the Shiloanga, and in 1877 they crossed the Congo to establish themselves in Santo Antonio;

¹ Masoin, *Histoire*, ii. 303-53.

they occupied Banana in 1880 and Boma in 1881, and advanced up the river, establishing in 1885 a post at Kwamouth, which, however, was surrendered in 1888, the mission thereafter confining its work to the coast region. More far-reaching were the schemes of Lavigerie, who decided to follow up the geographical aims of the International African Association by an energetic campaign. The Pope was sympathetic, and on February 24, 1878, created four Apostolic Vicariates for Central Africa. In 1879 missionaries of the Algiers Mission proceeded to Lake Tanganyika, and to the western coast. The proceedings of Lavigerie were, however, regarded with suspicion by the King, who held that his motives were not without political significance, and the State decided to secure for itself a Belgian propaganda. After much negotiation, it was definitely arranged on May 11, 1888, that the activities of the Algiers Mission should be confined to Tanganyika, the seat of an Apostolic Vicariate, but that the priests sent there should be Belgian by nationality, and that there should be created the Apostolic Vicariate of the Congo, entrusted to the Pères de Scheut and to the African Seminary established by the King at Louvain. The development of the work which followed, to which the Jesuits lent valuable assistance, led to the division of the territory by the creation of three Apostolic Prefectures on the Kwango (1903), the Welle (1898), and the upper Kasai (1901), and there were also set up missions of the Pères du Sacré-Cœur at Stanley Falls, which became in 1908 the seat of an Apostolic Vicariate, and in the Aruwimi, of Redemptorists at the cataracts, where they replaced in 1899 secular clergy from Ghent who had carried on the work there from 1891 to 1899 for the sake of the labourers on the railway, and of Trappists in the province of the Equator (1893).

Charges against the Roman Catholic Missionaries.—

An essential part of the work of the Roman Catholic missions was the education of children, and for this special facilities were provided by two decrees of the State. The first, of July 12, 1890, conferred on the State the duty of educating and caring for children liberated from slave-traders, of whom at that time there were many, or abandoned, or orphans, or whose parents did not in fact care for their upbringing and education. A second decree of March 4, 1892, gave the right to exercise the same supervision over these categories of children to religious bodies approved by the State. The Protestant missions, with hardly an exception, declined to undertake this duty, which, as the children were only entitled to their liberty at the age of 25,¹ raised grave problems, but the Roman Catholic Church readily assumed it as an easy and effective means to secure converts. The result was inevitable ; the Commission of Inquiry of 1904-5 made definite charges against the Roman Catholic missions,² which, they stated, exercised constraint on their pupils by chains and flogging, allowed them to acquire no property of any sort, separated husbands and wives, and would only with difficulty concede permission to marry ; moreover they pointed out that many of the children alleged to be abandoned were really taken away or withheld forcibly from their parents or natural guardians, children in the Congo being regarded as objects of value and rarely, if ever, abandoned. The accusations cannot be discounted ³ on the ground that the agents of the State, who were certainly not devout Christians, disliked the missions, or that Protestant

¹ Since reduced to 18 (decree Jan. 3, 1911).

² Masoin, *Histoire*, ii. 362.

³ As by Masoin. See Johnston, *George Grenfell*, i. 471-73. The discussion of the question by R. P. de Pierpont (*Bulletin de la Société belge d'Études coloniales*, No. 5, mai 1912) is very unsatisfactory.

missionaries attacked the Catholics. They were obviously due to a wholly wrong system; and so late as 1912 the same complaints were echoed by M. Vandervelde, who had himself travelled in the Congo. It is characteristic of the King that, far from giving any effect to the criticisms made by his own Commission, on May 26, 1906, he concluded a concordat with the Pope, under which he undertook to provide land gratis for Catholic missions in return for their undertaking educational work. Protestant missionaries, on the other hand, complained with truth that their efforts to obtain land by purchase were defeated by the State—an anomaly remedied by the Belgian Government in 1912.

Present Position of the Missions

The Charter provides for the free exercise of all forms of religion, and the holding of land is made legal to the different denominations in connexion with their work. In the case of the Roman Catholics an agreement with the Holy See of May 26, 1906, provides for grants larger than the usual limit of holding (100 or even 200 hectares as against 50 hectares) in return for the giving of education; priests appointed as chaplains receive pay, and a decree of June 3, 1906, authorizes the appointment of priests who, after celebrating the ecclesiastical marriage of natives, may perform also the requisite civil ceremony. In practice, since the inauguration of the new regime, the difficulties experienced by Protestant missions in obtaining land appear to have been removed, while these missions, by abstaining from seeking to make artisans or agriculturists of their converts, avoid the attacks for abuse of authority which have been levelled against Catholic missions.

In 1908, 211 Protestant missionaries were at work

in the Congo ; many stations, schools, hospitals, and dispensaries had been opened, and considerable numbers of converts had been made. The Roman Catholics had, in 1907, 343 missionaries (male and female) and claimed 41,000 converts, about double the number ascribed to the Protestants. In either case the genuineness of the Christianity of the converts is not always free from question. The total number of converts is, however, in any case so small as to indicate that the process of Christianizing the people must be slow, especially as Christianity is opposed to polygamy, and polygamy is still the basis of native life. But it would be unfair to under-estimate the value in the way of civilizing influences of the work which the many devoted missionaries of the Congo have performed at great personal sacrifice. The Protestant missionaries have been ably assisted by their wives, while Catholic nuns have worked with great devotion. The State recognizes fully its duty to aid and protect missionary enterprise at least as far as Catholic missions are concerned, and since the advent of King Albert to the throne Protestant missions also have been promised fair treatment, if not assured of active support such as is accorded to the Catholics.¹

(b) *Paganism*

Despite the efforts of the Christian missions, the vast majority of the people of the Congo are still wholly pagan, nor is there any probability of the early conversion of the tribes to a higher faith. The paganism of the Congo is unprogressive and devoid of points of contact with more advanced religions. A vague belief in a supreme deity is counterweighed by the fact that this spirit is held not to interest himself in the affairs of the world, and consequently is not the object of

¹ Cd. 6606, p. 39.

worship or prayer. For practical purposes the worship of the Congo native is animism : he believes himself to be surrounded by countless spirits usually malevolent, invisible to himself, but discernible by the medicine men, of whom in the lower Congo alone there are some fifty different kinds. The medicine man has the power to attract spirits to the fetishes which he manufactures ; and these fetishes have the power either to work evil on the enemy of the man in whose interest the medicine man is employed, or to avert injury from him. On death the spirit survives and may be dangerous ; hence the human sacrifices, especially to dead chiefs, which have so far as possible been suppressed under Belgian rule. Belief in witchcraft is universal and a most potent factor in preventing a rise in the standard of civilization.¹

(c) *Mohammedanism*

From the north, Mohammedanism appears never to have made any appreciable advance ; the Mahdists, who might have carried their tenets south from the Sudan, were decisively repelled by the Belgian advance in 1890-98. On the other hand, Arabs from Zanzibar reached Ujiji on Lake Tanganyika in 1840, and by 1865-66 had discovered the Lualaba and the Lomami. By 1871, when Livingstone reached Nyangwe in the Manyema country, it was already an Arab station ; and by 1879 the Arabs had extended their sphere of control not merely across the Lualaba to the Lomami, but also down the former river to Stanley Falls.² Until the war of 1892-94 they were in fact the dominant power in the eastern Congo, but since that struggle their political power has been definitely overthrown.

¹ Johnston, *George Grenfell*, ii. 632-71 ; J. H. Weeks, *Among Congo Cannibals*, pp. 246-93

² Johnston, i. 84, 124, 318.

Certain traces of their civilizing influence are nevertheless still evident.

The number of pure Arabs who attained political control of Manyema was apparently very small,¹ but the people of Manyema, or Bakusu, after vain efforts to resist their advance, accepted their rule, and aided them in imposing it upon other tribes; while from the marriages contracted by the Arabs with negro women sprang a mixed race of *Arabisés*, physically and intellectually much superior to the average Congolese negro.² Though their rule rested on the slave-trade, they introduced many valuable improvements in agriculture, while the villages in the regions which came under their influence are marked out by their broad streets and well-built rectangular houses. Before their political downfall they had also introduced the element of a higher political organization and of a legal regime, and they maintained close commercial relations with Zanzibar.³ The Swahili language has become, as a result of their action, the *lingua franca* of all the eastern third of the Congo;⁴ and the habits of industry which their rule exacted from their subjects have left distinct traces in the superiority of the Congolese labourer of the region above Stanley Falls.⁵ Nominally at least the population under their rule became Mohammedan, including not merely the tribes of Manyema, but also those of the upper valley of the Aruwimi, between the rivers Lindi and Lomami.

Lord Mountmorres during his tour in the Aruwimi district in 1905 was struck by the similarity in civilization between the large thriving towns above Stanleyville and those of Morocco. In the eastern regions of the Congo, between the Falls and the British and

¹ Masoin, *Histoire*, ii. 102.

² Johnston, ii. 539.

³ Masoin, ii. 103-7; Johnston, ii. 600, 743.

⁴ Johnston, i. 427.

⁵ Cd. 7048—77, p. 21.

German frontiers, he found the chiefs and notables intelligent and well conducted, able to read and write in the Arabic character, and well versed in the Koran, of which and of other Mohammedan devotional books there were copies in every village. In all the larger villages Mohammedan schools were established, at which attendance by all the children was enforced by the chief. The men all wore the traditional Mohammedan dress and were most devout and rigorous in the observance of their religion, while the women were suitably clothed and were treated with a degree of respect and consideration far ahead of that prevailing among Africans generally.¹ On the other hand, Consul MacKie, who travelled in the same district in 1911, wrote in his report ² as follows:

The Tambatamba (Arabisés)—Bokusu, Batetela, and other followers of Arab families—are congregated at Stanley Falls on both banks as far down as La Romée. These two latter tribes live in large mud-wall houses, detached, with yards or courts. They are both farmers and stock-breeders. The former are clean, clothed, and polite, while the latter are like the Arabs, superior in appearance, dress, and manners—in fact, the aristocracy of the land. Their fields are tilled by women and dependents and slaves. They are not true Arabs, though there are a few of these too among them. In all things except religion the Tambatambas follow their Arab conquerors of earlier days, but of religion they have only the superstitions without the bonds, rules, or system of worship of the Mahomedans.

There is probably no fundamental discrepancy between these reports. Lord Mountmorres was doubtless in the main impressed by the attitude of the chiefs who have the Arab tradition, while Mr. MacKie deals with the attitude of the people and with tribes at some distance from Manyema, which was the head-quarters of Arab power.

¹ Johnston, i. 321, n. 1.

² Cd. 5860, pp. 62, 63.

It seems hardly probable that Mohammedanism is destined to play an important part in the Congo. It owed its introduction to foreign aggression, and its spread was conditioned by political circumstances which have ceased to exist. There appears to be no evidence that any converts to Islam have been made among tribes exempt from Arab domination, or that any missionary enthusiasm has displayed itself among the arabized tribes. Entire freedom of worship and of missionary effort is secured by the Berlin Act ; but, though Mohammedanism has the advantage over Christianity in that it sanctions polygamy, domestic slavery, and the exploitation of women as workers, it is handicapped by the fact that it is no longer a State religion, and that in its general teaching it is far above the animism of the Congolese negro. The Government of the Congo has made no effort to encourage Mohammedanism since the definite abandonment of the policy, pursued till 1890, of permitting the Arabs to control the eastern Congo. Mohammedan law and native education receive only the same degree of recognition as is accorded to pagan institutions ; and opinion in Belgium¹ seems to be distinctly opposed to the idea that the improvement effected in civilization by Mohammedanism is such as to justify the encouragement of its spread as a possible preliminary to the adoption of Christianity. On political grounds a Mohammedan revival would doubtless present formidable difficulties ; and Belgium is directly interested in any steps which may be taken to secure that the policy of the Power or Powers holding territory in East Africa shall not be such as to stimulate a Mohammedan reaction against efforts to overthrow that faith where it is already established, such as were apparently meditated by Germany before the late war.

¹ Masoin, ii. 119-24.

(2) POLITICAL

The Central Government.—The Belgian Congo, under the Constitution of 1908, as since modified in detail,¹ is placed under the legislative and executive control of the King, acting, however, on the responsibility of the Minister for the Colonies, an office created after the passing of the Colonial Charter. The King exercises his legislative power by decree, and his executive authority by regulations (*règlements et arrêtés*), but subject to any law of the Belgian Parliament. He alone possesses the power of pardon and remission of penalties. In the government of the Congo the King is aided by a Colonial Council consisting of the Minister of the Colonies as president, and fourteen members—eight chosen by himself, and three each by the Senate and the Chamber; none of the members can be a member of the Senate or Chamber; they retire by rotation, but are eligible for reappointment. The powers of this body, which may have been copied from the Council of the Secretary of State for India, are advisory; they may be consulted on any matters by the King, and they must, save in cases of urgency, be consulted on any proposed decree, and their opinions, including that of any minority, must be published; they may demand information and may express opinions. The Belgian Parliament retains in its own hands the control of the colonial budget, which must be submitted to it annually, and, as the Colonial Charter, unlike the Belgian Charter, is not part of the formal Constitution, Parliament can at any time alter the Constitution or deal directly with any matter affecting the Congo. The foreign relations of the Congo are entrusted to the King acting on the advice of the Minister for Foreign Affairs. An annual report on

¹ The details are given in Lannoy, *L'Organisation coloniale belge*.

the political, economic, financial, and moral state of the Congo must be presented annually to Parliament along with the budget.

The Local Government.—Since 1911, for all practical purposes, the Congo has been divided into two Colonies, separated in everything except the possession of a common budget, the Congo¹ and Katanga, to which has been assigned some portions of the Kasai and other districts. The head of the executive power in the Congo is the Governor-General, who has also the right in cases of urgency to exercise the power of legislating by *ordonnance*, in derogation even of a decree, but such legislation ceases to be effective after six months, if not within that time approved by decree. He is assisted by a head-quarters staff of seven directors, by vice-governors and inspectors, and a secretary-general; with other official and unofficial members if desired, these form a consultative council whose services are little used. The twenty-two districts are administered by commissioners, who represent the Governor-General and exercise wide powers. The former independence of the heads of *secteurs* and *zones* has disappeared, and the commissioners control the administrators and agents of the territories into which each district is divided. Under the new regulations these officers are not in a position to abuse their powers. The administrators are formally forbidden by a decree of June 25, 1912, to order military expeditions against the natives, to remove villages, or to prohibit or subject to conditions the recruiting of men.

¹ No term is in official use for the Congo in this reduced sense. By a royal decree of November 3, 1913, a Province Orientale was created under a Vice-Governor, and another decree of July 28, 1914, divided the territory into four Provinces, Congo-Kasai (capital Léopoldville), Equateur (capital Coquilhatville), Orientale (capital Stanleyville), and Katanga (capital Elisabethville), each under a Vice-Governor-General.

Native Administration.—The decree of May 2, 1910, for the first time provided a code regulating the position of native chiefs, the State administration having left the matter wholly undetermined.¹ The chiefdoms are determined by the commissioners, sub-chiefdoms being established if customary. The chief will as a rule be the customary head of the tribe, but the commissioner may remove a chief and appoint another. All the natives must normally be attached to a chiefdom, usually that in which they were residing when the formal determination took place; up to the end of 1911, 2,700 chiefs had been recognized with nearly 2,300,000 subjects, and at present over 4,000 chiefdoms have been formally established. The authority of the chief is that which is possessed by custom, and it must be exercised in the customary manner (for example with a council if customary²), but the authority is limited by the requirement that it must not be contrary to public order, or contravene laws or regulations intended to supersede customary rules. Though the chief is not hierarchically subordinate to the territorial administrator, he is subject to interference by the commissioner³ or the administrator acting for him; but it is the policy of the Government to limit such interference to cases where the chief acts contrary to the public order, the prestige of the Colony, or the general interests of the Colony or of civilization. The chief has also other functions as a State official; he is required to co-operate in enforcing the law, in policing his tribe, in carrying out measures for public health, and in executing public works, and for

¹ Cf. Cd. 5860, pp. 3, 4, 20–26.

² Cf. Johnston, *George Grenfell*, ii. 689, 690, 697–700.

³ A class of native messengers acts as intermediary between the commissioner and the chief. Their position is open to abuse, but need not actually result in a revival of the old practices.

this purpose can require two days or sixteen hours' work monthly from his subjects ; he is also employed in the collection of taxes, with sometimes unhappy results ; and his power to forbid the migration of his subjects is liable to grave abuse, since he can use it to prevent their obtaining employment unless he is well paid himself. It is in fact doubtful whether the chiefs in the Congo are likely to make satisfactory use of their powers. Experience, so far, has not produced very encouraging results.¹

The Judiciary.—The reforms of the Belgian regime ² have added to the number of the courts and improved their procedure. The European courts consist of (a) seven tribunals of first instance with unlimited civil jurisdiction, which are alone competent to hear criminal cases against Europeans punishable by over 5 years imprisonment ; (b) *tribunaux du parquet*, with power to hear any criminal case against natives, or against non-natives where the punishment cannot exceed five years' penal servitude, or is a fine subject to appeal to a tribunal of first instance ; they can dispose of any civil case if not over 100 frs. value, and, subject to appeal, of any case not over 600 frs. ; (c) *tribunaux du police*, composed of *magistrats de carrière* in urban areas, and of territorial administrators elsewhere, who can hear cases of offences by non-natives or natives, where the penalty does not exceed seven days' imprisonment or 200 frs. fine, and certain specified classes of other offences by natives ; the decisions of the former are subject to appeal, of the latter to revision by the *tribunal du parquet*. There are Courts of Appeal at Boma and Elisabethville, which hear appeals in civil cases where the matter in dispute exceeds 2,500 frs. in

¹ See Lannoy, *L'Organisation coloniale belge*, p. 91, n. 1.

² Completed by the decree of August 11, 1913.

value or a question of competence arises, and appeals in criminal cases unless the offender is a non-native and the punishment exceeds five years' imprisonment, and which also act as a criminal court in cases of charges against inferior judges. The *Conseil supérieur du Congo* which sits at Brussels acts as a Court of Cassation in civil matters, as a criminal court of appeal in cases affecting judges, and as a criminal court in cases affecting judges of the Courts of Appeal. Crimes committed in the Congo may also be punished by the Belgian courts acting on the Congo law. The native courts are those held by the chiefs according to native custom. Their power of punishment is limited in two respects: they can inflict no other corporal punishment¹ than flogging, which is forbidden for old men, invalids, women, and children, and the punishment must not exceed twelve strokes; and they must report to the European authorities all cases of cannibalism, ordeal by poison, human sacrifice, slave-trading, and the trade in or use of hemp, none of which are crimes by native law. The competence of a chief never applies to Europeans, and is normally confined to cases between natives neither of whom is 'matriculated'.² The native court is the normal court for cases between such natives; but either party may insist on going to a European court. In criminal cases the native court is the normal one; but the officer of the *ministère public* may decline to let the chief deal with any case, and any man dealt with by the chief may ask a European court to rehear the charge. These provisions are held to render any formal appeal from

¹ For the other native punishments see Johnston. *George Grenfell*, ii. 695, 696.

² Matriculation is the entry in a register of civil status, normally that kept by the Territorial Administrator of the territory to which is attached the chiefdom to which a native belongs.

a native court unnecessary except in so far as under native law an appeal lies from a subordinate chief's court to that of the superior chief.

The Rights of the Subject.—The Charter grants the same civil rights to Belgians, foreigners, and to matriculated natives, who enjoy the benefit of the written law, and fall under the operation of the customary law only when the written law does not cover the case. Any native can obtain matriculation on his own application, and certain classes, composed of natives who have been in service with Europeans, in the army, &c., are automatically matriculated. All natives are protected from forced labour for any individual or company by the Charter itself ; the executive power is absolutely forbidden to suspend the operation of the judicial power, which is placed, through the Procurator-General, directly under the Minister of the Colonies, and the judges are given security of tenure against the executive.¹ On the other hand, while the law does not recognize or regulate the status of domestic slavery, it does not penalize it, and the institution forms an essential part of the native regime which the native courts sustain.²

The Commission for the Protection of the Natives.—The State regime created in September 1896 a commission³ which was to exercise a benevolent guardianship over native rights. The project was at the time an idle farce ; the members selected were 200 miles or more from the districts where atrocities were being committed, and no provision for travelling expenses was made. The Charter provided for a more effective body,

¹ The actions of the executive are not subject to control by the civil courts, a decision reaffirmed in 1913 by the Colonial Council in their report of July 12 (*Bulletin officiel*, 1913, pp. 716 seq.).

² Cd. 5860, p. 40 ; Weeks, *Among Congo Cannibals*, pp. 112–14.

³ Cd. 1754 ; see Johnston, *George Grenfell*, i. 440, n. 2.

which subsequent legislation has further strengthened.¹ The commission consists of ten members with the Procurator-General of the Court of Appeal at Boma as president ; it must meet once a year at least ; the expenses of its members are paid, and they take an active interest in their duties, which are advisory in character. An annual report suggesting measures for the benefit of the natives must be sent to the King, and published. The Governor-General is also required by the Charter to give special care to the advancement of native interests, especially in regard to liberty, the repression of polygamy, and the development of private property ; but so far no attempt has been made to recognize individual property in land, all natives being deemed to hold collectively ;² while polygamy³ and domestic slavery are institutions which are at the basis of native society, though they are discouraged in a minor degree by the imposition of an additional tax of 2 frs. for each extra wife. More effective and useful is the duty thrown upon the officers of the *ministère public* to safeguard the rights of the natives, especially as regards contracts of service, and the power given to them to take civil action in the name of a native who has suffered wrong.

(3) MILITARY ORGANIZATION

The Charter forbids the compulsory employment of any Belgian in the Congo forces, and the colonial charter forbids even voluntary enlistment of serving soldiers. The Congo *force publique*, which performs police and military duties, and had a nominal strength of 17,800 men in 1913, is recruited in part voluntarily, in part by compulsion, the annual contingent before

¹ Cd. 6802, pp. 39-41 ; 6606, p. 38.

² Lannoy, pp. 140-42.

³ For a criticism of it see Weeks, *Among Congo Cannibals*, pp. 134-39.

the war being about 3,750. The period of service is seven years, with five years in the reserve. The men are trained in instruction camps before being drafted to companies. The officers (with 192 non-commissioned officers in 1913) are all Belgians, largely lent from the Belgian army, to which they return in due course. The rank and file and some of the non-commissioned officers are Congolese, and in peace the troops, which are organized as infantry, were scattered throughout the country in platoons of about fifty men. Recently a distinction has been drawn between the soldiers proper, some 12,000 in number, and the police, numbering 6,000.

(4) EDUCATIONAL

Comparatively little has yet been done by the Government for native education. The State maintains orphan and abandoned children, and educates them at Boma and Nouvelle Anvers by Roman Catholic priests; at 18 they are given their liberty; for these orphans there are also two special schools of training, created in 1897 and 1906, leading up to careers in the military and civil service of the Colony. For other natives there are professional schools attached to the workshops at Boma, Léopoldville, and Stanleyville, open to boys from 12 to 20 authorized by their parents and presented by the chief to the commissioner of the district, a number of primary schools taught by members of religious orders, and a school for the sons of chiefs at Stanleyville. In addition there are many schools conducted by Roman Catholic and Protestant missionaries,¹ many absolutely free, others subject to Government inspection, which is insisted upon in the case of schools for orphans, and when grants of land have been made to the mission.

¹ 482 and 190 respectively in 1912 (Cd. 6606, p. 80).

Instruction includes manual instruction, and the Belgian languages must be taught in subsidized schools.

The education of Europeans in the Colony is not yet provided for ; instruction for those desiring to proceed to the Colony is given in Belgian schools ; administrators are trained at the Colonial School, which is under the control of the Minister for the Colonies, while at Vilvorde, and in less degree at Laeken, instruction is given in agriculture and horticulture.¹

¹ For agricultural institutions, &c., in the Colony itself, see below, pp. 75, 76.

IV. ECONOMIC CONDITIONS¹

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) *Roads and Paths*

INHABITED tropical Africa is everywhere intersected by a network of native paths, and along these, the ordinary routes away from the waterways and railroads, the sole means of transport is human portage. The average load weighs about 60 lb., and in most parts of the Colony a porter has no difficulty in carrying this weight, in addition to which he usually takes his own food, water, and cooking-pot. If he is allowed to proceed at his natural pace, he will cover 20 miles a day, or more if necessary; but a day's march is usually from 10 to 15 miles. The official rate of pay is generally 60 centimes per day, but in some localities the private rate is as high as 1 franc, or even more.

The presence of the tsetse fly renders animal traction impracticable in most districts, and the luxuriant vegetation and heavy rainfall make the upkeep even of metalled roads an arduous task. A network of good roads is nevertheless essential, if the country is to be effectively opened up for administration and commerce. The winding native paths are quite inadequate.

The State-built roads already exceed 6,000 miles in length. They include several motor roads. One of these, 154 miles long, connects Bambili on the Welle river with Buta on the navigable Itimbiri-Rubi. A second, running from Kasenyi, on the western shore of Lake Albert, to Kilo and Moto, includes a zigzag

¹ The economic conditions of Katanga, so far as separable from those of the rest of the Belgian Congo, are discussed below on pp. 110-18.

section along which, by a fine piece of engineering, the road is carried up 1,200 feet from the flats by Lake Albert to Bogoro on the summit of the escarpment. Motor lorries are now running on this road.

From Kilo another road, to run through the Ituri forest to Stanleyville, is being constructed with gradients so designed as to render it adaptable for a railway track. Until rails can be laid it will be used for motor transport. In the Welle district also are several useful roads similarly built with a view to carrying railways in the future. One of these follows the course of the Welle from Bambili to Aba;¹ another runs from Niangara northward to the old station of Pupwandi. Neither of these, however, has as yet any service of motors, and the former still lacks bridges over most of its length.

(b) *Rivers*

The Colony possesses about 8,000 miles of river waterways, navigable for large or small river steamboats. This mileage is almost entirely contained within the central equatorial basin, outside which only a few short stretches are navigable.²

The main waterways are :

(a) The Congo river from Léopoldville to Stanleyville (1,050 miles), with further navigable sections from Ponthierville to Kindu (196 miles), and—under favourable conditions—from Kongolo to Bukama (397 miles). The points between which navigation is impossible are now connected by railways.

(b) The Kasai—Sankuru, from Kwamouth, at the junction of the Kasai with the Congo, to Lusambo or Pania Mutombo higher up (660 miles).

¹ This road is continued to Rejaf, the limit of navigation on the Nile; see below, p. 67.

² See for the navigation of the Congo, *International Rivers*, No. 149 of this series.

(c) The Ubanghi, the greatest tributary of the Congo, and the boundary between French and Belgian territory, broken in places by rapids, but otherwise navigable for steamers as far as Mokoange, and during the high-water period as far as Banzyville.

The first steamer to reach the great central waterway of the Congo was the *En Avant*, a small paddle-boat, 43 ft. long by 8 ft. beam. It was brought out by Stanley in 1879, and by strenuous exertions lasting for two years was dragged in three sections from Vivi, below the cataracts, to Stanley Pool, 250 miles up-stream.

The navigation of the rivers of the Congo basin is by no means easy, being hampered by shoals, rocks, snags, and floating vegetation. Much has been done to improve matters by marking the banks and buoying the channels. Sandbanks also impede navigation. These, however, occur less frequently than in other great rivers such as the Niger, since the current of the lower and middle Congo is too sluggish and the riparian vegetation too luxuriant to favour their formation. The islands and the river banks are covered by a dense growth of swamp-grass or tangled forest which tends to fix their limits. The navigation of the tributary Kasai-Sankuru is somewhat more difficult than that of the Congo, owing to its being a swifter stream. Above the central basin of the Congo, where the altitude rises and streams are swifter, navigation is greatly affected by season and rainfall.

The administration possesses seventeen steamers, besides a number of shallow-draught barges on the lower Congo, and forty-four smaller steamers on the upper river and its branches. Within the last five years private firms—Lever Brothers, the ‘Citas’ Company (see p. 103), and others—have put steamers on the river.

As a result of the opening of the Colony to free

trade in 1912 and the abandonment of the Government monopoly in rubber and ivory, the Government steamers plying on the river made the return journey from the upper Congo practically empty, for the traders could not afford to pay, even for rubber and ivory, the high freight rates charged. The Government was therefore obliged in 1913 to reduce these rates by 50 per cent. in order to get cargoes, with very satisfactory results as regards the increase of general traffic.

The river steamers are almost universally stern-wheelers. The largest of them are of about 500 tons burden, but the building of steamers of 800 to 1,000 tons was contemplated before the war. Large flat-bottomed barges pushed or towed by a tug are also utilized. There are a floating dock, several large slipways, and ample facilities for construction and repairs at Léopoldville. The necessity of burning wood fuel has hitherto been a source of much difficulty and delay. In 1913 the construction of a 4-inch oil pipe-line with several pumping-stations was completed, for the purpose of pumping oil for fuel from Matadi to Léopoldville, a distance of 246 miles. The concession is for fifty years, at the end of which time the whole of the plant reverts to Government. Whatever difficulties may be experienced on the upper reaches of the Congo and its great tributaries, there can be no doubt that the long stretches of navigable waterways in the central Congo basin are of immense value to the Colony. It has been proposed to install light motor-boats on the main stream between Léopoldville and Stanleyville, and experiments with an 80-horse-power boat having a speed of 23 miles per hour have proved satisfactory.

The great lakes on the eastern frontier, Albert, Edward, Kivu, and Tanganyika, Lake Mweru on the Katanga frontier, and Lakes Leopold II and Tumba in

the central basin, as well as those in the basin of the Lualaba, offer additional facilities for the development of inland navigation. Tanganyika, which is over 400 miles in length, is specially important. On its western shore are the Belgian ports of Uvira and Albertville, the latter being near the head of the Kabalo Railway. The construction of a canal between Matadi and Léopoldville at a cost of £4,000,000 has been proposed with a view to relieving the congestion of the Congo Railway, but the scheme is hardly likely to be realized.

In addition to waterways navigable for steamboats, there are in the Belgian Congo many rivers and streams which are capable of being utilized for the transport of produce by means of canoes. These craft, made by the natives from the trunks of forest trees, are propelled by long bamboo or raphia poles. They are strong and last for years, and in spite of their weight and apparent clumsiness can under skilful control be guided with astonishing ease even over rapids and broken water.

(c) *Railways*¹

The following railways are now working :

(a) *The Congo Railway (Chemin de fer du Congo)*, from Matadi to Léopoldville, a single line, 0·765 metre gauge, 248 miles in length, linking the estuary navigation with that of the Congo basin. Begun in 1893, it took six years to construct. Its highest point is at Thysville, 2,444 ft. above sea-level. Matadi is 20 feet and Léopoldville 1,000 feet above sea-level. The line has many severe gradients and sharp curves. Three passenger trains a week run in each direction. In 1913 freight charges were reduced; that on raw rubber was lowered from 130 francs (£17 4s.) to 135 francs (£5 8s.) per ton.

¹ For the relations of the railway companies to the administration, see below, pp. 91, 92.

(b) *The Great Lakes Railway (Chemin de fer du Congo supérieur aux Grands Lacs)* :

(i) Stanleyville-Ponthierville section, sometimes called the Falls Railway, completed in 1910, a single line, one metre gauge, 78 miles in length, linking the middle Congo with its upper reaches above the Stanley Falls. Its gradients and curves are fairly easy. For most of its length it traverses forest, crossing several deep river-beds. Three trains a week run each way. It is on the left bank of the river.

(ii) Kindu-Kongolo section, sometimes called the Manyema Railway, a single line, one metre gauge, 218 miles in length, passing through hilly country and linking the Ponthierville-Kindu reach with the upper navigable reaches of the river above Kongolo. It is also on the left bank of the river.

(iii) Kabalo-Kalemi section, from Kabalo, 40 miles above Kongolo, to Kalemi, a little south of the township of Albertville¹ on Lake Tanganyika. This line was only completed after the outbreak of war. Its first section runs through a bad tsetse-fly area. It is a single line, one metre gauge, 168 miles in length, connecting the Cape-Congo rail and steamboat system with Tanganyika and the Cape-Cairo route. It has also opened, between the Atlantic and the Indian Ocean, a route of through communication *via* the Congo river, Lake Tanganyika, and the railway from Kigoma to Dar es-Salaam. The latter line is 780 miles long, and, as this distance is traversed in forty-eight hours, Lake Tanganyika can now be reached in twenty days from Naples.

(c) *The Katanga Railway (Chemin de fer du Katanga)*, from Sakanian on the Rhodesian frontier, *via* Elisabeth-

¹ It is understood that steps are being taken to transfer the name and township of Albertville to Kalemi, so that township, lake port, and railway terminus shall coincide.

ville and Kambove, to Bukama on the Lualaba (upper Congo), a single line, 1·067 metre gauge, 468 miles in length.

The line is of primary importance for the development of the mining district of Katanga, which in the meantime finds its most convenient outlet along the railway to Beira. At some future date, however, the Katanga Railway will be joined, between Kambove and Bukama, by the Benguela line from Lobito Bay in Angola, and when this happens much of the Katanga traffic will probably be diverted to the west coast.¹

The permanent way of the Katanga Railway had been constructed to the terminus at Bukama by 1916, but for several months rails could not be obtained for the last 30 miles of line. Ultimately, however, a sufficient number were taken up from an uncompleted line between Tabora and the Kagera river, a projected branch of the Central Railway in German East Africa. With the help of these it became possible to complete by August 1917 the final section, in which the line is carried across the Mitumba Mountains, descending sharply from the summit (9,960 ft.) to Bukama. From this point on the upper Congo through communication has now been established northward over a distance of 2,300 miles, by railway and steamship services alternatively, along the Congo to the Atlantic, and southward by rail to Capetown, 2,600 miles distant. The journey from the Cape to Elisabethville occupies six and a half days.

(d) *The Mayumbe Railway (Chemins de fer vicinaux du Mayumbe)*, in the coastal region, from Boma to Chela on the Lubuzi river. It is a single line, of narrow gauge (24 inches) and 85 miles in length, and taps the rich cocoa, coffee, and timber districts in Mayumbe. It is being extended to the Cabinda

¹ For discussion of this question in connexion with the competing interests in the trade of Katanga; see below; pp. 105-6, 111-12.

frontier. In 1911 this line was said to possess 93 locomotives, 37 passenger coaches, and 589 freight trucks. Hitherto it has been hampered by excessive freight charges. The passenger rates in 1912 were 50 centimes ($4\frac{3}{4}d.$) per kilometre first-class and 7 centimes ($\frac{3}{4}d.$) second-class.

(e) *The Alberta Railway*, a private line, 12 kilometres (7.5 miles) in length, built by Messrs. Lever for the purpose of connecting their oil-palm concessions with the Congo at Ebonda, a few miles west of Bumba.

The following lines have been projected (see also below, pp. 104-6) :

(a) *The Benguela Railway*, 1,330 miles in length, to connect Lobito Bay in Angola with the Sakania-Bukama line near Kambove. About one-third of this line is completed from the coast. When finished it will afford a route from Katanga to the sea shorter than any at present existing.¹ Lobito Bay is an excellent harbour.

(b) *The Kiambi Railway*, from Ankoro on the Lualaba at its confluence with the Luvua river, *via* Kiambi to Pweto at the north end of Lake Mweru and thence to Moliro on Tanganyika.

(c) *The Kongolo-Kabalo Railway*. This line, only 56 miles in length, would link up the Kindu-Kongolo and Kabalo-Albertville sections of the Great Lakes Railway, obviate two trans-shipments, and span a section of the river not easily navigated in the dry season.

¹ Compare Kambove to Beira, 1,740 miles, Kambove to Matadi, by the Great Lakes Railway, 2,200 miles, by the projected Lusambo route, 1,600 miles, Kambove to Dar es-Salaam, *via* Albertville and the Tabora line (with four trans-shipments), 1,600 miles. It should be noted, however, that the projected railway from Salisbury, Rhodesia, to Kafue would materially shorten the Kambove-Beira route. The Lobito Bay route would, however, have the advantage of a shorter sea voyage for European trade.

(d) *The Welle Valley Railway*, from Bumba on the Congo to Buta on the Itimbiri-Rubi river, thence by the existing motor road to Bambili, and along the Welle to Aba on the Nile-Congo divide. This would be a single line and would open up the rich and thickly-populated Welle basin. The permanent way was completed about 1908, but the streams are unbridged, and it is only used for porter traffic. When the Lado enclave (now British) was administered by the Belgians, this road was continued over the divide to Rejaf on the Nile. This section, which for some years has been used for cart traffic, is rocky and uneven, but has recently been improved by the Sudan Government, and a service of motor lorries has been inaugurated upon it. Since the reversion of the Lado enclave to the Anglo-Egyptian Sudan, the project of a railway seems to have been abandoned. This is regrettable, for an extensive traffic is rapidly developing between the Sudan and the north-eastern territories of the Congo, *via* Rejaf and Aba. The wholesale houses in Khartoum dispatch quantities of goods to Greek and Arab traders in upper Welle, in return for ivory, rubber, hides, &c.

(e) *The Irumu Railway*, connecting the Lake Albert region with the Congo at Stanleyville. This railway is intended to open up the rich alluvial gold districts of the eastern Welle, and divert the traffic from Kilo and Irumu, which now passes through Uganda to the east coast, towards the Congo and the west. The route has been surveyed and the construction already begun from Stanleyville.

(f) *The Lusambo-Kabalo Railway*. This line, about 250 miles in length, would unite Lake Tanganyika with the Atlantic by connecting it with the head of the Kasai-Sankuru waterway. It has been surveyed, and is said to cross fairly easy country, following an important caravan route.

(g) With a view to keeping the Katanga traffic to some extent within the Belgian frontiers, it is proposed to connect the Katanga Railway with Luebo at the limit of navigation on the Lulua tributary of the Kasai river. Such a railway in its northern part would traverse one of the most heavily timbered forest regions in the Congo. A proposed extension of this line to Léopoldville would pass through some of the richest and most densely populated districts. A branch line would probably be built to Lusambo on the head navigable waters of the Sankuru. The construction of this line would bring Matadi and seaboard shipping within 1,700 miles of Elisabethville, but would increase the already severe strain upon the Congo Railway. The enormous population of the Kasai and Kwango districts is at present almost untouched by European influence, and the advent of the railway would open up extensive markets for European goods.

(h) It should be mentioned that the French contemplate tapping the resources of the Congo basin, a large portion of which is in French Congo, by means of a line from the Atlantic to Brazzaville on Stanley Pool. A finished section of this line, running from the Pool to the copper mines of Minduli, is already feeding the Congo Railway.

(i) The Portuguese also are pushing forward their Northern Angola Railway from Loanda towards Luchiko in the upper Kasai region.

(j) *The Western Rift Railway*, connecting Lake Albert (altitude, 2,030 ft.) with the north end of Lake Tanganyika. The route surveyed by the Belgians for this line passes through the Semliki valley, along the western shore of Lake Edward (altitude, 3,200 ft.) and the western side of the rift, reaching its highest altitude (about 6,000 ft.) by the Mfumbiro volcanoes, then along the western shore of Lake Kivu (altitude,

5,000 ft.) and down the course of the Rusizi river to Lake Tanganyika. The only engineering difficulty of any consequence is in the last section, where, within the first 20 miles of its course from Lake Kivu, the Rusizi river falls 2,000 ft., nearly to the level of Tanganyika.

(d) *Posts, Telephone and Telegraph Lines, and Wireless Stations*

There are in the Colony 51 post offices, nearly 2,000 miles of telegraph lines, and 15 wireless stations. The Congo is included in the Postal Union.

There are telephone lines along all the railways, and each of the larger towns has its own telephone service.

The chief telegraph lines are : Banana to Coquilhatville, 800 miles ; Boma to Chela, 85 miles ; Stanleyville to Ponthierville, 79 miles ; Kasongo to Uvira on Lake Tanganyika, 265 miles ; Kindu to Kongolo, 219 miles ; Kabalo to Albertville, 169 miles ; Sakania to Chilongo, 280 miles.

The wireless stations are Banana, Boma, Kinshasa, Coquilhatville, Basankusu, Lisala, Basoko, Stanleyville, Kindu, Kongolo, Lukuga, Kikonja, Elisabethville, Lusambo, and Kilo. It will be noticed that ten of these stations are at more or less regular intervals along the curve of the main river, forming an uninterrupted chain of communication between Boma and Elisabethville. A low-power installation is also mentioned as connecting Kabalo and Albertville.

The system in use is similar to that used at the Eiffel Tower, and known as the *radio-électrique*. The construction work has been undertaken by the Société Française Radio-Électrique. Many stations in French Africa, notably those at Loango, Pointe Noire, and Brazzaville, are on the same system.

(2) EXTERNAL

(a) *Seaports*

The River Congo has but one mouth, which widens out immediately within the entrance and forms Banana Harbour. The depth of water in the harbour is 5 fathoms, and safe anchorage, protected from all winds, is afforded for vessels of large displacement. It is entered by a somewhat narrow channel between two sandbanks, visible at low tide. Vessels of 19 ft. draught have no difficulty in entering this channel. The Customs Stations, Government buildings, and houses of the business firms are situated amongst coco-nut palms upon a narrow sandspit between the harbour and the sea. Banana might be developed into a considerable port of call.

The estuary at places is 15 to 17 miles wide, with the great depth of 70 to 900 ft. in mid-channel. This deep trough, increasing in depth to 4,000 ft., is carried west-north-west outside the river's mouth through a shallow coastal sea for some 120 miles, till it merges in the ocean depths, and all this distance the current and the fresh water of the mighty river are still discernible.

Boma, on the right bank, 60 miles up the wide estuary, is the administrative capital of the colony and the port for the Mayumbe region, with which it is connected by railway. There are two steel piers, having 23 and 17 feet of water off them at low tide, but there are no shipbuilding facilities.

Matadi is nearly a hundred miles from the coast, at the head of the lower Congo, on the left bank of the river, close to Stanley's old camp of Vivi, immediately below the last cataract. Ocean-going vessels ascend to Matadi, which is the port for the whole of the interior, and is served only by a single

line of railway from Stanley Pool. Although there are ample docks and landing facilities, and quay accommodation, 1,657 feet in length, for ocean steamers, the congestion is acute owing to the fact that the railway, which taps an enormous area, is only a single line. The swiftness of the current in the 'Devil's Cauldron', just below Matadi, makes it difficult for steamers of less than twelve knots to reach the port. An additional port is shortly to be established at Ango Ango, three miles lower down, opposite the Portuguese port of Noki.

In 1913, 168 vessels, of 370,000 tons, were cleared at Banana; 302 vessels, of 364,000 tons, at Boma; and 124 vessels, of 198,000 tons, at Matadi. In 1914 the tonnages fell to 310,000, 278,000, and 141,000 respectively.

(b) Shipping Lines

The two chief shipping lines from Europe to the Congo before the war were the Compagnie Belge Maritime du Congo (Antwerp) and the Chargeurs Réunis (Havre). Some of the vessels of the former line called at Teneriffe and Sierra Leone, accomplishing the voyage in eighteen days. The service of these two companies was so arranged that a mail steamer arrived at Boma every ten days. A monthly service was also supplied by the Elder Dempster Combine (African Steamship Co. and British and African Steam Navigation Co.) and by the Hamburg-Amerika, Hamburg-Bremer-Afrika, and Woermann lines jointly. Other callers were steamers of the Empresa Nacional and Brompton (Lever Bros.) lines.

(c) Cables and Wireless Stations

Previous to 1913 cablegrams to Europe or elsewhere had to be sent by boat from Matadi across the river to the Portuguese port and frontier station of Noki,

which is connected by means of an overland line with Loanda, a cable station on the Portuguese Angola coast. Matadi and Noki are now connected by wire. Matadi is also connected with Boma, and Boma with the Eastern Telegraph Company's cable system. The charge per word between Brussels and Boma is 5.85 francs, with half-rates for Belgian Government and press telegrams.

There is no wireless station in the Congo powerful enough to send messages to Belgium without the assistance of some intermediate station, nor was the Laeken station in Brussels able to send as far as the Congo.

(B) INDUSTRY

(1) LABOUR

The white man in the Congo State used to compel and now attempts to persuade the native to work. The labour demand affects the native in two ways; it makes serious calls upon his physical vigour and heavy inroads into his time. Unless the employer supplements the native diet and arranges that there shall be sufficient native labour available for the necessary forest clearing and tillage, so as to ensure a harvest adequate to the needs of each village, he may involuntarily cause considerable suffering. The white man frequently makes excessive demands upon the natives to supply food-stuffs for his own consumption or that of his labourers. A striking example occurred in the case of the Baholoholo, a tribe to the west of Lake Tanganyika, whose fate is summarized in the phrase, *un peuple qui meurt*. Formerly they possessed large herds of cattle; owing to the demands of the white men at a neighbouring post, these cattle are now extinct.

No effort has been made by the Government to develop the Congo by Indian labour, the employment of which the Indian Government would doubtless have refused to sanction, and its recruiting of African labour from outside the territories has been merely sporadic, for definite public works which required men of skill. The latest legislation on the recruitment of labour is a great improvement on the earlier legislation. It applies to all engagements of natives of the Congo and the neighbouring territories by a non-native of the Congo. The contract must be in writing; the conditions must be stated clearly; the master must normally house and feed the labourer, and pay his wage monthly; no contract can exceed three years; if for a period over three months it must be submitted to the *visa* of a Government officer, who must assure himself that the employé understands the conditions. A contract may be enforced civilly, in which case, however, imprisonment cannot be inflicted; criminally it can be enforced by penalties up to 7 days' imprisonment or 200 frs. fine, and a decree of February 9, 1912, prescribes a summary procedure under which a Territorial Administrator may order a native to be sent back to his master if he is still bound by his contract of service.

There are apparently no available statistics to show the number of natives who enter or leave the Congo. The extent of European immigration can only be gauged from the estimate of the European population already given (p. 18). It is obvious that the European immigrants, though numerically a negligible fraction of the total population, are, nevertheless, in their capacity not of labourers but of employers of native labour, the chief factor in the economic development of the country. In the Congo, as distinct from Katanga, there is no prospect of a large influx of white settlers,

for the climatic conditions are such that European residents can only preserve health by careful observance of precautionary measures and by frequent visits to Europe.

(2) AGRICULTURE

Except in the great forest areas where the Nains and the marginal forest tribes live by hunting, the natives of the Congo are almost all cultivators. Their only idea of cultivation, however, is to clear and burn the forest or bush and hoe the soil, moving on to another area after three or four years and leaving the old clearing to revert to secondary forest or bush. This universal system leads to enormous destruction of forest. Women do most of the field work, and the hoe is almost the only implement used.

The exploitation of the agricultural wealth of the Congo has as yet been scarcely attempted, owing to the difficulties of transport from the interior to the sea. Several Europeans, assisted by the Agriculture Department, have attempted farming. In 1914, 2,270 acres were being cultivated, chiefly in the Katanga and Mayumbe districts, where there happens to be a demand by Europeans for garden produce. The small farmers then numbered 37, of whom 20 were Belgians. Some fairly successful cocoa, coffee, and rubber plantations exist in the Mayumbe district. The rice cultivation is almost entirely in the hands of the *Arabisés* ('Manguana' or 'Wangwana') in the Stanleyville-Ituri regions. It is all dry rice, and irrigation is unknown.

Mainly owing to the prevalence of malaria, no part of the Congo is suitable for white colonization, that is, for the squatter who intends to make a living off the land and bring up a family.

Probably no tropical African colony has expended so much money and energy on agricultural and scientific

research as the Belgian Congo. Besides numerous botanical gardens and experimental farms the Colony possesses five agricultural laboratories, established in the general interest and for the use of the various districts. Two (Elisabethville and Zambi) are equipped specially for agricultural chemistry ; one, at Eala Botanical Gardens, specially for mycology (fungoid diseases of plants) and economic entomology. An extensive bacteriological laboratory for veterinary research exists near Zambi, and a well-known laboratory for medical and veterinary work at Léopoldville.

For experiments in cattle-breeding and acclimatization similar to those being carried out at Katentania in Katanga¹ there are at present twenty special farms and stations.

(a) *Products of Commercial Value*

Of vegetable products, copal, rubber, and the oil-palm are commercially the most important.

Copal.—This is a gum exuded from the roots and branches of a large forest tree, and used in the manufacture of varnish. Enormous supplies exist in the riverain forests of the Congo basin. Since the fall in the prices of wild rubber the natives have taken to collecting it in place of that commodity. Although the industry is a recent one, the tonnage of shipments already exceeds that of rubber, in spite of the light weight of copal.

Rubber.—The 'Congo Free State' may be said to have created the African rubber industry, as before the State was founded the natives hardly knew the rubber vine, and certainly were unaware of its value. Up to 1910, rubber accounted for 75 per cent. or more of the total exports. This was all collected by the natives as wild rubber, chiefly from vines

¹ See below, p. 114.

(*Landolphia*), but some from trees (*Funtumia*). A considerable quantity is obtained from the so-called 'grass or root rubbers', aberrant *Landolphias* of the grass uplands of the southern Kasai plateau. Originally forest climbers, but now growing in a region long denuded of its forest, these *Landolphias* creep at a level of a few inches beneath the soil for 80 or 100 ft., throwing up each rainy season a tuft of small branches bearing leaves, flowers, and fruit. The rubber is contained in the bark of these subterranean lianes or rhizomes, which are first sun-dried, then beaten to loosen the bark. This is then beaten until the small pieces of rubber can be picked out of the resulting débris. The most valuable of the several species is *Landolphia thollonii*.

Supplies of wild rubber in the Congo are still almost unlimited, but after 1910, owing to the withdrawal of the Government monopoly and the drop in prices on the European markets, the natives ceased to interest themselves in its collection, and the industry declined by nearly two-thirds. In 1913 the freight charges on river steamers and railways were therefore reduced by about 50 per cent., in order to stimulate export.

As regards plantation rubber, *Hevea brasiliensis*, a South American species, grows and yields well, but as it is expensive to cultivate and needs skilled labour and machinery, it is not likely that Pará rubber will ever bulk largely in the rubber exports of the Congo.

Funtumia elastica, the indigenous rubber-tree of tropical Africa, might with great advantage be planted over wide areas of forest land in some districts, where the red laterite soil, in which this tree flourishes, is to be found. It requires special planting methods, which are well understood by the natives. No skill is required for the tapping, and the rubber, which is of high quality, need not be prepared by machinery.

About 1900 it was decreed by King Leopold that for every ton of rubber exported 500 trees or vines were to be planted. Very large areas were consequently planted with young *Funtumia* trees, but at that time knowledge of rubber planting was derived almost entirely from Ceylon, where *Hevea*, belonging to a different natural order and to another continent, was grown successfully. The result was that the trees were planted widely instead of in coppice formation, their growth was stunted, and the plantations ruined. If the life-history of the tree, the histology of the bark, and the chemical composition of the latex had been studied before planting was undertaken, there would to-day have been a very considerable export from the Belgian Congo of plantation rubber of high quality.

Ceará rubber (*Manihot*), another South American species, and the hardiest of all rubber plants, might also be grown over even larger areas than *Funtumia*, though not in similar localities. Most bush-covered country is suitable for it, but not forest. The *Manihot* is a quick-growing tree, and no skill is required for either planting, tapping, or preparation for the market. The Germans were the first to realize the advantage of planting this species of rubber in the waste lands of Africa, and extensive areas of bush country in the Tangangika Territory have been utilized for its cultivation. The bark of the tree is merely pricked, the latex coagulated on the trunk, and the rubber collected as scrap by men, women, and children. After four or five years, when the bark has become thickened and useless owing to the continued pricking, the tree is discarded and another one reared in its place.

If the natives were induced to plant these two species, *Funtumia* and *Manihot*, in the neighbourhood of their villages, or wherever suitable in forest

or bush, a very flourishing native rubber-industry might be developed, to the great advantage of the finances of the Colony.

Oil-palm Products.—These are (a) palm oil from the red pericarp of the fruit, (b) the kernel, which when crushed produces white nut-oil, used for making margarine, soap, candles, &c., and (c) the fibrous refuse, which is pressed into oil-cake. Mayumbe is at present the chief centre of production, but the tree grows over almost the whole of the lower, middle, and south Congo regions, and could be cultivated in these districts to any extent. The wild trees in the forest are of little use, as they only produce one small bunch of fruit in several years, while trees in full sunlight may produce three or more large bunches every year.

The cultivation of the oil-palm is capable of being developed into a very extensive native industry, profitable both to the natives and to the Government. Before the war 95 per cent. of oil-palm products from the west coast of Africa went to Germany, owing to the continental demand for edible oils, and the high price Germany was able to pay for the materials.

Other vegetable products of which commercial use is being or might be made, or which might be used for the initiation of native industries, may be briefly noted.

Bananas.—This fruit contains all the essential elements of nutrition. It consists mainly of carbohydrates, and is an article of high dietetic and antiscorbutic value. Throughout Uganda and other large areas of tropical Africa the banana is the staple food of the inhabitants. Mixed with wheaten flour, banana flour makes excellent bread. Banana flour or sun-dried bananas for flour-making should become an important article of export.

Beans of many species are to be found in almost every native garden, and their cultivation could be extensively developed.

Bees-wax.—In the Kasai and other districts bees are kept for the sake of the honey. If the value of the wax and the best methods of its collection were explained to the natives, as was systematically done in the German African colonies before the war, a very profitable industry might be started.

Benniseed (Sesame, Simsim).—This is grown extensively in the Welle basin, and yields an oil which is used chiefly for cooking, but also occasionally for lighting purposes. Mixed with kerosene it will burn in an ordinary European lamp.

Camwood.—The red heartwood of at least two species of forest trees (*Pterocarpus* and *Baphia*) growing between Stanley Pool and the Western Rift. It produces a crimson dye used as a cosmetic by the natives.

Cassava (Manioc).—The staple food of the natives of most of the central Congo basin. It is known locally as *chiquang* or *quanga*. The leaves and tubers contain prussic acid, which is got rid of by a process of washing and desiccation in the sun. The leaves are used as a spinach. Tapioca is made from the tubers, which could also be utilized for the production of commercial starch, since they are almost pure starch.

Castor-seed.—A hardy perennial, seen in most districts. The oil is not used by the natives as a purgative, but only as a lubricant for the skin.

Cocoa.—In the Mayumbe district there are several fairly successful cocoa plantations. The Equator district is also suitable for cocoa, and successful experiments have been carried out in the upper Congo (Aruwimi district). The plant was introduced from San Thomé. There is no reason why its cultivation

should not be a flourishing native industry, as in the Gold Coast.

Coco-nut.—Though this palm will flourish as far inland as Stanleyville, it usually grows best near the sea. Hitherto its cultivation has been neglected. The Mayumbe district should be very suitable. The demand for coir and copra is always brisk.

Coffee.—Several species grow wild in the Welle and northern parts of the Congo, as well as in the Kasai-Sankuru region. Robusta coffee (*Coffea robusta*), one of the most successful and widely cultivated species in tropical Africa, is a native of the Congo. It has been very successful in Java, where it now occupies thousands of acres, largely interplanted with Pará rubber. It is said to have been less successful in Ceylon. It will grow from sea-level up to 2,000 ft. It is being successfully experimented with in several parts of the Congo, where unsuccessful State plantations of *Funtumia* are being interplanted with it, the rubber trees being utilized for shade for the young coffee-plants. There is some likelihood of the Congo becoming an important coffee-producing centre.

Cotton.—The cultivation of cotton is at present almost unknown in the Congo. Many experiments have recently been carried out by the Administration, and it would appear that the Manyema, upper Kasai, and Lomami districts and the central Welle basin are the most suitable areas. The cultivation of cotton in these districts should in time become one of the most flourishing of native industries, provided that educational methods are successful and railway facilities improve.

Dura or *durrah* (*Sorghum*), known also as Guinea-corn, Kaffir-corn, millet, &c., is grown extensively only in the northern and north-eastern Welle regions, where it is used for local consumption.

Fibres.—There is an almost unlimited field in the Congo for the cultivation of vegetable fibres in addition to cotton. *Sansevieria* grows wild in many districts. The eastern territories would probably be as suitable for the cultivation of sisal hemp (*Agave*) as the Tanganyika Territory has proved to be.

Ginger.—Several species belonging to *Zingiberaceae* grow wild in the northern Congo forest belt.

Ground-nuts (*Arachis*).—The ‘monkey-nut’ or ‘pea-nut’ of commerce could be grown to any extent in the eastern territories, but the central Congo basin is not a ground-nut country. The oil extracted from the nuts is extensively used for the manufacture of soap. There are endless varieties of oil-bearing edible nuts and seeds, as yet unexploited, in the forest areas of the Congo basin, which could to a large extent take the place of the ground-nut. In general the natives of the Congo basin and most of West Africa derive their oils and fats from the oil-palm (*Elaeis*), while in East Africa, much of which is comparatively dry and open country, the oil-palm is not found, and the ground-nut is the chief source of oil.

Kapok.—This is the pappus or hair surrounding the seed of a species of *Eriodendron*, one of the biggest trees in Africa. It is used in upholstery and life-belt making. This could be cultivated by the natives to almost any extent.

Kola.—The kola-nut is scarcely met with in the Congo in a cultivated state, nor are its value and uses known as in Nigeria. It grows wild in the Ituri forest, and its cultivation could be carried on as a native industry.

Piassava.—The fibre from which ‘bass’ brooms are made. It is obtained from the leaf-stem of the *Raphia* palm.

Raphia fibre.—The ‘raffia’ or ‘bast’ of commerce is

the epidermis stripped from the under-surface of the leaves of the same palm-tree that produces the piassava fibre. It has many uses. The natives collect it in quantities for their own purposes.

Raphia vinifera is common all over the Congo, as in most parts of tropical Africa, and the quality of the fibre is similar to the Madagascar product. In the Kasai and Bakuba country the making of mats and raised-pile cloths is a considerable native industry. Recently raphia fibre has increased in value owing to its military uses. The possible supplies from tropical West Africa are almost unlimited.

Rice.—The cultivation of rice in the Congo is almost confined to the Stanleyville-Ituri region, where the Kiswahili-speaking Arabisé natives clear annually large areas of forest, and grow hill or dry rice. This has a ready sale all over the upper Congo region, and is now shipped to the lower Congo. Great progress had been made during 1916, and it is noteworthy that 5,000 tons of rice were supplied to General van Deventer for the use of the troops in East Africa. The policy of sending experts to teach the natives the best methods of rice cultivation has been highly successful, and now that the natives are assured of the sale of their crops at a good price, the output has been tripled.

Sugar.—Sugar-cane is grown in most districts, especially by the riverain people, and the production of molasses, or of Indian 'jaggery', would be a very profitable industry, for all African natives are inordinately fond of sugar.

Of animal products, apart from live-stock, the most important are silk and ivory.

Ivory.—Ivory was formerly one of the chief articles of export, and a Government monopoly. Before the war the export was still about 300 tons a year, but

its relative importance had decreased considerably. The minimum weight of a tusk for export is 6 kg. In spite of reiterated assertions to the contrary, elephants are probably not on the decrease, though the number of large tuskers is declining, and the average weight of the tusks exported has probably diminished year by year. Tusks of over 100 lb. are now rare, though common enough ten years ago. The best elephant localities are in the eastern and northern territories.

Silk.—Large quantities of cocoons (of a species of *Anaphe*) could be collected by the natives in the forest areas. If the natives were shown how to wind and work the silk, a profitable wild-silk industry could be initiated. For exploitation by Europeans the industry has no future, unless the breeding of this silk-moth caterpillar were undertaken, for the cocoons have to be searched for over very large areas of forest.

Live-stock.—The chief cattle districts of the Congo are the grass-covered uplands near the great lakes of the eastern frontier. The natives in these regions seldom kill their animals, and live largely on milk, as do those in the cattle regions of Uganda and East Africa.

The natives in Katanga, the low plateaux of the Sankuru district, and the open country of eastern Welle, also own herds of cattle, sheep, and goats. The cattle are all of the large long-horned type from East Africa. The goat is the typical dwarf domestic animal from Egypt and western Asia. The sheep is the common woolless sheep of all negro Africa. Fat-tailed sheep are only found east and south of the Western Rift. Horses have done well in tsetse-free open-country areas in Welle and Katanga, but the mule is the hardier and more useful animal, and is

less influenced by fly-bite. The universal pye-dog is of Portuguese origin.

At Api, a post in Lower Welle, wild elephants have during the last fifteen years been domesticated and trained for field labour with some success. There are now on the farm thirty-three tame elephants, most of them in regular work. Attempts at domesticating the zebra have been abandoned.

(b) Forestry

The two main forest areas are (a) the north, from Lakes Albert and Edward and the Semliki river, westward to the Ubanghi river, and extending onward into the French Congo and Cameroon; and (b) the south, on the upper Lomami, between the Lualaba and Sankuru rivers. These are the great virgin forests for which the Congo is famous, and which are equalled only in Liberia and Brazil. In addition along all the riverain regions of the Congo basin heavy forest exists, but of a more dense and tangled soft-wood type, with less timber. With the exception of the grass cattle-regions already mentioned, the remainder of the Colony is bush-covered country, in which the prevailing vegetation is of a drier type, consisting chiefly of acacia-bush, long grass and scrub, with scattered trees.

Timber.—Owing to the great timber forests being far inland, and railway communications with the Atlantic as yet almost non-existent, the timber of the Congo, which includes mahogany and many other valuable woods, has scarcely been touched for commercial purposes. The natives yearly destroy large areas of the best of it to make room for their plantations. In the Mayumbe region there are still small areas of virgin forest, and there only has exploitation by the Europeans been possible. The annual destruction of the timber forests by the natives is

a serious problem. Timber could be floated from the forests of the northern territories for a thousand miles down the Congo, but it could not pass by water through the cataract regions to the sea.

(3) FISHERIES

Fishing is naturally one of the chief occupations of the riverain people, and of those round some of the lakes. At certain seasons, when flooded areas are drying up, whole villages migrate for several weeks to the rivers to catch fish with baskets or by spearing. They split the fish or cut them into strips and dry them in the sun or over wood fires. At Stanley Falls, and many other places on the upper Congo and its tributaries, enormous quantities of fish are caught during the low-water season by means of large funnel-shaped wicker baskets held in place by timber platforms erected in the falls and rapids. On the lower Congo netting is the more usual method of fishing. Poisoning is practised on the Semliki river, and on many of the upper Congo streams. Dried fish is one of the most familiar articles of barter in all the native markets, but is not exported.

(4) MINERALS

(a) *Natural Resources*

Coal.—Large quantities of inferior coal have been found on both banks of the Lukuga river over a wide area lying near Lake Tanganyika. Borings have disclosed several horizontal seams from 30 to 60 ft. thick. As mined up to the present the product is too ashy to be utilized for steam coal. Coal of the same quality has also been found near Bukama.

Copper.—In addition to the copper ore of various types to be found in almost every part of the province of Katanga (see below, pp. 115–16), good ores occur in the

upper Ituri district near Kilo ; near the junction of the Ubanghi river with the Congo ; between Lakes Kivu and Tanganyika ; between the rivers Lowa and Oso, south-east of Stanleyville ; and in the Mayumbe district.

Diamonds.—In 1911 the Société Internationale Forestière et Minière, a Belgian-American prospecting and trading company, discovered diamonds on a tributary of the Kasai river near the Portuguese frontier in the region of Mai Munene. The area over which they are found is wide, but their source has not yet been traced. The stones are all of small size. Fifteen American prospectors were at work here before the war. More recently the Tanganyika Concessions, Ltd., have discovered diamond pipes on the Kundelungu plateau in Katanga.

Garnets are common in river sands.

Gold.—The Congo is rich in alluvial gold deposits, chiefly in the eastern Welle region to the west and north-west of Lake Albert, where grains of gold can be found at the first washing in practically all the streams of the district.

Rich quartz reefs have also been discovered, but none of them has as yet been worked, owing to their distance from any railway and the impossibility of obtaining machinery.

The Government alluvial gold-mines at Kilo were the first mines to be worked and have been the most successful. Receipts in 1912 were 3·5 million francs and expenditure less than 2·25 million, while in 1913 receipts were 3·75 million and expenditure less than 2 million. Other successful mines are at Moto, eighty miles or more north-west of Kilo, and at Babeyru near the Nepoko river, some eighty miles south of Poko.

Iron.—The iron ore deposits of the Congo are extremely extensive. Vast supplies are to be found

along the Nile-Congo watershed. A range of hills of almost pure hematite exists between the Ituri and Bomokandi rivers. The Welle region is specially rich in iron. Rich iron ores are also to be found in the neighbourhood of the Western Rift, in Katanga, and along the Zambezi-Congo watershed.

Kaolin is found in the coastal region, and is reported to occur also near the junction of the Kwango and Kwilu (Juma) rivers.

Lead.—Lead ore (*galena*) has been found in several places—for example, near Matadi—occurring in quartz veins, though in small quantities.

Lime is known to exist in several regions, notably in Katanga, where it is needed chiefly for the manufacture of cement and for smelting purposes. Limestone of fair quality appears in the rock formations near the River Luezi (Léopoldville), and it has also been recorded in the cataract region, and in the district between the upper Kasai and Sankuru rivers.

Mica exists in the Ituri district, but the largest plates hitherto found are no more than 8 inches square.

Petroleum.—Mineral oil has not yet been discovered in paying quantities in the Congo.

Platinum associated with gold has been discovered.

Salt.—Hot salt springs exist at several spots along the Western Rift and Tanganyika. Some of these are worked by the natives for salt.

Silver occurs in the Mayumbe district, and in Katanga.

Tin.—Katanga is also rich in tin. The metal was being successfully mined before the war, and the first shipments had been dispatched to Europe. The richest mine is the Muika mine at Kiambi on the Luvua river.

Uranium compounds have been found in the Kasai and other regions in conditions which are said to suggest the existence of veins of radio-active minerals.

Zinc has been found in the Ituri region.

(b) *Output*

The following table gives the approximate figures for the output from the principal mining centres :

<i>Year.</i>	<i>Copper</i> (Katanga). <i>Metric tons.</i>	<i>Diamonds</i> (Kasai). <i>Carats.</i>	<i>Gold</i> (Kilo and Moto). <i>Ounces.</i>
1913	7,400	15,000	43,600
1914	10,700	39,000	55,000
1915	14,200	49,000	82,800
1916	22,200	54,000	95,200

The copper output for 1916 amounted in value to 66,000,000 francs (from Katanga), the gold output for the same year to 9,000,000 francs, the diamond output to 1,000,000 francs. The estimated output of diamonds for 1917 was 87,000 carats. In 1914 the average price of diamonds on the Antwerp market was £1 per carat. In 1916 the price of copper in Europe reached £120 per ton.

(5) MANUFACTURES .

The native manufactures of the Colony, as of other undeveloped African protectorates, are of small economic importance, since they are usually produced by the individual for his own use, and at best subserve a limited barter trade.

They include roughly fashioned products of native craft such as huts, canoes, pottery, mats, baskets and woven fabrics, fish-traps, iron-bladed implements, and weapons. The only manufacture of first-class importance was introduced by Messrs. Lever, whose firm, the Société des Huileries du Congo Belge, has several factories—on the Kwilu, Kwengo, and Koo rivers, at Alberta near Bumba, and at Elisabetha above Barumbu. The firm employs 140 Europeans, and up

to 3,000 natives, for whom it has built a hospital. The establishment of these factories has not only created a new industry, but has appreciably stimulated the cultivation of the oil-palm.

(6) WATER-POWER

The water-power available in the Congo is undoubtedly very great, though no survey has as yet been made of the total supply which might eventually be utilized. In all the regions bordering the central basin, where the courses of the rivers are frequently broken by falls and rapids, power could easily be generated. The Lualaba above Bukama and the Luvua above Kiambi have a succession of falls which might supply all the power required by the mines and railways in these districts; the falls of the Congo on the reaches between Kongolo and Kindu and between Ponthierville and Stanleyville could be used to electrify the railways which connect those places; the numerous rapids of the Welle lie upon the track of the proposed railway from Buta to Rejaf on the Nile.

In the central basin there is little water-power, but there the rivers make railways less necessary. Where the Congo leaves it, however, to descend to the coast the Livingstone Falls supply an enormous amount of power in a district where it is needed for railways and mines.

The mechanical difficulties which have to be surmounted in each instance before the power can be utilized are very great, and the execution of any such project would involve the expenditure of much capital.

(C) COMMERCE

(1) DOMESTIC

(a) *General Conditions*.—When the primitive native has come in contact with civilization and acquired a taste for European goods, he may be induced to work or bring in trade commodities in order to acquire the money to buy those goods ; his needs soon expand and lead to a demand for such articles as knives and cloth, or even gramophones and bicycles. In this way development indirectly depends upon transport facilities and railway expansion, and the greatest need of the Congo to-day is railways. European commodities are easily obtained in Katanga from Rhodesia and the Transvaal, in the Welle from Khartum *via* the Nile, and in lower Congo by sea from Europe, but in the rest of the Colony they are procured only with difficulty. Cloth, beads, cutlery, and all other kinds of ‘ trade goods ’ are sought after by the natives throughout the whole Congo basin, while in some districts there is a demand for tinned goods and general stores to supply the wants of Europeans.

The two most densely populated regions in the Congo are probably the central Welle and Kwango-Kasai districts. Neither of these is as yet opened up to European civilization and trade. Over large portions of the latter, in fact, the sway of the Congo Government is not recognized by the inhabitants, and tax-collecting is not attempted. In the thickly populated and fertile regions of the central Welle, however, the natives are of a far higher potential value, being physically and morally of a better type. They have acquired, probably from the north, a comparatively high civilization. Their arts and crafts—ornamental iron and ivory work, &c.—their code of laws and morals, their architecture, their weapons and dress, and their display on cere-

monial occasions, are probably not equalled by any other tribes of Equatorial Africa. During the last few years they have readily acknowledged the Congo administration and have paid their hut-tax willingly. The advent of a railway in either of these two districts, and the introduction of European influences, would open up great trading possibilities.

(b) *Markets and Fairs*.—Markets, weekly or bi-weekly, have been instituted at Government posts in most administered districts. Officials and police attend them, in order to prevent abuses and ensure fair dealing. These markets are greatly appreciated by the natives, and besides encouraging trade serve the purpose of familiarizing them with Europeans and their goods, and disseminating the news of the district. They are quite a feature of the Belgian Congo, and have done much to simplify the difficulties of the administration and raise the standard of civilization. In spite of its success in the Congo this system is apparently not encouraged in the British protectorates in Africa.

The chief caravan and trade routes in the Belgian Congo are provided with rest-houses, and portage services are arranged for under Government supervision.

(c) *Foreign, including British, Interests*.—As a relic of the old regime must be reckoned the large number of powerful companies holding concessions from the Government, which now, no longer as a rule in any relation of community of interest with the Government, carry on operations in the Congo. A special position is occupied by the railway companies, which still, with one exception, have close relations with the administration. The line to Léopoldville is entirely in private hands, though 15,000,000 francs of its capital of 82,000,000 francs were provided by the State, and the terms on which the State was authorized by agreements of 1896 and 1901 to acquire the line if desired

in 1916 were very onerous. The arrangement with the Great Lakes Railway Company of 1902 requires the Government to exploit and pay three-quarters of the profits of 8,000,000 hectares,¹ while the company is to work the minerals. The actual construction of the railways was carried out by the State at the expense of the company, which, however, works the lines.

In Katanga the Katanga Railway Company, instituted by a decree of March 11, 1902, started with a capital of 1,000,000 frs., of which three-fifths were provided by the State, and the rest by the English group headed by Mr. R. Williams. On January 25, 1909, the capital was increased by 25,000,000 frs., in order to permit of the construction of the line from the frontier to Elisabethville, 10,000,000 frs. being provided by the Union Minière du Haut-Katanga, and the rest by the Compagnie du Chemin de fer du Bas-Congo au Katanga, which latter added 54,000,000 frs. to cover the additional cost of the line from Elisabethville to Bukama, and constructs and operates the lines for the Katanga Company. This second body, which has now as its main function the construction of the lines to meet the Portuguese line, and to the lower Congo by a direct route through the Kasai basin, is also entrusted by the agreement of November 4, 1906, with the duty of representing the Government in relation to the Katanga Railway Company. Its own capital is only 2,000,000 frs., all the other sums required being provided from a loan of 150,000,000 frs. at 4 per cent. authorized in 1906 by the State, which will obtain half the profits on the working of the lines to be constructed. The company will also work minerals, for which it has the sole right to prospect in a large part of the Kasai-Sankuru basin on half shares with the State.

¹ The agreement was under revision in 1913 (Cd. 6606, p. 114). The capital is 75,000,000 francs.

The Government, which has since the decree of June 8, 1888, claimed all minerals, granted on February 27, 1911, the right to exploit for 99 years gold, &c., in an area of 20,000 hectares on the Tele, a tributary of the Itimbiri-Rubi, to the Société Internationale Forestière et Minière du Congo, which also has the right to prospect over nearly 4,000,000 acres and to exploit 150,000 hectares of land. In Katanga the Comité Spécial, which represents the agreement between the State and the Compagnie du Katanga, under which a joint body was to exploit the lands of the territory of which in 1891 a third was ceded to the company, occupies a special position in all mining concessions; not only does it decide whether to grant them, but 33 per cent. of the shares of any company must be allotted to it gratis, and it can subscribe for 20 per cent. more, thus acquiring full control.¹ The actual exploitation is mainly in the hands of the Union Minière, formed in 1906, which was created by Belgian and English capital with a slight preponderance of the former.

Other important concessions in Katanga include two approved in 1912, with some hesitation, one between the Comité Spécial and the group representing the Comptoir National d'Escompte of Paris and the Société Générale, and one between the Comité and the Brussels branch of the Deutsche Bank;² both were for 150,000 hectares, and doubt was felt as to the wisdom of granting such large areas for prospecting and mining.

There are also in the Congo the remodelled companies, the Abir, the Société Commerciale Anversoise, and the Compagnie du Kasai,³ with the Compagnie du Lomami and the American Congo Company, as well as minor concessionaries. The opening of the country to

¹ Lannoy, *L'Organisation coloniale belge*, pp. 162-67

² Cd. 6606, p. 36.

³ Three offshoots from the original Anglo-Belgian Indiarubber Company (A.B.I.R.).

free trade since 1910, however, has enormously increased the number of traders, mainly Belgian and Portuguese, with business in the country, and has brought into the field the important firm of Messrs. Lever Brothers, to which reference has been made above. An imposing effort to colonize the Katanga attempted by the Compagnie Foncière, Agricole et Pastorale du Congo (1909–12) ended in failure, and the company surrendered the 150,000 hectares which the State had conceded gratis, and on which a Benedictine monastery was to be founded. The presence of so many powerful companies naturally renders the entry of any mere individual trader difficult, unless he restricts himself to petty trade as do the Portuguese, but there is still room for powerful firms.

(2) FOREIGN

(a) Exports

In 1912 the exports from the Congo amounted to 16,000 tons, while those of 1913 reached a total of 19,600 tons. As regards values, however, these figures are misleading, for the price of rubber having dropped from 10 francs per kg. in 1912 to 5 francs per kg. in 1913, a fall of about £500,000 occurred in the value of exported rubber. Quantities are therefore a better basis of comparison than values, and the progress of export trade in recent years is indicated by the following returns for 6 leading items¹ out of 150 shown in the official reports :

	1913. <i>Metric tons.</i>	1916. <i>Metric tons.</i>
Rubber	3,600	3,200
Ivory	276	318
Copal	4,698	8,700
Palm nuts and kernels	7,195	22,400
Palm oil	1,981	3,850
Rice	2	901

¹ The figures are from *Congo Belge, 1916, Rapport Annuel*. London, 1918.

In considering the import and export figures for the Belgian Congo, it should be noted that the Congo and Ubanghi rivers serve other parts of the Congo basin, notably French Equatorial Africa (French Congo). It is desirable, therefore, to specify what proportion the figures for the Belgian Congo bear to the total river-borne trade in and out of the Congo ports. This is shown as far as possible in the tables which follow.

EXPORTS OF RUBBER.

(From *Renseignements de l'Office Coloniale, Ministère des Colonies Belges.*)

[A]

Produce of the Belgian Congo only.

1913	Quantities (kg.).	Values (frs.).
Grass rubber . . .	758,000	2,654,000
Wild vine rubber . . .	2,865,000	15,043,000
Plantation rubber . . .	451	2,480

1914

Grass rubber . . .	409,000	1,431,000
Wild vine rubber . . .	1,840,000	9,200,000
Plantation rubber . . .	—	—

1915

Grass rubber . . .	877,000	3,946,000
Wild vine rubber . . .	1,302,000	7,161,000
Plantation rubber . . .	—	—

[B]

Total exports of rubber through Congo ports.

1913	Quantities (kg.).	Values (frs.).
Grass rubber . . .	901,000	3,153,000
Wild vine rubber . . .	4,705,000	24,699,000
Plantation rubber . . .	451	2,480

1914

Grass rubber . . .	600,000	2,098,000
Wild vine rubber . . .	2,500,000	12,500,000
Plantation rubber . . .	—	—

1915

Grass rubber . . .	1,446,000	6,508,000
Wild vine rubber . . .	2,250,000	12,375,000
Plantation rubber . . .	—	—

Export Values in 1916.—According to the report of M. Leplae, Director of Agriculture for the Belgian Congo, the exports for 1916 were in quantity three times, and in value twice, those of 1912.¹ The total value of the exports of rubber, palm kernels, palm oil, copal, and ivory in 1916 was 44,000,000 francs, nearly three-fifths of the value of the mineral exports from Katanga. Of the products of cultivation, cocoa was the most important item; 770 tons, produced mainly in the Mayumbe district, were exported, and were valued at 1,400,000 francs.

(b) Imports

The total value of the principal imports for 1913 amounted to £2,297,791, an increase of £416,131² over the previous year. But of this total, machinery, iron and steel materials, and metals and manufactures thereof, accounted for about £500,000, and as they were required for railway extension, &c., their value must be deducted in estimating the amount of ordinary trade. There were, however, large increases in textile goods (£415,418 against £362,608 in 1912), clothing (£156,268 against £109,553), provisions (£346,162 against £249,731), and perfumery and toilet articles (£20,035 against £14,014), 'entirely due to the enormous credits which were given on the easiest possible terms by German firms, who apparently determined to capture trade for what it is worth in this Colony'.³ This fact explains also the figures of the trade of 1912 which perplexed the author of the Consular report for that year: ⁴ there was an increase of £224,000 over 1911,

¹ Figures recently published give the total export values for 1916 and 1917 as 122,300,000 and 161,490,000 francs respectively (*African World*, Jan. 11, 1919).

² The official Belgian figures, which have since been published, show a much larger increase over 1912, viz. £694,316.

³ Cd. 7820—103, p. 4.

⁴ Cd. 7048—77, pp. 5, 6.

and of the total for the year Belgium supplied 66 per cent., the United Kingdom 10 and Germany 8, while in 1911 Germany had only 5 per cent. to the United Kingdom's 12. There is also a considerable trade with Rhodesia and the Union of South Africa, and the total of British imports rose in 1912 to 17 per cent. as against 15.8 per cent. in the previous year. France and Holland come next, then Portugal and then Angola, but the total amount of imports in these cases is comparatively small.

The goods imported for the natives are of the usual type, cotton fabrics, loincloths, blue and white striped prints, indigo blue drill, scarlet baize, cotton covers, ready-made and second-hand clothing of the cheapest kind, German slippers, straw hats, and a few sun hats of British manufacture. Of other imports for native use Germany supplied in 1912-13 nearly all the perfumes and perfumed soap, padlocks, scissors, pocket-knives, imitation pearl beads, mirrors, machetes, and beer. Other articles in demand are matches, pipes from Gouda, condensed milk, biscuits (mainly of British or French manufacture), Portuguese sardines, Dutch gin, Portuguese wines, Belgian sugar, American or Australian corned beef, American tobacco, Austro-Hungarian flour and Dutch crockery, soap, starch, and rice.

The import trade is small in relation to the size of the country and number of its people, but it must develop largely with the opening of the country to free trade, and it is impossible not to recognize the energy shown by the Germans in their endeavour to capture the market, by sending representatives to the different centres to exhibit their wares and solicit orders. British firms have done much less work in this direction,¹ and in 1912 Manchester goods were meeting with serious competition from German cheap prints.

¹ Cd. 7048—77, pp. 9, 10. German trade made its first great advance in 1911 (when Germany ousted France from the third place) by the energy of Hamburg agents (cf. Cd. 6665—1, pp. 6, 7).

(c) *Customs*

By the terms of an agreement signed at the Brussels Conference in 1890, the import duties of the Congo Free State were limited to a maximum of 10 per cent. *ad valorem*. The schedule of duties levied under this regulation was replaced by a new tariff introduced by the Belgian administration in 1911 and modified by amendments published in 1912 and 1914. The new tariff observed the old maximum of 10 per cent. *ad valorem*, and applied this rate to all but a few categories. Seeds and fertilizers were admitted free; railway material and agricultural or industrial machinery paid only 3 per cent. *ad valorem*, but spirits were charged high rates, varying with their alcoholic strength and amounting to 70 francs or more per hectolitre.

In 1914 a royal decree announced the conversion of the 10 per cent. *ad valorem* duties in a number of cases to specific duties; about thirty articles were affected, the tariff in certain cases being carefully graded, e.g. for cotton tissues of various qualities and for blankets. A table showing the new rates leviable from October 1914 was published in the *Board of Trade Journal* for April 2, 1914.

As regards exports, the tariff was revised in 1913, some of the duties originally imposed by the Free State Government being abolished. On the other hand, since that date, prohibitions of certain exports have been issued from time to time. Ivory, copal, and rubber are liable to export duty, but rubber is not dutiable when the market price in Europe falls below 1s. 10d. per lb. for vine rubber, or 1s. 1d. per lb. for grass rubber. Plantation rubber, of which there is very little, goes out free. In 1917 the export of rice was totally prohibited.

The Budget estimates of Customs receipts for the years 1912-14 amounted to :

<i>Year.</i>	<i>Francs.</i>
1912	7,069,000
1913	8,261,500
1914	6,031,156

In 1913, of the 8,000,000 odd francs received under this head, 3,000,000 came from exports and 5,000,000 from imports. The scantiness of the Customs receipts (barely 16 per cent. of the total revenue) is largely the result of the policy of monopoly and restrictions on trade, and of the operation of *exploitation en régie*, which held sway before the inauguration of the present regime. It cannot be doubted that the maintenance in the Congo of the system of free trade introduced in 1912 will under normal conditions result in a rapid rise in Customs revenue. During the first year of its operation, 1913, the new system had produced an increase, arising from imports alone, of 1,000,000 francs, and the set-back in the following year was wholly due to the outbreak of war.

(D) FINANCE

(1) PUBLIC FINANCE

The immediate result of the abandonment, in 1912, of the system of Government exploitation was a great reduction in the gross revenue of the Colony. In 1908, out of 35,000,000 frs., 16,000,000 were credited to 'products of the domain, tributes and imposts paid in kind', a category which embraced resources of very different kinds. Even in 1911, the last year in which a considerable part of the Congo remained under Government exploitation, the receipts were over 10,000,000 francs.

The Colony, however, still enjoys important revenues from lands, proceeds of sales and leases (385,000 francs in 1913), dues on licences to collect rubber, &c. (140,000 francs), and the tax on ivory, which in 1913 produced 2,110,000 francs. The proceeds of the taxes of 40 centimes per kilogramme on tree or vine rubber, and of 20 centimes on grass rubber, which together amounted to 800,000 francs in 1913, were laid aside for the creation and maintenance of domain rubber plantations. An active policy of extension in regard to these has now apparently been abandoned, but a certain number of plantations, of coffee and cocoa as well as rubber, are being worked by the State, and although in 1913 the return was only 110,000 francs, it should increase largely in course of time. A small sum, 17,000 francs in 1913, was obtained from the dues payable on wood cut within domain forests. These dues are not levied on wood cut by natives or others for domestic use.

Mines, which in 1913 yielded 3,780,000 francs, are, as is natural, a Government monopoly. Posts, telegraphs, river transport, and minor services yield hardly any surplus over the cost of working. The proceeds of the Government's share in companies, which even in 1911 exceeded 3,000,000 francs, fell practically to zero after the abandonment of the policy of exploitation. Fees of court, survey fees, and minor licence and permit fees yield a trifling revenue.

Direct taxation includes a personal tax paid almost entirely by Europeans, and based on the size of the buildings used by them, and on the number of their employés and of the boats used in their business; it yielded in 1913 a comparatively small sum (825,000 francs). The payment of this tax confers the right to trade within the Colony; the European trader must otherwise pay 500 francs for a special licence to deal in rubber, copal, or ivory,

or 200 francs for a licence to trade in other commodities. Natives must pay from 5 to 12 frs. per adult male, and 2 frs. for each wife beyond the first, though the rate may be lowered in case of distress. The tax yielded some 9,000,000 francs in 1913, and its yield will steadily increase with the bringing of the tribes under control and the growth of the wealth of the natives. It can only be paid in cash, in terms of a decree enacted in 1910 in order to prevent the old abuses.

The total revenue¹ is not sufficient to cover the necessary cost² of developing the administration, and on the strength of the potential wealth of the Colony new loans have been contracted, so that by 1913 the interest on the public debt amounted to 9,673,035 francs.³

(2) BANKING AND CURRENCY

Of the three banks in existence, the chief is the Banque du Congo Belge, established in 1909 with a capital of 5,000,000 francs, with branches at Boma, Matadi, Kinshasa, Stanleyville, Kilo, Kigoma, and Elisabethville, and head office (at present) in London. The Banque Commerciale du Congo has a capital of 1,000,000 francs, and its profits for the year 1912-13

¹ 40,418,410 francs in 1913; 45,367,639 in 1912; 30,451,276 in 1914; 30,451,250 in 1915; 32,049,082 in 1916 (Cd. 6606, pp. 1 and 13).

² 63,076,573 francs in 1914; 65,957,084 francs in 1913; 66,538,970 in 1912. The ordinary expenditure in 1915 was 51,936,000 francs; in 1916, 54,755,912 francs. The central administration at Boma, the Governor-General's head-quarters, is conducted on very expensive lines, costing 2,170,000 francs in 1913. The annual instalment of 3,300,000 francs payable under the arrangement of cession to the King for colonial purposes is devoted to works of utility, such as the campaign against sleeping-sickness.

³ Of the total debt on which this interest was paid 62,545,000 francs represented the floating debt, and 99,780,000 francs the loan of 1888, the repayment of which is not quite adequately provided for by *fonds d'amortissement*.

were reported to be 77,578 francs. The Banque Coloniale de Belgique (capital 3,000,000 francs) had profits amounting to 778,269 francs in the same year.

The currency of the Congo is that of Belgium; consisting of 20 and 10 franc pieces in gold; 5, 2, and 1 franc pieces and 50 centime pieces in silver; 25, 10, and 5 centime pieces (perforated) in nickel; and 2 and 1 centime pieces (perforated) in copper. In 1912 the Banque du Congo Belge put into circulation notes of 10, 20, 50, 100, 500, and 1,000 francs, current only in the Congo. Up to August 1, 1912, the total imports of coin into the Congo were 24,317,500 francs, equivalent to £962,700 sterling.

Gold disappeared from circulation almost immediately after the outbreak of war, and silver was hoarded to such an extent that it became necessary for the Banque du Congo Belge to issue bank-notes for nominal values of 1 and 5 francs, a large number of which were put into circulation on October 15, 1914.

The metric system was introduced by law on August 17, 1910.

(3) INFLUENCE OF FOREIGN CAPITAL

On the inception of the Congo Free State in 1884, difficulty was experienced in attracting capital, and the method adopted was to form large 'concessionnaire' companies for the development of the territory. The most important of these and the parent of numerous other companies was the Compagnie du Congo pour le Commerce et l'Industrie, founded December 27, 1886, with an original capital of 1,227,000 francs. This company soon formed five others: the Compagnie de Magasins Généraux (October 20, 1888), the Société Anonyme Belge du Haut-Congo (December 10, 1888), the Compagnie du Chemin de Fer du Congo (July 31, 1889), the Compagnie des Produits du Congo (Novem-

ber 29, 1889, and the Compagnie du Katanga (April 15, 1890), the last of which organized three expeditions to counteract Mr. Rhodes's schemes of expansion. Two other companies were also formed a few years later—the Compagnie du Lomami (July 5, 1898), and the Süd-Kamerun-Gesellschaft (December 8, 1898).

After the Free State passed into the hands of the Belgians in 1908, a new impetus was given to commercial enterprise, and there were formed the Compagnie Internationale de Transport au Stanley pool (Citas), the Inter-tropical Anglo-Belgian Trading Company, and the Banque du Congo Belge (January 11, 1909).

After King Albert's accession, activity in this direction increased, and there were formed in quick succession the Société des Recherches des Minières du Bas-Katanga (June 29, 1910) to prospect in Katanga, the Société d'Alimentation du Bas-Congo (August 1, 1910), the Société Industrielle et Financière du Katanga (November 15, 1910) for prospecting, the Société des Pétroles du Congo (December 13, 1910), and the Compagnie Maritime Belge du Congo (January 1, 1911). These are also daughter companies of the Compagnie du Congo, and nearly all have been successful. In Katanga this group stood in 1913 in opposition to that of the British concession-holder, Mr. Robert Williams (Tanganyika Concessions, Ltd.). In 1902 the Compagnie du Congo took shares in the founding of the Great Lakes Railway Company, and in 1906 it took shares in the Union Minière du Haut-Katanga. In 1911 it widened its activities, taking shares in the Société des Mines du Djoue (French Equatorial Africa) and in a Dutch East Indies exploiting company. Much pioneer work stands to its credit, in general development, in railway construction, and in cattle-breeding, and it can claim to have held Katanga for Belgium.

(E) GENERAL REMARKS

Though the resources of the Congo are large, both in minerals and in agricultural products, it must be borne in mind that there are many factors which will certainly tend to make progress slow, and which must be weighed against those considerations which point to an early development of the territory after the war. Of these the chief are the following :

(i) *The Expense of Communication.*—The energetic development of means of transit by the Government is extremely satisfactory, and the river system is an invaluable asset, but none the less the necessity of trans-shipment and the heavy charges on the Matadi-Léopoldville section of the railway, though these have been diminished in deference to pressure by the Government, make carriage in any event costly. Some reduction can doubtless be effected by improving the steamship service through the employment of larger vessels carrying goods at a cheaper rate, but this in its turn requires considerable improvement of the channel of the river, steps to effect which are being carried out. Whatever may be the improvements ultimately possible by generation of electricity from water-power, the immediate future shows this grave impediment in the way of rapid progress.

(ii) *The Inadequacy of the existing Railway System,* which will have to be supplemented by measures designed to remedy the congestion of traffic on the Congo, and by the construction of a number of new lines.

As regards new construction the most important question from the British point of view is that of the establishment of communication between Rhodesia and Rejaf,¹ the limit of navigation on the Nile, or some

¹ Rejaf is separated from Dufile, to which Uganda steamers run, by 104 miles of cataract.

other point in the Sudan. At present the Katanga Railway extends to Bukama; the river is navigable thence to Kongolo, whence the railway runs to Kindu, from which there is again navigation by river to Ponthierville, and then a railway to Stanleyville. From Stanleyville a line designed to open up the Kilo gold-fields is projected to run to Mahagi, where in due course it will presumably be met by a line from the Sudan, through Darfur and along the watershed between the Nile and the Congo, which offers a practicable route. More direct communication by a line from the north of Lake Tanganyika to Lake Albert was contemplated when the treaty of 1894 was negotiated; and Mr. R. Williams obtained from Leopold II the right to carry out this project, for which surveys have been made.¹ This route would have to be completed by railway connexion between the Rhodesian system and the south of Lake Tanganyika, either *via* Elisabethville or from Broken Hill, and even assuming the extension from the north to Lake Albert, the making of a line thence to the north of Lake Tanganyika, and the connexion of the lake with the Rhodesian railways, there would still remain as gaps in the chain of railway connexion both Lake Tanganyika and the short stretch of the Nile between Halfa and Shellal. The difficulties therefore in the way of an early completion of the Cape-Cairo project are not to be minimized.

From the Belgian point of view, interest in the Cape-Cairo project is naturally secondary to that in plans intended to preserve Matadi as the outlet for the traffic of the Congo, including Katanga, in successful rivalry with either the route from Benguela, the Congo portion of which has yet to be constructed, or that from Dar es-Salaam, or that from Rhodesia and Beira. It is admitted that the actual route *via* the

¹ R. Williams, *United Empire*, 1917, p. 450.

Congo, with its three portions of railway (859 kilometres) and its 2,770 kilometres of river to Bukama, where the line to Elisabethville begins, cannot in the long run compete either with the line to Benguela or with the Beira line, especially as shortened by the variant route of Salisbury-Broken Hill, and that accordingly two further routes should be created; the first should follow the Congo, the Kasai, and the Sankuru to Lusambo (1,300 kilometres), where navigation normally ceases, then be carried by rail to Kabalo, the terminus of the line from Lake Tanganyika, then proceed to Pweto on Lake Mweru, and possibly thence to the south of Lake Tanganyika; the second should be entirely a railway route, extending from Elisabethville *via* Bukama to a point on the line from Matadi to Léopoldville, probably Thysville, west of the valley of the Inkisi. The first of these lines would combat the competition of the Tanganyika line; the second would compete, it is hoped successfully, with both the Benguela and Beira routes, between which competition will be minimized by the existence of the pooling agreement of 1908. The funds required for these great projects, however, would obviously be considerably more than the Colony is likely to be able to afford for a considerable period to come.

(iii) *The Character of the Native*, whose labour is indispensable for all important development. The native is, doubtless as the result of environment and heredity, by nature disinclined to hard work, and he has been accustomed to delegate as much toil as possible to his numerous wives and domestic slaves, and to regard this state of things as ideal. Moreover, of late years the ravages of sleeping-sickness have added to the disinclination and inability of the native to work, while the episodes of the State regime have inevitably tended to make every native detest work.

Relief from the excessive tasks and oppression of the old regime have encouraged a spirit of insolent disregard for the white population, which has been as unfavourably commented on by British consular officers¹ as by Belgians.

The remedy for this state of things is not at all simple. It is easy enough to suggest that the procedure of Germany in East Africa or in Samoa should be followed, and that the Government should instruct the chiefs to secure that so many rubber trees should be planted; but the suggestion is open to the fatal objection that the whole root of the evils which prevailed in the Independent State was precisely the application of the principle of compulsory labour, and that no British Government could approve it. It is of course perfectly true that the aim of the policy would be to benefit the native, but it is equally certain that it could not be carried into effect without reintroducing all the evils of quasi-slavery.

It remains, therefore, to adopt a policy similar to that of the British on the west coast of Africa, and to find means of inducing the natives to work in a legitimate manner by encouraging them to become anxious to attain a higher standard of comfort, and to advance in the scale of civilization. This end is undoubtedly fostered by the opening up of the country by railways and other means of communication, and doubtless a good deal can be done by other means. Of these, one of the most effective is the providing of work on regular wages, as is done by the Lever Company, the native thus easily earning enough to pay the native tax, and, owing to free competition, being able to acquire goods at prices which bear some reasonable relation to the actual cost of production, instead of, as formerly, paying a wholly fanciful price estimated in produce. By this means

¹ See e. g. Cd. 6606, pp. 10, 11, 54, 56.

large areas will in due course be effectively worked for the production of palm products.

The natives should also be encouraged by the Government to apply for grants of land, to be given free on condition that they are brought under effective cultivation in a specified time; and in this manner rubber, palm-trees, manioc, pea-nuts, bananas, perhaps cocoa, coffee, and even cotton, may be effectively cultivated. Any substantial extension of this system beyond production for domestic wants will require co-operation by the Government or capitalists in setting up machinery to deal with the produce and prepare it for commercial export. An obvious desideratum is an agricultural bank on something like the Egyptian model.

Another question for serious consideration is whether the development of industry does not render requisite a departure from the present policy of recognizing only communal rights on the part of the natives. In the case of chiefs so far from enlightened as those of the Congo, there is grave risk that the individual may find himself disinclined to efforts from which he will not reap substantial benefits.

In any case, however, there is really no doubt that for a long period the labour supply of the Congo will not be equal to the demands upon it; the importation of outside labour is practically impossible; white labour is very expensive, and the possibility of white settlement on a substantial scale cannot be regarded as at all promising.

(iv) *Lack of Capital.*—Whatever potentialities of development may exist in the Congo, they cannot be exploited except by the free expenditure of capital. It is not at all clear from what source after the war such capital will be forthcoming on a purely commercial basis, for the risks of large enterprises in the Congo are obviously considerable, and can be faced

only by firms so powerful as that of Messrs. Lever. Delay in development need not be regarded as in itself a great evil. Slow but sure progress is probably the wisest course for the Colony.

(v) *Financial Difficulties*.—The financial position of the Government is unquestionably serious ; the receipts for 1914 showed a falling off by 9,966,824 francs from 1913, and 1915 saw a further decline by 11,700,000 francs. The loss of revenue is due in part to abiding causes such as the inevitable loss of revenue on ivory (due both to the necessity of lowering the duties and to the actual diminution of the amount available) and the decision to sacrifice the revenue from trade spirits, in part also to the decline in the price of rubber, which may be temporary and is clearly due to various causes, such as the coming on the market of large supplies from other sources, the invention of synthetic rubber, &c. The deficit in 1914 was 22,500,000 francs, and in 1915 not under 25,000,000 francs, and since the annexation there has been no success in balancing revenue and expenditure, the deficit being made good from loans, although much of the expenditure is unproductive. On the other hand, increase of revenue can be confidently expected from (i) the growth of land revenue of a legitimate character ; (ii) the mineral royalties ; (iii) the native taxation, which will increase as the country is effectively brought under administration, and as the rate is raised, as it legitimately can be when the native is able to earn more money ; and (iv) import duties, which will develop with the growth of the spending power of the natives. It must, however, be remembered that at any time sleeping-sickness may develop and produce demands on the Colony which it would be difficult to meet.

NOTE ON KATANGA

(1) DESCRIPTIVE

GEOGRAPHICALLY, Katanga cannot be regarded as part of the Congo, but belongs rather to Rhodesia. Its fauna and flora are both more akin to those of South Africa. It is connected by railway with the Cape and Beira, and at present its outlet is towards the south, whence it derives all its stores, machinery, &c.

In the matter of climate also, Katanga stands apart from the rest of the Colony. Owing to its altitude, from 4,000 to 7,000 ft., it is much more temperate than most other parts of the tropics, the mean daily temperature being about 70° F. The annual rainfall is from 50 to 80 in., the rainy season being from October to April.

The greater portion of Katanga is hilly, and the country chiefly rolling grassy uplands or well-timbered bush, with some forest areas in the west. No part, however, is wholly suitable for colonization by whites, the climate, though in some respects favourable, being too hot, and severe malaria being prevalent.

The boundaries of the province (cf. pp. 9; 10) are roughly the following: north, the Lukuga river; east, Lakes Tanganyika and Mweru, and the Luapula river; south, northern Rhodesia; west, the River Lomami.

(2) SLEEPING-SICKNESS

As in other parts of the Congo, this disease is prevalent amongst natives, though large areas of the plateau country are said to be free from 'fly', and

therefore also from sleeping-sickness. Before the war 18 doctors and 30 sanitary brigades were employed in the Congo, many of them in Katanga, mainly in connexion with this disease, the cost being borne by the civil list of the King of the Belgians. The most seriously affected areas are on the Lufira and Luvua rivers.

(3) MEANS OF COMMUNICATION

(a) *Roads*.—In Katanga a great deal of labour has been expended on the construction of roads. The new road branching towards the Kundelungu plateau from mile 60 on the road from Elisabethville to Kasenga is finished as far as the Lashipuka river, a distance of 40 miles, while the Elisabethville–Kasenga road has been continued to mile 73, and is being actively pushed forward. An alternative road has been built between Elisabethville and the ‘Star of the Congo’ copper mine. During the war a rough bush-track was cut from Elisabethville to the south end of Lake Tanganyika. It was used in the dry season by motor lorries conveying stores and munitions for the troops in German East Africa, and may one day carry a section of the grand trunk Cape to Cairo Railway.

(b) *Railways*.¹—The natural outlets from Katanga to the sea are to be found not in the far north-west at the mouth of the Congo, but on the east or the west coast, and the official scheme of railway construction has these considerations in view. The Lobito Bay (or Benguela) line seems to be the most obviously advantageous route. The sea-journey from England would be shortened by 2,000 miles, and the route affords the obvious outlet for the copper of Katanga (already over 22,000 tons a year). The late war, however, has

¹ For the Katanga Railway, see above, pp. 64–5, 68, 105–6; for the Lobito Bay (Benguela) Railway, see p. 66.

prevented work on the Congolese section of the line, and meanwhile the Beira and Mashonaland Railway Company is making efforts to secure the Katanga trade both as against that route and as against the competition for the trade of northern and central Katanga of the Tanganyika-Dar es-Salaam route. From January 1, 1913, it leased the section of the line from the south lying between Broken Hill and the Congo border, on which the rates had previously been very heavy—often thrice as great as on the rest of the system—and from January 1, 1914, it announced large reductions in the rates from Beira and Port Elizabeth to the Congo frontier ; thus the rate on *limbo* (coloured cotton prints), blankets, and beads for natives was reduced from £1 4s. 3d. to 17s. 10d. per 100 lb., in order to enable the merchants in Katanga to attract rubber caravans to Elisabethville to buy, the rubber thus being sent to Europe by the Beira route instead of by the Kongolo-Boma route. If Ayrshire, in southern Rhodesia, were connected by railway with Broken Hill in northern Rhodesia, Salisbury would for the time being replace Buluwayo as the base of the foreign trade of Katanga, and with the shortening of the route the position of Beira as the chief port of entry for the province would be temporarily strengthened.

(4) INDUSTRY

(a) *Labour Conditions*.—Most of the arrangements for the recruiting and repatriating of native labourers are in the hands of the Bourse du Travail du Katanga. In 1916 over 2,000 passed through the compound of the Bourse at Elisabethville. In 1914 the Union Minière employed 2,670 natives in the copper mines and smelting works. Most of the labour has hitherto been recruited from Rhodesia and Portuguese territory, some also from Northern Nigeria. The food supplied

consists of maize meal (from Rhodesia), meat, salt fish, rice, pea-nuts, sugar, salt, and beans. (Beans and tobacco are raised locally.) Now that the railway has been completed to Bukama, it is probable that recruits and food supplies will be drawn largely from the north.

Beyond the mining areas native unskilled labour is plentiful, and wages are low, though higher than in other parts of the Congo. In the Lake Tanganyika zone porters are paid 1.50 frs. (1s. 3d.) *per diem*; in the Lomami region, 1 fr. (10d.); while 5d. to 8d. is the usual rate elsewhere.

(b) *European Settlement*.—In regard to European settlement, conditions in Katanga are in some measure different from the rest of the Congo. The Belgian element in the population is much less numerically strong, being 51.5 per cent. on January 1, 1912; since then the population is estimated to have increased by January 1, 1914, to about 2,500, of whom about 1,000 are at Elisabethville, where the population is extraordinarily cosmopolitan. The political danger of the swamping of the Belgian element in Katanga by the South African element has been recognized by Belgium,¹ and a real attempt has been made to encourage agricultural settlement by Belgian farmers, the Government giving free passages third class and obtaining large reductions for emigrants on the South African railways, while the Agricultural Department, as has been seen, is endeavouring to clear land and establish a pastoral industry. A special company for this purpose operated for some time, acting on the basis of bringing out settlers to whom, after a year's work, land and assistance were given, while for others industrial employment for two years was guaranteed.

¹ Cd. 6606, pp. 50-71. Of 434 Belgians imported in 1910-12, 82 left (Cd. 6665—1, p. 3). Undesirable persons may be deported (*ibid.*, p. 18.)

Through this means 434 Belgians, including 41 farmers and 189 artisans, 89 women, and 80 children, were introduced up to June 30, 1912 ;¹ the effort, however, collapsed in 1912, doubtless for the simple reason that the Belgian is not anxious to colonize, especially in circumstances which are probably more difficult than those of northern Rhodesia. Only 30 farmers and their families were established in Katanga by 1913, and there is as yet no evidence to show whether or not the country is really adapted for permanent European settlement of the Rhodesian type, though it appears to be generally assumed, perhaps without adequate consideration, that this is the case. In any case, if white settlement is possible, the most natural way to foster it would be by the introduction not of Belgians but of South Africans with experience of colonial life ; but naturally enough South Africans for the present find the agricultural prospects in Rhodesia more attractive.

(c) *Agriculture*.—Although most of the country is extremely fertile, little interest has been taken in the exploitation of its vegetable wealth, owing to the great distance of Katanga from the sea, and to the smallness of its white population, which in 1914 was said to number about 2,500.

Stock-raising offers a more promising future, the Biano plateau being reported to be free from ' fly ' (tsetse). This and the Kundelungu plateau are about 400 metres above the surrounding country, and covered with short grass, which, however, is thin and poor. Reports from the Government experimental breeding station at Katentania on the plateau have been uniformly good. In 1914 it had 1,737 head of cattle, 734 of which had been imported from northern Rhodesia. Sheep-farming has also given good results. The export of cows from Katanga is prohibited.

¹ Cd. 6665—1, p. 18.

A large number of cattle are imported monthly from Rhodesia for slaughtering, and their hides are largely exported.

(d) *Mining*.—In 1916 the value of the export of minerals from Katanga amounted to more than half that of the total exports of the Colony. Katanga is a copper country. Its southern copper belt is said to extend for a distance of 200 miles, with a breadth of from 35 to 60 miles. The region derives its industrial importance from this great copper belt, now being exploited by the Union Minière du Haut-Katanga, a Belgian company. There are several other mining companies, but they are of little importance as compared with the Union Minière. Most of them have ceased to operate since the outbreak of war, for example the Simkat Company, mining tin at Muika, and the Comité de Kundelungu, working diamonds at Msipashi. On the other hand, war needs and the high price of copper have served to redouble the energies of the Union Minière, and to increase its output. It is fortunate that the very necessary fluxes, ironstone and lime, are to be obtained in close proximity to the copper mines.

The majority of the ores are of low grade, containing about 7 per cent. of copper, but there are large deposits containing from 10 to 20 per cent., and some even 30 per cent. or more. It is hoped that for the treatment of low-grade ores a method will be perfected in the near future. The electrolytic leaching process by which electrolytic copper is produced seems to offer promising results. The smelting plant of the Union Minière is at Lubumbashi, and when the additional blast-furnaces recently installed are in working order, it is estimated that the annual output will be about 40,000 tons of metal and matte, in which case Katanga would be one of the most productive copper-fields in

the world. The present mining programme will keep the plant supplied until 1920 or 1921.

Up to 1915 five furnaces had been installed. Two others, capable of turning out 600 tons monthly, are now in course of erection. The production of copper since 1911 is as follows :

<i>Year.</i>	<i>Copper (metric tons).</i>
1911	997
1912	2,492
1913	7,407
1914	10,722
1915	14,190
1916	22,200 ¹

The cost of production per ton has been reduced considerably by the latest improved furnaces. The cost per ton of copper from Katanga delivered in England in 1916 is shown by the following figures :

	£	s.	d.
By old furnaces	27	16	0
By new furnaces	22	15	0
Average cost	25	12	0
Average cost of rail, freight, insurance, &c.	15	19	3
Total cost of production and dispatch to England	41	11	3

In normal times, with improved furnaces, the last figure would be about £30, and on the completion of the Benguela Railway it is expected that the cost of transport will be greatly reduced.

About 50 per cent. of the shares of the Union Minière are held by the Tanganyika Concessions, Ltd., which also holds 90 per cent. of the Benguela Railway Company's shares, the remaining 10 per cent. being in the hands of the Portuguese Government ; 70 per cent. of the shares of the Rhodesia-Katanga Junction Railway Co. are also held by Tanganyika Concessions.

¹ The value of the output in 1916 is given as 66,000,000 francs ; the total exports from the Colony in that year were valued at 122,000,000 francs.

Prospecting licences for two years may be obtained for £4. The working of minerals discovered is subject to a royalty of 1 per cent. of the value of the output (except in the case of precious metals and diamonds, on which the royalty is 5 per cent.), and 33 per cent. of the net profits go to the Treasury. There is, however, very small scope for new undertakings, most of the country in the mineral regions in the east of the Belgian Congo being included in concessions of prospecting or mining rights issued to wealthy corporations.

(5) COMMERCE

(a) *Local Trade*.—Most of the local trade of Katanga is in British hands, but it rests on a system of credit which is often disastrous.

(b) *Foreign Trade*.—In 1914 the value of imports into Katanga (wholly from the south) was £564,365; the value of the exports (southward) was estimated at £781,893, their weight being approximately 10,500 tons. The foreign trade of the province is therefore considerable for a newly-opened country so far removed from the usual trade routes. Iron and steel goods, machinery and rails, are the chief imports. These come mainly from Belgium; Rhodesia and the United Kingdom being next on the list. Copper, of course, was the chief article of export—over 10,000 tons, more than 95 per cent. of the total, being exported in 1914.¹

There is no preferential tariff on goods of Belgian origin, all imports paying an average of 10 per cent. *ad valorem*. The Customs receipts for 1914 were £29,591, as against £34,906 in 1913. The decline in imports indicated was probably due to the war. The Customs receipts of the Congo have always been extremely small (see p. 99).

¹ The export of copper reached 14,000 tons in 1915, while both the export and the price further increased in 1916.

(c) *Elisabethville*.—At the beginning of 1912 this town, of which there was no sign eighteen months previously, covered an area of 560 acres, and had some 20 miles of streets, and a population, according to the census of that year, of 1,132, of whom 519 were Belgians, 228 British, and 385 of other nationalities¹. By March 1912 a collapse of the 'boom' set in, and a somewhat acute financial crisis was produced. This was complicated by the action of the Banque du Congo Belge, which, realizing that there were no mortgage laws in force in the country, promptly called in its various loans on land and building property. By 1914, however, business had revived and indeed increased, and the original wattle-and-daub huts of the town had been largely replaced by substantial buildings.

(6) FINANCE

In 1910 it was estimated that the capital invested in Katanga in connexion with mining, agricultural, and commercial operations, and railway construction amounted to £10,000,000. A branch of the Standard Bank of South Africa was opened at Elisabethville in 1919.

¹ At the end of 1919 the whole population was estimated at about 1,600. A. de Bauw, *Le Katanga*, Brussels, 1920.

APPENDIX

I A

DECLARATIONS EXCHANGED BETWEEN THE GOVERNMENT OF HER BRITANNIC MAJESTY AND THE INTERNATIONAL ASSOCIATION OF THE CONGO, DECEMBER 16, 1884

Declaration of the Association.

The International Association of the Congo, founded by His Majesty the King of the Belgians for the purpose of promoting the civilization and commerce of Africa and for other humane and benevolent purposes, hereby declares as follows :

1. That by treaties with the legitimate sovereigns in the basins of the Congo and of the Niadi [Niari] Kwilu and in adjacent territories upon the Atlantic there has been ceded to it territory for the use and benefit of Free States established and being established in the said basins and adjacent territories.

2. That by virtue of the said treaties the administration of the interests of the said Free States is vested in the Association.

3. That the Association has adopted as its standard, and that of the said Free States, a blue flag with a golden star in the centre.

4. That, with a view of enabling commerce to penetrate into Equatorial Africa, the Association and the said Free States have resolved to levy no customs duties upon goods or articles of merchandise imported directly into their territories or brought by the route which has been constructed around the cataracts of the Congo.

5. That the Association and the said Free States guarantee to foreigners established in their territories the free exercise of their religion, the rights of navigation, commerce, and industry, and the right of buying, selling, letting, and hiring lands, buildings, mines, and forests on the sole condition that they shall obey the laws.

6. That the Association and the said Free States will do all in their power to prevent the slave-trade and to suppress slavery.

Declaration of Her Britannic Majesty's Government.

The Government of Her Britannic Majesty declare their sympathy with, and their approval of, the humane and benevolent purposes of the Association, and hereby recognize the flag of the Association and of the Free States under its administration as the flag of a friendly Government.

I B

EXTRACTS FROM THE CONVENTION BETWEEN HER BRITANNIC
MAJESTY'S GOVERNMENT AND THE INTERNATIONAL ASSO-
CIATION OF THE CONGO, DECEMBER 16, 1884

ART. V. Every British Consul or Consular Officer within the said territories who shall be thereunto duly authorized by Her Britannic Majesty's Government may hold a Consular Court for the district assigned to him, and shall exercise sole and exclusive jurisdiction, both civil and criminal, over the persons and property of British subjects within the same, in accordance with British law.

ART. VI. Nothing in the last preceding article contained shall be deemed to relieve any British subject from the obligation to observe the laws of the said Free States applicable to foreigners, but any infraction thereof by a British subject shall be justiciable only by a British Consular Court.

[These advantages belong by express grant to Italy, France, Austria-Hungary, Denmark, Portugal, and Russia, and by most-favoured-nation clauses to the United States, Germany, Spain, Norway and Sweden, and Holland; the operation of Art. VI is conditional on Art. V being put in effect by the erection of such courts; otherwise the territorial jurisdiction applies, and in the absence of the courts has always been exercised.]

ART. X. In the case of the Association being desirous to cede any portion of the territory now or hereafter under its government, it shall not cede it otherwise than as subject to all the engagements contracted by the Association under this convention. Those engagements and the rights thereby accorded to British subjects shall continue to be in vigour after every cession made to any new occupant of any portion of the said territory.

II

EXTRACTS FROM GENERAL ACT OF BERLIN CONFERENCE,
FEBRUARY 26, 1885CHAPTER I. *Declaration relative to Freedom of Trade in the
Basin of the Congo, its mouths and circumjacent regions,
with other provisions connected therewith.*

ART. 1. The trade of all nations shall enjoy complete freedom :

1. In all the regions forming the basin of the Congo and its outlets.

This basin is bounded by the watersheds (or mountain ridges) of the adjacent basins, namely, in particular, those of the Niari, the Ogowé, the Schari, and the Nile, on the north ; by the eastern watershed line of the affluents of Lake Tanganyika on the east ; and by the watersheds of the basins of the Zambezi and the Logé [Loje] on the south. It therefore comprises all the regions watered by the Congo and its affluents, including Lake Tanganyika, with its eastern tributaries.

2. In the maritime zone extending along the Atlantic ocean from the parallel situated in $2^{\circ} 30'$ of south latitude to the mouth of the Logé.

The northern boundary will follow the parallel situated in the $2^{\circ} 30'$ from the coast to the point where it meets the geographical basin of the Congo, avoiding the basin of the Ogowé, to which the provisions of the present Act do not apply.

The southern boundary will follow the course of the Logé to its source, and thence pass eastwards till it joins the geographical basin of the Congo.

3. In the zone stretching eastwards from the Congo basin as above defined to the Indian Ocean from the 5° of north latitude to the mouth of the Zambezi in the south, from which point the line of demarcation will ascend the Zambezi to five miles above its confluence with the Shiré, and then follow the watershed between the affluents of Lake Nyassa and those of the Zambezi, till at last it reaches the watershed between the waters of the Zambezi and the Congo.

It is expressly recognized that in extending the principle of free trade to this eastern zone the Conference Powers only undertake engagements for themselves, and that in the

territories belonging to an independent sovereign State this principle shall only be applicable in so far as it is approved by such State. But the Powers agree to use their good offices with the Governments established on the African shore of the Indian Ocean for the purpose of obtaining such approval, and in any case of securing the most favourable conditions to the transit (traffic) of all nations.

ART. 2. All flags, without distinction of nationality, shall have free access to the whole of the coast-line of the territories above enumerated, to the rivers there running into the sea, to all the waters of the Congo and its affluents, including the lakes, and to all the ports situate on the banks of these waters, as well as to all canals which may in future be constructed with intent to unite the water-courses or lakes within the entire area of the territories described in Art. 1. Those trading under such flags may engage in all sorts of transport, and carry on the coasting trade by sea and river, as well as boat traffic, on the same footing as if they were subjects.

ART. 3. Wares, of whatever origin, imported into these regions, under whatsoever flag, by sea or river, or overland, shall be subject to no other taxes than such as may be levied as fair compensation for expenditure in the interests of trade, and which for this reason must be equally borne by the subjects themselves and by foreigners of all nationalities. All differential dues on vessels as well as on merchandise are forbidden.

ART. 4. Merchandise imported into those regions shall remain free from import and transit dues. The Powers reserve to themselves to determine after the lapse of twenty years whether this freedom of import shall be retained or not.

ART. 5. No Power which exercises or shall exercise sovereign rights in the above-mentioned regions shall be allowed to grant therein a monopoly or favour of any kind in matters of trade. Foreigners without distinction shall enjoy protection of their persons and property as well as the right of acquiring and transferring movable and immovable possessions, and national rights and treatment in the exercise of their professions.

ART. 6. *Provisions relative to protection of the natives, of missionaries and travellers, as well as relative to religious liberty.*

All the Powers exercising sovereign rights or influence in the aforesaid territories bind themselves to watch over the preservation of the native tribes and to care for the improve-

ment of the conditions of their moral and material well-being, and to help in suppressing slavery and especially the slave-trade. They shall, without distinction of creed or nation, protect and favour all religious, scientific, or charitable institutions and undertakings created and organized for the above ends, or which aim at instructing the natives and bringing home to them the blessings of civilization. Christian missionaries, scientists, and explorers, with their followers, property, and collections, shall likewise be the objects of especial protection. Freedom of conscience and religious toleration are expressly guaranteed to the natives, no less than to subjects and to foreigners. The free and public exercise of all forms of divine worship, and the right to build edifices for religious purposes, and to organize religious missions belonging to all creeds, shall not be limited or fettered in any way whatsoever.

CHAPTER III. *Declaration relative to the neutrality of the territories.*

ART. 10. In order to give a new guarantee of security to trade and industry, and to encourage by the maintenance of peace the development of civilization in the countries mentioned in Art. 1, and placed under the free trade system, the high signatory parties to the present Act, and those who shall hereafter adopt it, bind themselves to respect the neutrality of the territories or portions of territories belonging to the said countries, comprising therein the territorial waters, so long as the Powers which exercise or shall exercise the rights of sovereignty or protectorate over those territories, using their option of proclaiming themselves neutral, shall fulfil the duties which neutrality requires.

ART. 11. In case a Power exercising rights of sovereignty or protectorate in the countries mentioned in Art. 1 and placed under the free trade system, shall be involved in a war, then the high signatory parties to the present Act, and those who shall hereafter adopt it, bind themselves to lend their good offices in order that the territories belonging to this Power and comprised in the conventional free trade zone shall, by the common consent of this Power and of the other belligerent or belligerents, be placed during the war under the rule of neutrality and considered as belonging to a non-belligerent State, the belligerents henceforth abstaining from extending

hostilities to the territories thus neutralized, and from using them as a base for warlike operations.

ART. 12. In case a serious disagreement originating on the subject of, or in the limits of, the territories mentioned in Art. 1 and placed under the free trade system shall arise between any signatory Powers of the present Act, or the Powers which may become parties to it, these Powers bind themselves before appealing to arms to have recourse to the mediation of one or more of the friendly Powers. In a similar case the same Powers reserve to themselves the option of having recourse to arbitration.

III

DECLARATION SIGNED AT BRUSSELS, JULY 2, 1890, MODIFYING ARTICLE VI OF THE GENERAL ACT OF BERLIN

The signatories or acceding Powers who have possessions or protectorates in the said conventional basin of the Congo shall be able, so far as authority is required to this end, to establish duties upon imported goods, the scale of which shall not exceed a rate equivalent to 10 per cent. *ad valorem* at the port of entry, always excepting spirituous liquors, which are regulated by the provisions of Chapter VI of the General Act of this day.

[By Declaration of June 15, 1910, Powers 'which have possessions or protectorates in the conventional basin of the Congo are authorized, so far as such authorization is necessary, to impose therein upon imported arms and munitions, duties exceeding the maximum limit of 10 per cent. at the port of importation fixed by the aforesaid Declaration'. The liquor duties are fixed by the Brussels Convention of November 3, 1906.]

IV

DECLARATION, PORTUGAL AND THE CONGO, MARCH 24, 1894

Following the thalweg of the Kwango (Cuango) from the 8th parallel as far as its confluence with the Tungila (Utungila) 8° 7' 40" south latitude approx.; the thalweg of the Tungila (Utungila) as far as its intersection with the canal through which pass the waters of the Lola; the thalweg of the same canal as far as its junction with the Komba, 8' west

of the Wamba (Uhamba), and $8^{\circ} 5' 4''$ south latitude approx.; for want of a natural boundary, the frontier as far as the thalweg of the Wamba (Uhamba) shall be marked out by the line due east passing through the aforesaid point of junction (Komba and Lola).

The thalweg of the Wamba (Uhamba) from the parallel of the point of junction between the Komba (Comba) and the Lola, as far as its confluence with the Uövo (Nuovo); the thalweg of the Uövo (Nuovo) as far as its junction with the N'Kombo (Combo); the thalweg of the N'Kombo and of the Kamanguna (Camanguna) (or the river by which the waters of the river Lué flow into the N'Kombo), as far as the 8th degree south latitude. From this point the boundary shall be the 8th parallel, as far as the thalweg of the Lucaia, then the thalweg of this river (Lukaï) as far as $7^{\circ} 55'$ south latitude; the parallel from this point ($7^{\circ} 55'$ south latitude) as far as the Kwengo (Cuengo); from this point the thalweg of the Kwengo (Cuengo), as far as the 8th degree; from thence a parallel as far as the river Luita; the thalweg of the Luita as far as its junction with the Kwilu (Cuilu). From thence ($7^{\circ} 34'$ south latitude approx.) the parallel as far as the thalweg of the Kama Bomba (Camabomba) or Kangulungu (Congulungu); the thalweg of the Kangulungu as far as the junction of its waters with the Loangué, and the thalweg of the Loangué as far as 7° south latitude. From the intersection of the thalweg of the Loangué and of the 7th degree, following this parallel as far as its intersection with the thalweg of the Lovua; the thalweg of the Lovua as far as $6^{\circ} 55'$ south latitude. From this point ($6^{\circ} 55'$ south latitude) the boundary shall be marked out by the parallel as far as its intersection with the thalweg of the Chikapa (Chicapa); the thalweg of this river (Chicapa) as far as $7^{\circ} 17'$ south latitude; from this point ($7^{\circ} 17'$ south latitude) the parallel as far as the thalweg of the Kassai (Cassai).

V

ART. I OF THE TREATY BETWEEN GREAT BRITAIN AND THE CONGO STATE, MAY 12, 1894

(a) It is agreed that the sphere of influence of the Independent Congo State shall be limited to the north of the German sphere in East Africa by a frontier following the 30th

meridian east of Greenwich up to its intersection by the watershed between the Nile and the Congo, and thence following this watershed in a northerly and north-westerly direction.

(b) The frontier between the Independent Congo State and the British sphere to the north of the Zambezi shall follow a line running direct from the extremity of Cape Akalunga on Lake Tanganyika, situated at the northernmost point of Cameron Bay, at about $8^{\circ} 15'$ south latitude to the right bank of the River Luapula, where this river issues from Lake Moero. The line shall then be drawn directly to the entrance of the river into the lake, being, however, deflected towards the south of the lake so as to give the island of Kilwa to Great Britain. It shall then follow the 'thalweg' of the Luapula up to its issue from Lake Bangweolo. Thence it shall run southwards along the meridian of longitude of the point where the river leaves the lake to the watershed between the Congo and the Zambezi, which it shall follow until it reaches the Portuguese frontier.

VI

BOUNDARY AGREEMENT BETWEEN FRANCE AND THE CONGO FREE STATE, AUGUST 14, 1894

Art. I.—The frontier between the Congo Free State and the colony of French Congo, after following the thalweg of the Oubanghi up to the confluence of the Mbomou and the Ouelle [or Welle], shall be constituted as follows :—(1) The thalweg of the Mbomou up to its source. (2) A straight line to the watershed between the Congo and Nile basins. From this point the frontier of the Free State is constituted by the said watershed up to its intersection with longitude 30° East of Greenwich ($27^{\circ} 40'$ E., Paris).

Art. IV.—The Free State binds herself to renounce all occupation, and to exercise in the future no political influence west or north of a line thus determined :—Longitude 30° E. of Greenwich ($27^{\circ} 40'$ E., Paris), starting from its intersection of the watershed of the Congo and Nile basins, up to the point where it meets the parallel $5^{\circ} 30'$, and then along that parallel to the Nile.

VII

AGREEMENT BETWEEN FRANCE AND BELGIUM, FEBRUARY 5, 1895, REAFFIRMED DEC. 23, 1908

ART. 1. The Belgian Government recognizes that France has a right of pre-emption over its possessions on the Congo in case of their alienation by sale or exchange in whole or in part. Any exchange of territory with a foreign Power, any placing of the said territories in whole or in part in the hands of a foreign State, or of a foreign company invested with rights of sovereignty, will also give occasion to France's right of pre-emption, and will become therefore the object of preliminary negotiation between the Government of the French Republic and the Belgian Government.

ART. 2. The Belgian Government declares that there shall never be gratuitous cession of all or a portion of the said possessions.

ART. 3. The arrangements contemplated in the above articles apply to the whole of the territories of the Belgian Congo.

VIII

ART. II OF THE AGREEMENT BETWEEN THE UNITED KINGDOM AND THE CONGO STATE, MAY 9, 1906

The boundary between the Independent State of the Congo, on the one hand, and the Anglo-Egyptian Soudan on the other, starting from the point of intersection from the south of the meridian of 30° longitude east of Greenwich with the watershed between the Nile and the Congo shall follow the line of that watershed in a general north-westerly direction until it reaches the frontier between the Independent State of the Congo and the French Congo.¹

Nevertheless the strip of territory, 25 kilometres in breadth, stretching from the watershed between the Nile and the Congo up to the western shore of Lake Albert, and including the port of Mahagi, of which a lease was granted to the Independent State of the Congo by Article 2 of the agreement of May 12, 1894, shall continue in the possession of that State on the

¹ The details of this boundary and of the boundary from Sabinio where German, British, and Belgian territory meet are given in the agreement of February 3, 1915.

condition laid down in that article [i. e. 'so long as the Congo territories as an independent State or as a Belgian Colony remain under the sovereignty of His Majesty the King of the Belgians and His Majesty's successors'].

IX

CONVENTION BETWEEN BELGIUM AND GERMANY,
AUGUST 11, 1910

Du Lac Tanganika au Lac Kivu. La frontière abandonnant la ligne médiane du lac Tanganika s'infléchit pour suivre le thalweg de la branche principale occidentale du delta de la Russisi jusqu'à la pointe nord de ce delta.

Elle emprunte ensuite le thalweg de cette rivière jusqu'au point où elle sort du lac Kivu.

Aux endroits où la rivière se divise en plusieurs branches les autorités locales détermineront, aussitôt que possible, la branche principale dont le thalweg formera la frontière.

A travers le Lac Kivu. La frontière suit la ligne indiquée sur la carte I ci-jointe.¹ Cette ligne, partant de la Russisi, aboutit au nord en un point de la rive situé à égale distance de Goma (poste) et Kissegnies (boma).

Elle laisse à l'ouest notamment les îles Iwinza, Nyamaronga, Kwidjwi et Kitanga, qui appartiendront à la Belgique et à l'est les îles Kikaya, Gombo, Kumenie et Waú (Wahu), qui appartiendront à l'Allemagne.

Au Nord du Lac Kivu. La frontière suit d'abord dans la direction du nord, autant que possible, le méridien du point situé à mi-chemin entre la station belge de Goma et le boma de la station allemande de Kissegnies jusqu'à une distance de 500 mètres au sud du chemin, marqué en rouge sur la carte II ci-jointe,² allant de Goma par Bussoro-Iwuwiro-Niakawanda-Buhamba au col entre le Rukeri et le Hehu. Pour le tracé de ce méridien il y a lieu de tenir compte des établissements indigènes que cette ligne rencontrerait, de telle façon qu'ils restent, autant que possible, en territoire allemand.

À partir de ce point la frontière se détourne dans la direction du nord-est et court à une distance de 500 mètres à l'est du chemin indiqué ci-dessus jusqu'à la hauteur du parallèle de Niakawanda marqué en noir sur la carte II.

¹ Not reproduced.

² Not reproduced.

Là où le terrain permet d'adopter, pour la frontière, des points de repère naturels, la frontière pourra s'écarter jusqu'à 1,000 mètres à l'est du tronçon de chemin précité.

Ce n'est que dans le cas où l'écartement aurait pour effet de séparer des établissements indigènes du territoire allemand que l'éloignement de 500 mètres dudit chemin ne pourra en principe être dépassé.

Au nord de Niakawanda le chemin n'est indiqué sur la carte II ci-annexée que d'une façon approximative.

Il est entendu que si le chemin s'écarte plus vers l'est que ne le montre la carte, la frontière ne pourra dépasser à l'est la plus grande dépression de terrain entre les versants du Niragongo et du Karissimbi indiquée approximativement par une ligne verte sur la carte II ci-annexée.

Au nord du parallèle de la colline de Bihira, la frontière doit être tracée de manière à ce que, se détournant vers l'est et utilisant dans la mesure du possible les accidents du terrain, elle atteigne, en passant à mi-chemin environ, entre le Bihira et le Buhamba, la pointe nord du Hehu.

La section de frontière décrite ci-dessus à partir de la rive septentrionale du Kivu jusqu'au parallèle passant par le sommet septentrional du Hehu sera fixée et délimitée sur le terrain par une commission mixte d'après les principes établis plus haut.

A partir du sommet nord du Hehu, la frontière se dirige en ligne droite sur le point culminant du Karissimbi (Barthelemy-Spitze). De la pointe du Karissimbi, la frontière se dirige en ligne droite vers le sommet du Vissoké (Kishasha). De là, elle atteint le sommet principal du Sabinio en suivant la crête de la chaîne de petits cratères qui s'étend entre ces deux volcans.

Le sommet du Sabinio marque le point de contact des territoires allemand, belge et anglais. Au delà de ce point commence vers l'est la frontière anglo-allemande et vers le nord la frontière anglo-belge.

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(3) MAPS

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