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Report
on the
Administration of the Sudan
for the Year 1948

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(I)

REPORT BY THE GOVERNOR-GENERAL ON THE
ADMINISTRATION, FINANCES AND CONDITIONS
OF THE SUDAN IN 1948.

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GLOSSARY.

Asal = Honey.
Ardeb = Standard measure of capacity—198 litres.
Dar = Tribal district.
Demlig .. ..	.. = Minor Chief (Western Sudan).
Dom .. ..	.. = <i>Hyphoena thebaica</i> palm.
Dukhn .. ..	.. = Bulrush millet.
Dura .. ..	.. = Millet (<i>Sorghum vulgare</i>).
Emir .. ..	.. = Chief.
Feddan .. ..	.. = 1.038 acres.
Feki .. ..	.. = A man learned in the Koran or reputed to be so.
Fetwa .. ..	.. = Ruling by Mohammedan Law Courts.
Garad .. ..	.. = <i>Acacia arabica</i> pods used for tanning.
Gism .. ..	.. = An administrative division.
Gizzu .. ..	.. = Desert grazing.
Goz .. ..	.. = Sandy ground.
Haboob .. ..	.. = Dust-storm.
Hafir .. ..	.. = Excavation for water storage.
Harig .. ..	.. = Cultivation land cleared by burning.
Hashab .. ..	.. = Best variety of gum.
Hikr .. ..	.. = Rent for land.
Howasha .. ..	.. = A tenancy (Gezira).
Jebel .. ..	.. = Hill or mountain.
Kadi .. ..	.. = Judge, Mohammedan Law Courts.
Kantar .. ..	.. = 100 rotls.
Kantar, small (cotton)	= 100 rotls.
Kantar, large (cotton)	= 315 rotles.
Kerkedeh .. ..	.. = <i>Hibiscus sabdariffa</i> a red sorrel.
Khalwa .. ..	.. = Native village elementary vernacular school.
Khor .. ..	.. = Watercourse or nullah.
£E. .. ..	.. = £ Egyptian=100 piastres=1,000 milliemes = £1. 0s. 6½d.
Lubia .. ..	.. = <i>Dolichos lablab</i> .
Maazun .. ..	.. = Minor official, Mohammedan Law Courts.
Magdum .. ..	.. = Chief (Western Sudan).
Mamur .. ..	.. = Sudanese administrative official.
Mek .. ..	.. = Chief (Southern Sudan).
Millieme (m.m.)	.. = About a farthing.
Nazir .. ..	.. = Tribal chief.
Omda .. ..	.. = Minor chief.
Piastre .. ..	.. = About twopence-half penny.
Ret .. ..	.. = Paramount Chief (Shilluk).
Rotl .. ..	.. = 0.99 lb.
Sagia .. ..	.. = Water-wheel.
Saidi .. ..	.. = Egyptian labourer.
Samad .. ..	.. = Sudanese Overseer (Gezira).
Seluka .. ..	.. = Land flooded by the Nile.

(VIII)

GLOSSARY.—(*Contd.*)

Semn .. ..	.. = Clarified butter (ghce).
Shaduf .. ..	.. = Water-lifting device worked by man-power.
Sharia .. ..	.. = Mohammedan Law.
Shartai .. ..	.. = Chief (Western Sudan).
Shiftas .. ..	.. = Band of brigands.
Sub-Mamur .. ..	.. = Junior Sudanese administrative official.
Sunt .. ..	.. = <i>Acacia Arabica</i> .
Talh .. ..	.. = Inferior type of gum.
Ushur .. ..	.. = Ten per cent. assessment tax on crops.
Wadi .. ..	.. = Water-course.
Waqf .. ..	.. = Mohammedan Charitable Trusts.
Zarag .. ..	.. = Blue cloth worn by women.

CHAPTER 1—GENERAL.

1. The growing interest of politically conscious Sudanese in external affairs, which has been a natural and predominant feature of post-war years, and which reached a high water mark in 1947 during the discussions at Lake Success of which the Sudan itself formed a major subject, gave place in 1948 to the concentration of their attention on matters of far-reaching importance within their own country. This shortening of focus to affairs at home in no way obscured the watchfulness of all political elements, responsible and otherwise, on external developments real or imagined; but on the whole these took second place to their intense solicitude for internal developments which culminated in the final session of the Advisory Council for the Northern Sudan and the promulgation of the Executive Council and Legislative Assembly Ordinance in June, 1948. Following on the promulgation, all energies were directed to preparations for the elections and their subsequent implementation. At the same time an impressive new edifice was erected in the brief space of a few months, and although it is regarded as the temporary home for the Legislative Assembly yet its external and internal appearance, its position and not the least its acoustics and amenities are a credit to all concerned in the work.

2. The Legislative Assembly was officially opened on 23rd December 1948, and the work of its first session falls outside the period now under review. As a result of the same Ordinance, the old Governor-General's Council established in 1910, held its last meeting on 19th December, 1948, and the new Executive Council, comprising, under the chairmanship of the Governor-General, twelve members of whom six (the Leader of the Assembly, also Minister of Agriculture, the Ministers of Education and Health, the Under-Secretaries for Economics and Trade and Irrigation, and one Councillor without portfolio) were Sudanese, held its opening meeting on 22nd December, 1948.

3. The developments leading up to the effective establishment of the Executive Council and the Legislative Assembly were naturally accompanied by reactions of the politically conscious in accordance with their sectarian or party allegiance, varying between whole-hearted support, mild approbation, reserve, suspicion and frank disapproval. In fact the proposed and actual creation of the Legislative Assembly was the backcloth against which all sectarian and party deliberations and activities were played out for the greater part of the year. In March the graduates' congress announced their intention of boycotting the Assembly and this attitude was maintained by the group known as the unity parties. The same period saw the coalescence of these unity parties and also the formation of the Internal Struggle Front, the Youths' Conference, and the Black Block. With the emergence of these new and rival coalitions, political tension in the urban areas rose steadily and, as recorded later in this report, erupted at the end of the year in a series of demonstrations which achieved no more than

providing an opportunity for hooligan elements to indulge in bouts of gangsterism entirely unconnected with any political issues. Happily by the end of the year responsible public opinion had veered strongly against such acts of lawlessness, an attitude reflected by the not inconsiderable body of neutral or disinterested citizens who owed no particular allegiance.

4. Alongside this political activity the awakening of self organised labour, noted in the previous year, further manifested itself, and its leaders regrettably permitted such justified case as they had to be infected and confused with politics. In the result the individual often showed little clear idea either of the merits of his case or of the issues involved ; a short strike of railwaymen in January was of negligible consequence but a much longer stoppage in March and April aroused much interest both sympathetic and censorious, and caused no little financial loss and dislocation to the government, to trade and the private citizen. This strike was called in spite of the fact that a special independent committee was already considering the grievances. After a stoppage of 33 days work was resumed on the publication of the committee's recommendations which included substantial increases for lower paid categories and modified increases for certain other grades. Concurrently with these manifestations, modern legislation covering labour and trade unions was being worked out and five ordinances were enacted during the year, namely the Employers and Employed Persons Ordinance, the Trade Unions Ordinance, the Trade Unions(Registration) Regulations, the Trade Disputes (Arbitration and Enquiry) Ordinance, and the Workmen's Compensation Ordinance. A sixth, the Factories Ordinance, was under preparation. Much is owed to Messrs. R. Brown and E. F. Smith of the Ministry of Labour and National Service in the United Kingdom, who visited the Sudan to advise in the drafting of this legislation. At the same time the Labour Section of the Civil Secretary's Office was expanded and a Commissioner, Assistant Commissioner and Inspector of Labour, and a Factory Inspector were appointed.

5. Economic conditions were generally good but the predominant position of cotton in the country's economy was even more marked than usual. The cotton crops were sold at roughly double the prices received in the previous year and, although production was below average, cotton and cotton seed accounted for nearly 80 per cent of the total value of all exports. One of the results was increased inflationary pressure. The dura crop was only average and in the first nine months of the year prices rose considerably. Though falling sharply in the last quarter with the prospects of a good harvest, they remained at a higher level than at the end of 1947.

6. Gum exports rose to a new record figure of 34,000 tons and, although prices fell, the total value was higher than in 1947. There were only small changes in both internal sales and exports of cattle, while camel exports were again estimated at not less than £E. 1,000,000.

7. Total exports and re-exports reached the record figure of £E. 24,500,000 compared with £E. 15,500,000 in 1947, cotton being almost solely responsible for the increase. Imports rose to £E. 22,000,000

compared with £E. 16,250,000 in 1947, the result of increased prices and of increased volume, notably of sugar and cotton piece goods. After taking into account camel and certain other exports not included above and the deficit on invisible items, it was estimated that the balance of payments was favourable to the extent of about £E. 500,000. Invisible imports included the debt services, remittances and pensions; invisible exports the interest on foreign investments, services to foreign ships and aircraft and British and Egyptian Government expenditure in the Sudan.

8. The prices of exports continued to rise faster than those of imports. The terms of trade thus shifted more in the Sudan's favour but as the year closed it did not appear that they would necessarily continue to be so favourable.

9. One of the principal factors giving rise to increases in the cost of living was the greatly enhanced income of cotton cultivators. But the inflationary tendency became fairly general and to lessen pressure on prices various measures were taken. The export duty on raw cotton and cotton seed was raised to 5 per cent, various new royalties were imposed, the payments to Gezira tenants of proceeds of sales was spread over a longer period, government expenditure was deferred where possible, and imports under the licensing programme were increased. The incidental effect of most of these deflationary measures was to increase government revenue and thus augment the budget surplus.

10. The 1948 budget showed a prospective surplus of £E. 28,891, after providing for appropriations of £E. 750,000 to the Cotton Equalisation Account and £E. 500,000 to the Development Account. The actual results proved to be much more favourable, largely because of the substantial increase in the price of cotton, making it possible to increase the appropriations to the Cotton Equalisation Account and Development Account to £E. 2,952,980 and £E. 1,000,000 respectively, and still leave a surplus of £E. 1,461,994 available for transfer to the General Reserve.

11. Public Health was again satisfactory and there was no serious epidemic. An increase in the number of smallpox cases occurred but extensive vaccination and control measures were carried out with the desired effect. Happily there was no recrudescence of cholera in Egypt.

12. In the educational field the main pre-occupation was the implementation of the programme of expansion. Measures to permit more rapid advance at the elementary and intermediate levels and in girls' education were prepared, as also plans for technical education including the establishment of pre-apprenticeship schools and a Technical Institute. The building programme proceeded apace and among the many works completed or in progress were the new secondary school at Khor Taggat near El Obeid, which was due to be opened in January, 1950, and the first secondary school in the southern provinces at Rumbek. The total strength of the Gordon Memorial College was 258 at the end of the year, compared with 194 in 1947. Much was done during the year towards consolidating the College's connection with

London University. Approaches were also made to the British Universities with a view to clarifying the status of various College diplomas, and the path was substantially eased for diplomates taking graduate courses in the United Kingdom.

13. Of the total classified staff in the civil service British personnel accounted for 10.8 per cent, Egyptians for 3.19 per cent and other non-Sudanese for 0.21 per cent. Sudanese employed in classified posts increased by 591 from 6,718 to 7,309 and now form 85.8 per cent of the total as compared with 50.9 per cent in 1930 and 36.8 per cent in 1920. There were 695 entrants for the civil service examination, compared with 359 in 1947. Of the candidates 41.3 per cent obtained the qualifying mark in the written part of the examination compared with 63 per cent in 1947. During 1948 a total of 858 Sudanese entered government service in a clerical or similar capacity.

14. I have to record the retirement of the following valued officials from government service.

15. Mr. F. D. Kingdon, M. C., joined the Political Service in 1920. His early service was in the White Nile Province and Bahr el Ghazal Province, where he acted as Political Officer to one of the Nuer patrols after Captain Ferguson's murder in 1927. He then served in the Blue Nile and Kordofan Provinces before taking over the duties of Deputy Governor in the latter province in 1938. In 1945 he became Governor Upper Nile Province, a post which he held until his retirement.

16. Mr. G. R. F. Bredin, C. B. E., joined the Political Service in 1921. After early service in the White Nile Province, Kordofan Province, the Secretariat and Darfur Province, he was appointed Assistant Civil Secretary in 1931. In 1933 he went to Kordofan Province as Deputy Governor, and towards the end of 1935 became Deputy Governor in Blue Nile Province. Shortly after the outbreak of war in 1939, Mr. Bredin was promoted to the status of Governor and became Deputy Civil Secretary. He remained in this post until 1941 when he returned to the Blue Nile Province as Governor, and retained that post until his retirement. The Blue Nile Province contains the concession area of the cotton companies and is also one of the largest food producing districts in the country. It was an essential during the war that the output both of cotton and food should be maintained and increased and it was largely due to Mr. Bredin's successful leadership that this object was achieved in the face of a host of difficulties. Under his guidance great advances were made in Blue Nile Province in the sphere of local government and of education: in the latter connection he was also Chairman of the Gordon Memorial College Council.

17. Mr. C. B. Tracey joined the Political Service in 1922. He was posted to Khartoum Province, and after further service in the Upper Nile and Blue Nile Provinces, returned to Khartoum, first on secondment to the Department of Economics and Trade where he acted as Secretary for Economic Development and then for six years on the administrative Staff of Khartoum Province. After a short spell in Equatoria Province, he was promoted to Deputy Governor in 1940 and went to the Blue

Nile Province. He became Governor of Northern Province in 1944, and remained there until his retirement. As Governor of Northern Province, his keen interest in local government, particularly in its financial aspect, and in economic plans for development, led to notable advances in both these spheres.

18. Mr. B. V. Marwood joined the Political Service in 1923 and was first posted to White Nile Province and then to Mongalla Province. After duty in the Finance Department from 1930 to 1933, during the period of retrenchment, he served for a short period in Northern Province, followed by four years in Upper Nile Province. In 1938 he became Deputy Governor in Kassala Province and transferred to Equatoria a year later, becoming Governor of that province in 1945 and remaining there until his retirement. Sixteen years of Mr. Marwood's twenty-five years' service were spent in the southern Sudan. As Governor and Deputy Governor of Equatoria Province he was responsible for many advances, and, before he left, was intimately concerned in the start of an ambitious scheme of social and economic development in the Zande area.

19. In December came the final retirement of Mr. N. Fearon of the Sudan Agency in London. After forty years service under the Egyptian Government and the Sudan Government he retired from the post of Chief Inspecting Engineer in the London Agency in 1946, but for a further two years he continued to serve as Advisory Engineer.

CHAPTER II—FRONTIERS

20. As a result of the serious cholera epidemic in Egypt during the preceding year a rigorous quarantine control was maintained on the Sudan-Egypt border until February, when it was relaxed. No serious smuggling of goods and animals on this border was detected during the year.

21. Conditions on the Ethiopian frontier of Kassala Province remained peaceful, save for small clashes with poachers. Smuggling of grain and sesame from the Sudan in this area, however, continued, owing to the value of these commodities in Eritrea. Many seizures were made but the principals in this trade remained undetected. On the Upper Nile Province frontier with Ethiopia the position continued to be uneasy, and details of events in this area will be found in a later paragraph.

22. The Eritrean frontier remained undisturbed until August when a well-known Eritrean brigand moved out of his hiding place in northern Ethiopia. One Sudanese Hadendowa was killed and cattle were lifted before joint patrols restored the situation. Final payments of compensation arising from the Hadendowa (Sudan)—Beni Amer (Eritrea) fighting of 1943-45 were completed in February.

23. Relations with the Belgian Congo and French Equatorial Africa remained cordial, and personal contacts between neighbouring administrative officers were maintained. On the northern frontier of Darfur Province with French Equatorial Africa minor incidents and smuggling occurred which necessitated patrol intervention by the French administration, but these were later able to be withdrawn.

24. In south-eastern Equatoria Province the long peace between the Toposa and Turkana on the Kenya border was rudely broken by a Turkana night raid on a Toposa camp in which six Toposa boys were killed. Action to forestall expected reprisals failed to prevent the Toposa from killing five Turkana. Six Toposa were tried and convicted. At a subsequent joint meeting at Kapoeta agreement between the antagonists was reached.

CHAPTER III—PUBLIC SECURITY

Police.

25. The handling of the various problems which arose during 1948 reflects credit on the officers and other ranks of the police force and efficiency remained high. Although on more than one occasion police came into direct conflict with the more unruly elements of the public, they retained the respect and goodwill of all the more responsible and thinking members of the Community.

26. The establishment of police officers at the end of the year was 104 including 89 Sudanese, and actual strength was one below establishment. The other ranks establishment was 1,262 non-commissioned officers and 4,860 men, an increase of 70 non-commissioned officers and 110 men over the previous year. This was due to the abolition of 203 emergency police, 180 of whom were transferred to the regular establishment. Strength was up to establishment except in Khartoum and Kassala Provinces, where recruiting did not fill vacancies.

27. Both the officers and the other ranks received increased rates of pay during the year. Officers were taken out of the normal scales and are now paid by rank as in other police forces.

28. The Law Instructors Courses and the Drill Instructors Courses were held as usual. The percentage of passes was high on both courses.

29. In 1948 training of cadets to be police officers was undertaken separately from the training of administrative cadets. Six police officer cadets were accepted into the training school, three being students from the Gordon Memorial College with diplomas from the School of Arts, and the other three serving officials. The standard set in the final examination was high, and all cadets passed successfully, the highest percentage of marks being 85.2 and the lowest 73. A Police Inspector from British Somaliland attended the course. Twelve administrative cadets were instructed in police subjects at the school.

Detailed proposals have been submitted to extend the cadets' course to two years and to place all cadets on a common rate of pay. A booklet "The Sudan Police Officers' Training School," giving conditions of entry and service was written and published during the year.

30. Public security was in general satisfactory. Crimes of violence showed no appreciable increase. The total number of murders reported was slightly lower than in 1947. Gedaref District was still the worst area for all offences under the heading of crimes of violence. Robbery and brigandage showed a slight increase over 1947, but the total was not serious. The small number of cases in which firearms were used gave cause for satisfaction, and it is worthy of note that no case in which firearms were used was reported in Omdurman throughout the year, and only three in Khartoum and Khartoum North combined.

The number of offences in which cutting weapons were used was still high, although slightly less than in 1947.

31. In spite of conflicting political emotions and labour unrest cases of civil disturbance were few, and, except for one at Port Sudan, were not of a serious nature.

32. Steps were taken to reorganise the finger print bureau to facilitate searching and to destroy much unwanted material which had accumulated since its inception in 1902. The total number of all classes of fiches, finger searches, and finger prints recorded during the year was 41,500. The total number of record slips filed was 222,211, an increase of 13,692 on the 1947 total.

Passports and Permits Section.

33. There was a general all round increase in travel during 1948, and the only form of travel which decreased was transit by surface route.

Aliens registered in the Sudan increased by 153, owing to the registration of a number of persons who were already resident in the country, particularly Yemanis and Higazis. The Indian population increased by 4 persons, to a total of 347.

34. Migration as compared with 1947 was as follows :—

		1947	1948
(a) Other than by air :			
Entered the Sudan	.. ..	20,590	25,935
Left the Sudan	.. ..	18,505	28,096
Transit	.. ..	29,190	3,908
(b) By air :			
Entered the Sudan	.. ..	2,581	3,456
Left the Sudan	.. ..	2,584	2,530
Transit	.. ..	35,090	85,151

The interesting point disclosed by these figures is that while the total number of persons travelling by means other than air decreased by 10,346 the number travelling by air increased by 50,882. This was

caused to a great extent by the movement of displaced persons from Europe by air southwards, and by the use of aircraft by pilgrims going to Mecca. Overall pilgrim traffic decreased by 1,000 compared with 1947.

Prisons

35. New Prisons Regulations were gazetted under the title The Prisons Regulations 1948. These Regulations reflect progress made in the penal system and, in general, lay emphasis on reformatory treatment without undue weakening of the deterrent aspect of imprisonment. Among the more notable changes are specific recognition of the detention camp and of the guarantee system ; an increase in remission which can be earned by good behaviour together with recognition of a right to this remission unless it has been forfeited specifically for misconduct during the prison sentence ; the introduction of earning schemes as of right.

36. An increase in the number and extent of detention camps has been encouraged both to relieve congestion within prison walls and because this kind of detention has been proved to be of great value in dealing with rural first offenders without exposing them to harmful influences through enforced contact with hardened criminals. A new camp was opened at Tokruf, near Kassala, run on the same lines as the pioneer camps at Abu Quta in the Gezira and Ban Gedid in Kordofan, both of which had successful seasons. Other satellite camps in Kordofan were maintained, and also a camp in Darfur.

37. Prison workshops and industries were developed along new and experimental lines as well as along those of proved value both in the central prisons and in the provinces.

38. Discipline was generally satisfactory in all prisons. Health remained good and there were no major epidemics.

39. Juveniles continued to be given reformatory training and schooling in the two reformatories of Khartoum North and Wad Medani the latter also accepting a quota of boy prisoners. A new boys' prison camp was opened experimentally near El Obeid.

CHAPTER IV—LOCAL GOVERNMENT

General

40. With the setting up of the Legislative Assembly the Sudan Administration Conference ceased to exist before it considered the report of its sub-committee on Local Government. The work of this sub-committee was, however, carried on by the Local Government Advisory Board. This Board held three meetings during the year. All matters of policy were referred to it, and its advice was accepted on all occasions by the government.

One of its recommendations was that an expert from England should be commissioned to undertake an enquiry into the present policy

and practice in local government and to make recommendations. For this the government were able to commission Dr. A. H. Marshall, the City Treasurer of Coventry.

41. The Board also approved the model form of warrant or charter for the constitution of councils.

42. At the beginning of the year there were 18 warranted councils, and 28 local administrations with independent budgets but no warrants. The budgets of the 45 units balanced at £E. 1,059,405 compared with £E. 963,552 for 44 units in 1947. This allowed for expenditure at £E. 719,927, contributions from the rural areas to central revenue of £E. 249,395, and a surplus of £E. 90,083 creditable to the reserve funds of the local units.

43. The recommendation of the Local Government Advisory Board that the English structure of major and minor authorities should be followed and the approval shortly afterwards of a model warrant enabled 24 new councils to be properly constituted during the year

Municipalities, district councils and the all-purpose rural district councils are considered as major authorities: town, urban and rural councils as minor authorities. The distribution by provinces at the end of the year is given in the table below:—

	Blue Nile Province.	Darfur Province.	Kassala Province	Khartoum Province	Kordofan Province	Northern Province	Upper Nile Province	Bahr-el Ghazal Province	Equatoria Province	Total.
Rural District Council ...	1	1	—	1	2	2	—	—	—	7
District Council ...	1	2	2	—	3	3	—	1	—	12
Municipal Council ...	—	—	1	3	—	1	—	—	—	5
Town Council ...	2	1	1	—	1	4	1	—	—	10
Rural Council ...	4	—	—	—	—	—	—	—	—	4
Urban Council... ..	2	—	1	—	1	—	—	—	—	4
	10	4	5	4	7	10	1	1	—	42

In addition there were still 9 local administration units of which 3 had nearly completed their transformation into local government councils by the end of the year.

44. As forecast in 1947, an experiment was made in aiding local government by grants from the central government. In 3 councils in Darfur the grant was equivalent to 2/3rds. of the expenditure. In 2 other councils in the centre and east, the grant was calculated on a formula for each service.

45. The powers of Kassala town council were revoked because certain members, for reasons wholly unconnected with the council's work, chose to absent themselves from the meetings. The remaining members were not enough for a quorum and the council became

impotent. The district commissioner was made the local government authority, with directions to consult the rump council in an advisory capacity. The Shilluk of Upper Nile Province, having shown that they were still incapable of administering an independent budget, came once more under the direct administration of the district commissioner and their budget was cancelled. Apart from these, all units made some progress in assuming responsibility for their own affairs. As might be expected, the units where tribalism is strongest found greater difficulty in adapting themselves to government by council.

46. 13 first and second division officials of the central government were seconded to local governments, but for the rest local staff were employed.

47. Of the two principal amendments to the local government ordinances, one removed from councils the power to appoint and dismiss sheikhs of the tribal hierarchy: the other transferred the control of assemblies and processions from the councils to the police and magistrates.

Courts.

48. There were 680 courts in the north and 304 in the south compared with 546 and 293 in 1947. In most areas, a group of courts is linked together by a single warrant, which provides for appeals in three stages, from the village to the branch to the central or main court. From the main court, the appeal lies to the district commissioner. These courts heard the following numbers of cases:—

	North		South		Total	
	1947	1948	1947	1948	1947	1948
Criminal	40,296	44,041	15,302	14,046	55,598	58,087
Civil	9,693	10,254	8,681	13,613	18,374	23,867
Personal	3,526	3,352	21,240	14,908	24,766	18,260
Total	53,515	57,647	45,223	42,567	98,738	100,214

There were 70,832 convictions compared with 68,940 in 1947. Appeals in criminal cases whether to a higher court or to the district commissioner numbered 2,455 compared with 2,079 in 1947.

49. Owing to pressure of other work the inspector of native courts was only able to visit one province—Darfur. Towards the end of the year it was found possible to appoint a Sharia Kadi to inspect the work of the northern courts in respect of personal or sharia cases.

50. New warrants were issued for the Southern Nuba, Ingessana, Western Nuer and the Juba courts, and warrants were brought up to date or revised for the Baggara of Kosti, Aba Island, Hassania, Maiwerno, Shukria (Rufaa), Zalingei and Bideriya. Two special courts were convened for the trials of a chief in Bahr el Ghazal Province, and of a tribal fight case in Blue Nile Province.

CHAPTER V—JUSTICE

Judicial.

51. Summary convictions by courts established under the Code of Criminal Procedure amounted to 29,912, including 24,762 by benches of magistrates. The average figures for the previous three years were 25,176 and 20,316 respectively. Non-summary cases totalled 2,491, of which 2,047 were heard by magistrates and 444 by major and minor courts. The average figures for the previous three years were 2,172, 1,759 and 413 respectively. There were 91 convictions for murder. The death sentence was passed in 80 cases and carried out in 19. The average figures for the previous three years were 91, 78 and 31 respectively.

52. 7,201 civil suits were registered in 1948 as against an average for the previous three years of 5,530.

53. The statistics for the Court of Appeal are as follows :—

	1947	1948
Appeals	28	37
Revisions	73	67

54. Sharia statistics are as follows :—

Year	Sharia cases instituted	Applications for administration of estates	Appeals disposed of in High Court	Appeals to first class Kadis disposed of	Fees £E.
1946 ...	13,471	4,095	364	190	17,003
1947 ...	15,170	4,002	310	233	13,267
1948 ...	14,783	3,961	273	241	14,562

Circuits of the sharia Kadis were extended to Juba, Wau and Zalingei in Equatoria, Bahr-el-Ghazal and Darfur Provinces respectively.

Legislation.

55. The year was noteworthy not only for the volume of legislation but for the significance of the laws enacted. 42 ordinances and 145 legislative rules and orders compared with 26 ordinances and 103 legislative rules and orders for 1947.

The Executive Council and Legislative Assembly Ordinance gave practical effect to the policy of closer association of Sudanese with the government of the Sudan. The Trade Unions Ordinance, the Regulation

of Trade Disputes Ordinance, the Trade Disputes (Arbitration and Enquiry) Ordinance and the Workmen's Compensation Ordinance provided the basis for a code of labour legislation on approved modern principles.

The following ordinances were passed and published in the Sudan Government Gazette during the year :—

The Local Government (Municipalities) (Amendment) Ordinance, 1948.

The Local Government (Townships) (Amendment) Ordinance, 1948.

The Local Government (Rural Areas) (Amendment) Ordinance 1948.

The Penal Code and the Code of Criminal Procedure (Amendment) Ordinance, 1948.

The Local Government (Rural Areas) (Amendment No. 2) Ordinance, 1948.

The Code of Criminal Procedure (Amendment) Ordinance, 1948.

The Passports and Permits (Amendment) Ordinance, 1948.

The Local Government (Rural Areas) (Amendment No. 3) Ordinance, 1948.

The Executive Council and Legislative Assembly Ordinance, 1948.

The Penal Code and Code of Criminal Procedure (Amendment No. 2) Ordinance, 1948.

The Penal Code and Code of Criminal Procedure (Amendment No. 3) Ordinance, 1948.

The Advocates (Amendment) Ordinance, 1948.

The Economic (Transitional Controls) Amendment Ordinance, 1948.

The Arms, Ammunition and Explosives (Amendment) Ordinance, 1948.

The Local Government (Municipalities) (Amendment No. 2) Ordinance, 1948.

The Local Government (Townships) (Amendment No.2) Ordinance, 1948.

The Definition of " Sudanese " Ordinance, 1948.

The Economic (Transitional Controls) (Amendment No.2) Ordinance, 1948.

The Provincial Forests (Amendment) Ordinance, 1948.

The Local Government (Municipalities) (Amendment No. 3) Ordinance, 1948.

The Local Government (Townships) (Amendment No.3) Ordinance, 1948.

The Code of Criminal Procedure (Amendment No.2) Ordinance, 1948.

The Quarantine (Amendment) Ordinance, 1948.

The Trade Unions Ordinance, 1948.

The Regulation of Trade Disputes Ordinance, 1948.

The Trade Disputes (Arbitration and Enquiry) Ordinance, 1948.

The Rabies Ordinance, 1948.

The Press (Amendment) Ordinance, 1948.

The Co-operative Societies Ordinance, 1948.

The Employers and Employed Persons Ordinance, 1948.

The Arms, Ammunition and Explosives (Amendment No.2) Ordinance, 1948.

The Passports and Permits (Amendment No.2) Ordinance, 1948.

The Workmen's Compensation Ordinance, 1948.

The Sudan Government Pension Ordinance 1919 (Amendment) Ordinance, 1948.

The Sudan Government Provident Fund Ordinance, 1930 (Amendment) Ordinance, 1948.

The Sudan Government Pension Ordinance 1904 (Amendment) Ordinance, 1948.

The Traders' Licence and Taxation of Business Profits (Amendment) Ordinance, 1948.

The Local Taxation (Amendment) Ordinance, 1948.

The Sudan Government Pension Ordinance 1919 (Amendment No.2) Ordinance, 1948.

The Employers and Employed Persons (Amendment) Ordinance, 1948.

The Sudan Government Pension Ordinance 1904 (Amendment No.2) Ordinance, 1948.

The Sudan Government Pension Ordinance 1919 (Amendment No.3) Ordinance, 1948.

Lands.

56. The application of the Town Lands Scheme 1947 which standardised terms of disposal of government owned land in towns was extended to Rufaa and Tendelti. A similar standard scheme for disposal

modified to suit villages and small towns was introduced. This Village Lands Scheme 1948 was applied to a number of places particularly in Blue Nile and Northern Provinces.

57. Town planning made continued progress and the town planner, the commissioner of lands and the central town planning board were responsible for formulating many improvements in the larger towns.

58. It was not found possible to introduce a new mining ordinance nor to have a geological survey of possible productive sites and without the information which would result therefrom, consideration of disposal of mineral rights was hampered.

59. Demand for agricultural leases decreased as the refusal of licences for pump schemes necessitated by the limitation of water became generally known.

60. There remained only a few hirings matters outstanding.

Administrator General's Office.

61. No petitions in bankruptcy were submitted during the year.

62. There were 43 new estates under administration during the year, and in addition enquiries and investigations were undertaken in 41 miscellaneous matters of which 24 actually required official administration.

63. There were 42 trust estates at the beginning of the year vested in the public trustee and a further four were accepted and formally vested during the year. Four trusts were discharged, of which three were on beneficiaries attaining majority and one by exhaustion of the fund in contributions to the beneficiary's maintenance. Investment of trust funds were confined as usual to loans on mortgage and deposits in the Post Office Savings Banks. 28 applications for loans on mortgage were received compared with 62 in 1947; of the 28, 22 were approved. The decrease in the number of applications was due to knowledge by the prospective borrowers that insufficient funds were available.

Custodian of Enemy Property.

64. During the year the court was moved to revoke five vesting orders for French nationals. As a result of an interview with the French Government's representative, all outstanding French accounts were cleared. The decision not to allow interest on the French accounts resulted at the end of the year in action to transfer interest earned, less fees due, to central government funds. German and other enemy funds continued to be held. Claims resulting from Italian invasion were still under correspondence.

Registration.

65. The following table shows the number of deeds registered and amount of fees collected under the Land Settlement and Registration Ordinance, 1925, during the last four years :—

Year	Town lands		Agricultural lands		TOTALS	
	Deeds	Fees	Deeds	Fees	Deeds	Fees
		£E.		£E.		£E.
1945	4,369	15,476	6,516	2,115	10,885	17,591
1946	4,214	16,279	5,471	3,112	9,685	19,391
1947	4,121	14,838	4,766	2,132	8,887	16,970
1948	4,352	18,749	6,104	2,245	10,456	20,995

66. Fourteen new companies incorporated in the Sudan were registered (11 private and 3 public) compared with eight in 1947. Two foreign (United Kingdom) companies were registered for carrying on business in the Sudan. One Sudan company ceased to carry on business in the Sudan. The statutory returns required to be registered under the ordinance were regularly rendered for filing.

67. Trade marks statistics were as follows :

Applications received	..	..	..	187
Applications still under consideration	..	..	..	6
Marks placed on the Register	..	..	..	158
Applications Cancelled	..	..	..	1
Assignment of marks recorded	..	..	..	10
Marks removed	..	..	..	2
Marks withdrawn after publication	..	..	..	3

68. 51 partnerships were registered and 15 were dissolved. The number of partnerships on the four registers was :—

Khartoum	..	..	292
Wad Medani	..	..	23
El Obeid	..	..	45
Port Sudan	..	..	60

69. 77 firms and individuals were registered under the Registration of Business Names Ordinance, 1931, whilst in 18 cases notice of cessation of business was given. The number recorded on the register was 758.

70. The total amount of fees collected in respect of the four registries detailed above was £E. 3,530 compared with £E. 3,329 in 1947.

71. 575 marriages were registered under the Non-Mohammedan Marriages Ordinance, 1926. Seven special marriage licences were granted as against six in 1947.

72. According to the returns rendered by the registrars and district registrars the following table shows the number of births, still-births and deaths registered during the last two years ;—

Year	Births	Still-births	Deaths
1947	34,864	832	13,874
1948	37,425	819	15,073

The total number of certificates issued for births and deaths was 7,849 as against 8,087 in 1947. Fees amounting to £E. 1,452 as compared with £E. 1,327 in 1947 were collected.

CHAPTER VI FINANCE.

Financial Results, 1948

73. In the 1948 budget estimates revenue was put at £E. 11,293,531 and expenditure at £E. 10,014,640. Of the surplus of £E. 1,278,891, £E. 750,000 was appropriated to the Cotton Equalisation Account and £E. 500,000 to the Development Account, leaving an unallotted balance of £E. 28,891. In the event, revenue amounted to £E. 15,735,326 and expenditure to £E. 10,320,352, final appropriations of the surplus of £E. 5,414,974 being £E. 2,952,980 to the Cotton Equalisation Account, £E. 1,000,000 to the Development Account and £E. 1,461,994 to the General Reserve Account.

74. Appendix 1, Table 1, sets out in detail the financial results of the year together with comparative figures for the last seven years. The revenue and expenditure figures were the highest yet recorded, being 311 per cent. and 211 per cent. of the 1939 corresponding figures.

Revenue.

75. The year's results are compared in the following table with the estimates and the corresponding figures for 1947 :—

	1947 Results	1948 Estimates	1948 Results	Excess of Results over Estimates for 1948
	£E.	£E.	£E.	£E.
Provinces	807,938	811,925	860,062	48,137
Departments	4,825,005	5,343,279	6,595,322	1,252,043
General Central (1)				
Services	1,829,756	1,716,262	2,652,864	936,602
Sudan Railways	450,000	400,000	400,000	—
Irrigation Department...	2,728,796	3,022,065	5,227,078	2,205,013
	10,641,495	11,293,531	15,735,326	4,441,795

(1) Excluding Sndan Railways' contribution shown separately.

76. Of the provinces, Kordofan alone showed a revenue shortfall as a result of a deficit in the contributions from local authorities. Nevertheless the total provincial revenue was £E. 48,137 in excess of the budget estimate as a result mainly of increases on motor licences, receipts from local authorities and rent from government properties.

77. The customs department showed an excess of £E. 1,206,342 over estimated revenue, owing to increased export duties, a substantial rise in the proceeds of sugar import duties and the adjustment of import and export duties on trade with Egypt : on the other hand, consumption duty produced less than estimated. The Ministry of Agriculture revenue exceeded the estimate by £E. 117,171, the result mainly of a marked increase in the government share of the net proceeds of the Gash and Tokar cotton crops, commission on cotton sales and miscellaneous receipts. Shortfalls arose on receipts from ginning factories mainly owing to the closing down of the Sennar oil mill and a reduction in sales of firewood and pole timber. In the legal department, the only other department to show an excess over estimates, abnormal receipts from registration and court fees were almost wholly responsible for the increase of £E. 31,454.

78. There was a substantial excess on revenue under General Central Services. Higher sales of sugar at higher prices produced an excess of £E. 523,730. The miscellany of minor sources of revenue under " Other Items " also showed a considerable increase amounting to £E. 186,433. Other excesses of £E. 28,980 and £E. 48,945 accrued from interest received and business profits tax respectively.

Expenditure.

79. The results for 1947 and 1948 are compared below—

	1947 Results	1948 Estimates	1948 Results	1948 Results compared with Estimates
	£E.	£E.	£E.	£E.
Provinces	1,466,763	1,610,850	1,739,108	+ 128,258
Departments	4,616,222	5,349,731	5,688,485	+ 338,754
General Central Services	1,174,895	1,343,029	1,328,644	— 14,385
Irrigation Department...	855,843	911,030	918,832	+ 7,802
Sudan Defence Force ...	320,944	800,000	645,283	— 154,717
	8,934,667	10,014,640	10,320,352	+ 305,712

Analysed by budgetary chapters, the expenditure was as follows :—

	1947 Expenditure	1948 Estimates	1948 Expenditure	1948 Results compared with Esti- mates
	£E.	£E.	£E.	£E.
Personnel	3,722,239	4,111,365	4,480,845	+ 369,480
Services	4,851,703	5,272,972	5,310,299	+ 37,327
Extraordinary expendi- ture... ..	360,725	630,303	529,208	— 101,095
	8,934,667	10,014,640	10,320,352	+ 305,712

80. Expenditure exceeded the estimates by £E. 305,712. The principal reasons for increased expenditure were—the assumption by the government of full financial responsibility for the Sudan Defence Force as from 31st. March, 1948 (Stores and Ordnance expenditure increased by £E. 119,856 and Mechanical Transport by £E. 131,070 as a result); the increase in cost of living allowances; the charging off of payments under adjustment representing unallocated budgetary expenditure of £E. 124,636 to General Central Services, and general overspending by the Sudan Medical Service. These were partially offset by savings resulting from the reintroduction of the free service system to the Sudan Defence Force (£E. 154,717) and the closing of the Sennar oil mill (£E. 94,004).

Reorganisation of Reserves.

81. A reorganisation of reserves was made as at the end of the year with the object of setting out more clearly the government's financial position. Among the main features of this reorganisation was a reserve for working capital and non-realizable assets, set up with the object of ensuring that the general reserve account would represent current assets at the free disposal of the government. Moreover the balance outstanding in the cotton equalisation reserve account was transferred to the general reserve account as the former also represented resources at the free disposal of the government. A reserve was also established to cover the capital required for the new Gezira administration to take over on 1st. July, 1950, the management of the Gezira scheme from the Sudan Plantations Syndicate and the Kassala Cotton Company.

Current Assets.

82. The position as at 31st. December, 1948, compared with that of 31st. December, 1947, was as follows ;—

	Balances at 31st Dec.		Increase (+) or Decrease (—)
	1947	1948	
	£E.	£E.	£E.
Cash	1,435,189	1,349,218	— 85,971
Marketable securities	9,600,223	10,990,246	+ 1,390,023
Accounts receivable	1,245,406	1,750,628	+ 505,222
Stocks on hand	5,162,133	7,959,030	+ 2,796,897
Loans and investments	817,691	1,145,235	+ 327,544
Payments under adjustment	109,895	89,721	— 20,174
	18,370,537	23,284,078	+ 4,913,541
REPRESENTING			
Current liabilities and commitments	3,797,102	4,156,774	+ 359,672
Reserve for working capital and non-realizable assets	—	6,000,000	+ 6,000,000
General reserve account	3,258,919	281,113	— 2,977,806
General development account	1,899,622	2,408,524	+ 508,902
Price stabilisation reserve account	3,050,213	1,590,659	— 1,459,554
Cotton equalisation account	1,000,000	—	— 1,000,000
Gezira reserve account	—	3,500,000	+ 3,500,000
Sudan Railways capital and renewals account	4,744,907	4,709,722	— 35,185
Provident funds	464,927	519,730	+ 54,803
Miscellaneous reserves	154,847	117,556	— 37,291
	18,370,537	23,284,078	+ 4,913,541

NOTE: In the above table, the Jebel Aulia Compensation Fund, which is separately invested, has been excluded.

General Reserve Account.

83. Details of the transactions in this account are given in Appendix II. They include the entries necessary to give effect to the reorganisation of the reserves which has already been described.

Price Stabilisation Reserve Account.

84. This account is credited with any financial surpluses accruing from the re-sale abroad of Sudan produce through government channels, any local surpluses resulting from controlled distribution within the Sudan, and any margins between Equatoria export values and prices obtained in the northern Sudan. The fund so accruing is to be utilised for internal price stabilisation and to promote the material development of the Sudan and the welfare of its people. The balance brought forward from 1947 was £E. 3,050,213. Credits during the year amounted to £E. 83,602. Debits totalled £E. 1,543,156, the main items being a transfer of £E. 1,000,000 to the General Development Account and subsidies amounting to £E. 391,090 on cotton piece goods. The balance of the account at 31st. December, 1948, was £E. 1,590,659.

General Development Account.

85. This account was inaugurated to finance the government's five-year development plan. The total credits to it up to 31st. December, 1948, were £E. 6,930,500 of which those made in 1948 were a contribution of £E. 1,000,000 from the main budget, £E. 1,000,000 from the Price Stabilisation Reserve Account and £E. 487,500 received from the British Government being the third instalment of the grant-in-aid of two million pounds sterling.

Expenditure charged to the account through the development budgets 1945/46 to 1948/49 amounted to £E. 4,521,976, of which £E. 1,978,598 was charged in 1948, leaving a balance at the end of the year of £E. 2,408,524.

Loans.

86. A summary of the position is given in Appendix III.

Cotton Growing.

(a) *General.*

87. With the exception of a small quantity sold to India the 1947/48 crop was sold to the British Government at prices approximately double those of the previous season.

The kantars mentioned in the following paragraphs are of 315 rotls (=312 lbs).

(b) *Gezira Irrigation Scheme.*

88. The cotton crop was below average, but this was more than compensated by higher prices. The following table gives details of the crop and compares it with those of the two previous years.

	1945/46	1946/47	1947/48
Area under cotton (feddans)	196,541	206,176	206,346
Total yield of seed cotton (kantars)	660,771	811,571	700,463
Average yield per feddan	3.362	3.936	3.395
Bales of 430 lbs. lint (approx.)	170,850	201,967	174,949
Cotton seed (metric tons)	61,247	75,509	65,393
Net divisible proceeds... .. (£E.)	3,276,101	6,776,394	11,752,497
Government share in net proceeds ... (£E.)	1,067,971	2,712,241	4,700,999

(c) *Kassala Cotton Scheme (Gash).*

89. The results of the last three seasons are compared below :—

	1945/46	1946/47	1947/48
Area under cotton (feddans)	26,868	27,448	33,240
Total yield of seed cotton ... (kantars)	40,764	49,602	73,128
Average yield per feddan ... (kantars)	1,501	1,807	2,200
Bales of 430 lbs. lint ... (approx.)	10,120	11,811	17,646
Cotton seed (metric tons)	3,879	4,731	6,876
Net divisible proceeds... .. (£E.)	138,379	389,708	1,135,019
SHARES :—			
Tenants (£E.)	69,190	194,854	567,510
Government (£E.)	28,160	81,878	266,275
Gash Board (£E.)	41,029	112,976	301,234

(d) *Tokar Cotton.*

90. The Tokar crop was again satisfactory, the yield amounting to 104,911 kantars of seed cotton. The revenue accruing to the government during the year was £E. 327,540. In addition, £E. 163,770 was allocated to the Tokar cultivators' financing account.

(e) *Nuba Mountains Rain-grown Cotton.*

91. The 1947/48 season was marked by an increase to 22,717 feddans in the area sown to cotton in the Nuba Mountains. The yield was 29,676 kantars as against 2,104 kantars in the previous season. The whole crop was disposed of before the end of the year at very satisfactory prices.

In the course of the year, the financial basis of the Nuba Mountains cotton undertaking was re-organised. The shares of the cultivators and the government in the net proceeds were specified and an equalisation reserve account established. Formerly, the government purchased cotton outright from the cultivators well in advance of sales with the result that accurate assessment of the prices payable to cultivators was impossible. Any mal-assessment of cultivator prices can now be corrected by the appropriate debit or credit to the equalisation reserve account.

(f) *White Nile Schemes Board.*

92. Seed cotton produced in the 1947/48 season rose to 52,070 kantars. The following table shows the last three seasons' results in the Abdel Magid and the Fatisa, Hashaba, Um Gerr, Wad Nimr and Ed Ducim schemes.

	1945/46	1946/47	1947/48
<i>Abdel Magid :</i>			
Area under cotton (feddans)	7,888	7,864	9,985
Total yield (kantars)	23,703	23,542	30,702
Average yield per feddan ... (kantars)	3.004	2.994	3.075
Net divisible proceeds... .. (£E.)	77,273	184,573	466,175
SHARES :			
Tenants (£E.)	30,909	73,829	186,470
Government or Board (£E.)	43,690	110,744	279,705
<i>Fatisa, Hashaba, Umm Gerr, Wad Nimr and Ed Dueim.</i>			
Area under cotton (feddans)	4,660	4,657	6,093
Total yield (kantars)	11,046	12,312	21,368
Average yield per feddan ... (kantars)	2.37	2.64	3.51
Net divisible proceeds... .. (£E.)	38,216	96,979	318,810
SHARES :			
Tenants (£E.)	15,286	38,792	127,524
Government or Board (£E.)	21,172	58,187	191,286

Local Finances.

93. There was further solid progress in the development of the local government system in 1948. A new town council for Rufaa was detached from the Shukria rural administration. Five authorities were promoted to rural district council status in Blue Nile Province. A new Southern Darfur rural district council was created, absorbing Nyala Magdumate and the Rizeigat administrations, and Tokar meglis ahli, Eastern Darfur and El Fasher rural district councils were inaugurated. The Shilluk administration was re-absorbed into the Upper Nile Province budget. The number of local units with separate budgets rose to 45. Revenue estimates increased from £E. 963,552 in 1947 to £E. 1,059,405 in 1948.

The financial results for the year are compared with the estimates in the following table :—

	Estimates	Results	+ or — on Estimates
	£E.	£E.	
Rural Administrations—			
Revenue	756,997	744,170	— 12,827
Expenditure	430,379	423,154	— 7,225
	326,618	321,016	— 5,602
Contributions to General Govern- ment	249,395	229,714	— 19,681
Surplus	77,223	91,302	+ 14,079
Municipalities and Town Councils—			
Revenue	302,408	334,815	+ 32,407
Expenditure	289,548	297,268	+ 7,720
Surplus	12,860	37,547	+ 24,687

The results of individual local government units, rural and urban, are set out in Appendices IV and V.

Jebel Aulia Compensation Fund.

94. This fund was created in 1934 to meet claims resulting from the construction of the Jebel Aulia dam across the White Nile. The dam was constructed for the benefit of Egypt, and the fund was created by the lump sum payment of £E. 750,000 to the Sudan Government by the Royal Egyptian Government, the Sudan Government assuming the responsibility for all compensation. Interest on unspent balances in credited to the fund and payments from it are made on the recommendation of the compensation committee.

The following table summarises the position at the end of 1948 :—

	Expenditure.		
	To end of 1947	During 1948	Total at end of 1948
	£E.	£E.	£E.
Protection of towns and basins	94,588	—	94,588
Compensation—individual damages	327,877	3,532	331,409
Alternative Livelihood Schemes :			
Fatisa and Hashaba	118,810	—	118,810
Um Gerr	65,607	45	65,652
Wad Nimr	9,763	—	9,763
Other schemes :			
Wad Rabbah (Dueim) Canal cul- tivation	1,592	—	1,592
Ferries	2,733	—	2,733
Abu Gassaba Causoway	2,729	—	2,729
Kawa Low Lift Schemo	1,020	77	1,097
Other Items	11,895	8	11,903
	629,614	3,662	633,276

The unexpended balance of the fund as at 31st. December, 1948, was £E. 381,689.

Customs.

95. Customs revenue in 1948 was £E. 4,470,528 against £E. 2,991,940 in 1947. Collections on behalf of other departments including royalties, quay dues and revenue from the sugar monopoly totalled £E. 1,472,005 making total revenue collected by the department £E. 5,942,533 compared with £E. 3,813,533 in 1947. A considerable increase in the value of both imports and exports and new and increased import and export duties and royalties all contributed to the overall increase.

96. The following table shows details of the revenue collected :—

Item	1947	1948	Increase or Decrease on previous year.
	£E.	£E.	£E.
<i>Customs Budget.</i>			
<i>Import duties—</i>			
Tobacco	714,012	803,480	+ 89,468
Alcohol	199,293	139,548	— 59,745
General	1,475,505	2,208,602	+ 733,097
Export duties	125,822	912,603	+ 786,781
Consumption duties	459,388	388,199	— 71,189
Net surtax on re-export to Egypt	2,307	618	— 1,689
Contraventions	5,544	4,990	— 554
Miscellaneous including cost of collection of surtax	12,376	13,106	+ 730
	2,994,247	4,471,146	+ 1,476,899
<i>Deduct Surtax credited to Egypt ...</i>	2,307	618	— 1,689
	2,991,940	4,470,528	+ 1,478,588
<i>Collections on behalf of other Departments—</i>			
Royalties	339,963	466,638	+ 126,675
Rental on petroleum bonded installations	2,774	3,012	+ 238
Quay dues etc.	216,731	290,689	+ 73,958
Revenue from Sugar	262,095	711,666	+ 449,571
Total net revenue	3,813,503	5,942,533	+ 2,129,030

97. Legislation introduced during 1948 included the following :—

Customs Ordinance (Amendment of Schedule) No. 4 Order, 1947, by which export duty was raised from 1 per cent to 3 per cent ad-valorem.

Customs - Ordinance (Amendment of Schedule) Order, 1948, by which export duty on raw cotton and cotton seed was raised to 5 per cent ad-valorem.

The Royalties (Amendment) No. 2. Order, 1948, which cancelled the existing 20 per cent ad-valorem export duty on hides and substituted the specific rates of £E. 21.500 mms. per ton for air dried hides and £E. 18.500 mm. for dry salted hides. By the same order a 10 per cent ad-valorem rate on the export of dates was introduced and 20 per cent on both salted fish and maize.

The Customs Ordinance (Amendment of Schedule) No. 3. Order, 1948, which increased the ad-valorem duty on the export of raw cotton and cotton seed from 5 per cent to 10 per cent. Neither of the two last Orders affected 1948 revenue as they were designed to operate from 1949.

98. More than half of the increase in Customs revenue was derived from export duties, and this resulted partly from the raising of the general rate of export duty from 1 per cent to 3 per cent ad-valorem in January, 1948, and the further raising of that on raw cotton and cotton seed to 5 per cent in April, and partly from the fact that these rates were levied on increased money values.

The increased revenue from tobacco was attributable mainly to the increase in the rate of duty in December, 1947, from £E. 1.750 mms. per kilo to £E. 1.900 mms. per kilo. The increased revenue from general goods was due in part to the effect of a full year's operation of the general ad-valorem rate, which was raised from 10 per cent to 15 per cent in June, 1947, and in part to the increase in the total value of imports on which the rate was levied. The fall in revenue from consumption duty was the result of legislation introduced in June, 1947, by which aviation spirit and lubricants supplied to aircraft leaving for abroad became duty free.

99. Customs expenditure during 1948 was £E. 72,424 and represented 1.25 per cent of total net collections.

100. The total of import and export declarations (Customs clearances) dealt with by customs was 49,038 compared with 48,070 in 1947.

101. At Port Sudan 24,821 declarations were handled compared with 26,252 in 1947, showing that the post-war tendency for clearances to be fewer and individually larger is not weakening. About 70 per cent of total revenue was collected at this station. The number of passengers arriving at Port Sudan by sea was 2,924 compared with 4,803 in 1947, while those leaving numbered 4,268 compared with 4,604 in 1947.

102. At Wadi Halfa the number of declarations handled was 10,955 compared with 11,647 in 1947. The number of passengers travelling via Wadi Halfa by steamer decreased, 20,791 entering the Sudan and 18,981 leaving, compared with 28,325 and 22,216 respectively in 1947; but the number of air passengers passing through customs increased from 3,603 in 1947 to 6,870 in 1948. This station dealt with 437 mechanically propelled vessels and 166 sailing craft, showing little change from those of 1947—423 and 110 respectively.

103. Khartoum customs revenue showed a substantial increase over 1947 and totalled £E. 505,225 as against £E. 392,392. This was the result rather of the increased rates of duty, particularly that on tobacco, and of increased values, than of increased volume of trade. The number of postal parcels from Egypt increased slightly, but the number from other countries decreased, and the overall number showed little change.

104. At Juba, imports of coffee, tea, soap and butter from Uganda and the Belgian Congo showed substantial decreases. As a result customs revenue fell from £E. 149,887 in 1947 to £E. 128,313 in 1948.

105. At Kassala, revenue increased from £E. 16,352 in 1947 to £E. 25,683, which again reflects the 1947 increases in duties, as the number and value of clearances showed little change.

106. At Kurmuk, increased coffee imports from Ethiopia accounted largely for a rise in revenue from £E. 9,072 in 1947 to £E. 15,065 in 1948. The same reason accounted for the increase of revenue at Roseires from £E. 898 to £E. 7,063 in 1948. The revenue collected at Geneina fell from £E. 8,764 in 1947 to £E. 4,114 as a result of a considerable drop in the volume of imports, particularly of lizard and snake skins.

107. Customs clearances of aircraft flying on the main routes increased only slightly, but a greater proportion was dealt with at Khartoum, where the 1948 figure was 4,148 compared with 3,323 in 1947. The numbers at Wadi Halfa and Juba showed small decreases. The number of air passengers passing through customs was 25,153 compared with 18,655 in 1947.

108. Contraventions totalled 500 in 1948, of which 130 were smuggling cases of varying magnitude and 370 of a minor technical nature. High prices in the Arabian peninsular stimulated smuggling on the Red Sea coast and 56 convictions, mostly in the latter half of the year, were secured.

109. The British Ministry of Food increased its allocation of sugar to the Sudan from 25,000 tons to 30,000 tons, and it was agreed that additional supplies should be purchased from countries within the transferable sterling accounts area, or from Egypt. Contracts were therefore made in the second half year for the supply of 10,000 tons from Egypt, and a further 10,000 tons from European sources. The total quantity actually imported during the year amounted to 46,143 metric tons.

With these quantities in sight, the allocations to provinces were increased by 100 per cent for August, the month in which the Ramadan Bairam fell, and by 50 per cent for subsequent months. The price to the public, which had been increased by five milliemes a rotl in June, was raised by another five milliemes in August with the object of damping down the initial demand. The larger allocations were not fully taken up, and by the end of September it was possible to offer unrestricted supplies. The monthly sales to merchants in the last five months of the year averaged about 3,150 tons, an increase of about 30 per cent above the original allocations. Total sales during the year were 33,036 tons compared with 26,694 issued in 1947, and the net profit is estimated at £E 711,666 compared with £E. 262,095. There was a large carry over at the end of the year of some 20,000 tons, part of which had not yet been taken into stock.

CHAPTER VII—ECONOMICS AND TRADE.

General.

110. The procedure adopted in the report for 1947 of placing all statistical tables at the end of the chapter has been continued and a graphic summary of changes in some of the more important economic factors has also been included.

111. In all foreign trade figures imports are shown at their cost, insurance and freight value (C. I. F.) and exports and re-exports at their value free alongside ship (F. A. S.). An adjustment has been made in Tables III and IV, which are estimates of the visible balance of trade, to convert F. A. S. to F. O. B. values. Camel exports, since they do not pass through customs stations, are not accurately recorded. Estimates, however, based on sales in Egyptian markets, have been included in Tables IV and XVII, but not elsewhere.

Foreign Trade—by Value.

112. The value of imports rose from £E. 16,207,000 in 1947 to £E. 22,153,000 in 1948 (an increase of 36.7 per cent); that of exports from £E. 14,866,000 to £E. 23,665,000 (a rise of 59.1 per cent). Re-exports rose from £E. 530,000 to £E. 629,000.

The value of government imports was £E. 7,546,000 (as against £E. 2,706,000 in 1947), and private imports were £E. 14,607,000 (as against £E. 13,500,000). The great increase in government imports resulted from larger purchases of sugar, cotton piece goods (destined for public consumption), coal, machinery, and base metals (tables I and II).

Balance of Trade.

113. The Sudan's visible balance of trade with the world, if allowance is made for camel exports (not included in the above figures) and for an adjustment to convert F. A. S. to F. O. B. values, is estimated at just over £E. 5,500,000. The net debit balance on current invisible items during 1948 was higher, it is believed, than in 1947. The favourable balance of trade in 1948 (when both visible and invisible items are taken into account) is estimated at approximately £E. 3 millions. The favourable balance of trade with the world less Egypt (with both visible and invisible items included) is estimated at about £E. 2,500,000. Imports of currency are excluded from both these estimates (Tables IV and V).

Foreign Trade—By Volume.

114. Indices (1938=100) of the value and volume of foreign trade and of the prices of import and export goods are given in Table III. These show how much of the increased value of imports and exports was due to changes in volume and how much to higher prices.

The volume of imports was above the pre-war level ; that of exports was slightly below, chiefly owing to the amount of cotton exported being lower than in 1938.

Terms of Trade.

115. As the result of the very high prices obtained for cotton exports, the terms of trade moved sharply in favour of the Sudan. The index of the prices of imported goods (1938=100) averaged 331, compared with 274 in 1947 ; that of exports jumped from 313 in 1947 to 481 in 1948 (Table III refers). There are signs of a downward tendency in world prices of agricultural produce and the terms of trade are unlikely to remain so favourable to the Sudan.

Trade Routes.

116. In 1948, 76.2 per cent of the total value of imports came by the Red Sea route (as against 69.0 per cent. in 1947) ; 18.4 per cent. by the Northern Nile route (as against 24.9 per cent) ; and 5.4 per cent. by overland frontier stations (as against 6.1 per cent). Of exports and re-exports, 92.2 per cent. in 1948 went by the Red Sea route (against 88.6 per cent. in 1947) ; 6.6 per cent by northern Nile route (against 9.5 per cent) ; and 1.2 per cent by overland frontier stations (against 1.9 per cent). (Table VI).

Imports—Principal Items.

117. Substantial increases occurred in the imports of sugar (50,557 tons in 1948 as against 20,129 in 1947), of nearly all cotton piece goods, particularly " greys " (6,184 tons against 4 239 tons) ; and of wheat, rice, timber, cement and coal. Smaller increases were shown for imports of coffee, sacks, oil fuel and petrol. Owing to higher import prices, increases in the values of these goods were even more marked than the rise in quantities. Decreases, in both quantity and value, were shown in the imports of tea, motor tyres and tubes, and boots and shoes.

Exports—Principal Items.

118. Cotton and cotton seed dominated the list of exports, their combined value being no less than 77.6 per cent. of the total and contributing £E. 8,309,938 of the total of £E. 8,784,430 by which the export values exceed those of 1947. Exports of gum represented 6.7 per cent. and of animals (except camels) 1.8 per cent of the total.

By quantity (or numbers) exports of cattle, dates, melonseed (17,974 tons in 1948, against 11,318 in 1947) and gum (34,656 tons against 25,969 tons) were all higher than in the previous year. Those of fish, dura, maize, cotton (50,118 tons in 1948 against 52,589 tons in 1947), donnuts, marine products, and most pulses, were lower,

Imports and Exports—by Countries.

119. 79.2 per cent by value of all exports went to the countries comprising the Scheduled Territories and Transferable Accounts Group, as against 68.1 per cent in 1947; the principal factor in this increase was the high value of cotton exports to the United Kingdom. 13.8 per cent of exports went to Egypt and Eritrea, as against 18.0 per cent; 2.5 per cent to "dollar countries," as against 6.5 per cent; and 4.5 per cent to all other countries, as against 7.2 per cent.

In 1948, 64.0 per cent of all imports came from countries in the Scheduled Territories and Transferable Accounts Group, and 22.1 per cent from Egypt and Eritrea.

Further details of foreign trade, by country, are given in Tables XII and XIII.

Trade with the United Kingdom.

120. Imports rose from £E. 3,888,360 in 1947 to £E. 6,650,142 in 1948, a gain of 71.0 per cent. Imports of sugar of Commonwealth origin purchased in the United Kingdom rose substantially (from £E. 201,934 to £E. 625,045). Lesser, but nevertheless considerable, rises in value were shown in the imports of steam, gas and oil engines, agricultural and other machinery, electrical equipment of all kinds, motor cars and parts, textiles, ready made clothing, prepared paints, pharmaceuticals, asbestos manufactures and lubricating oils and greases (Table XIV).

Exports and re-exports increased by 146.7 per cent from £E. 6,103,548 in 1947 to £E. 14,738,298 in 1948, cotton, cotton seed and gum accounting for 97.9 per cent of the total, (Table XV).

The unadjusted favourable visible balance of trade with the United Kingdom was £E. 8,088,156 compared with £E. 2,084,851 in 1947.

Trade with Egypt.

121. Imports increased sharply from £E. 3,507,553 to £E. 4,686,772 (a rise of 33.6 per cent). Imports of rice (6.562 tons in 1948 as against 2,564 tons in 1947), sugar (11,501 tons against 236 tons), and confectionery, were all substantially higher in quantity and value. (Table XVI).

The total value of exports and re-exports, inclusive of the estimated value of camel sales in Egyptian markets, rose from £E. 4,013,375 in 1947 to £E. 4,656,840 in 1948—a gain of 16.1 per cent. In quantity, exports of dates, melonseed, hides and skins, gum and garad were higher; those of cotton seed, fish and pulses, lower. (Table XVII).

The unadjusted visible balance of trade (with camel exports included) changed from a favourable balance in 1947 of £E. 505,882 to an unfavourable balance in 1948 of £E. 28,869,

Trade with the United States.

122. Imports from America declined from £E. 735,975 in 1947 to £E. 640,645 in 1948. Imports of machinery were much higher than in the previous year, but this was more than offset by smaller purchases of cotton piece goods and, to a less extent, cars and parts, (Table XX).

Exports and re-exports were also lower, declining from £E. 957,717 to £E. 577,635. It came to light that certain overseas merchants were trafficking in Sudan produce, notably gum, with the United States, in order to be able to make irregular use of the dollar proceeds. These practices undoubtedly affected direct trade adversely. (Table XXI).

The unadjusted visible balance of trade was unfavourable to the extent of £E. 63,010 in 1948, as against a favourable balance of £E. 221,742 in the previous year.

Trade with India and Pakistan.

123. Lower imports, in value and volume, of spices, essential oils, cotton piece goods and manufactures of aluminium—which more than offset the rise in sacks and hessian—were mainly responsible for the drop in total imports from £E. 1,876,582 in 1947 to £E. 1,528,198 in 1948. (Table XVIII).

Exports and re-exports dropped from £E. 3,242,293 to £E. 2,868,450, smaller cotton shipments being largely responsible. (Table XIX).

In 1948, the unadjusted favourable visible balance of trade was £E. 1,341,252, (as against £E. 1,365,711 in 1947).

Trade with South Africa.

124. A large increase in coal shipments contributed to the rise in imports from £E. 312,887 in 1947 to £E. 418,119 in 1948. (Table XXVI). Exports and re-exports rose from £E. 19,606 to £E. 44,124. (Table XXVII).

Trade with Iran.

125. Higher imports of motor spirit and fuel oils raised total import values from £E. 676,981 to £E. 954,262. Exports to Iran were negligible. (Tables XXIV and XXV).

Trade with Ethiopia.

126. Imports were slightly lower—£E. 339,504 in 1948 as against £E. 365,875 in 1947—owing to a small decline in the quantity and value of coffee purchased. Exports and re-exports were also slightly lower, dropping from £E. 122,450 to £E. 109,128. (Tables XXVIII and XXIX).

Trade with Eritrea.

127. The value both of imports and of exports and re-exports was lower in 1948 than in 1947. (Tables XXII and XXIII).

Trade with Uganda.

128. Imports of sugar were higher than in 1947, but those of coffee were lower. Total imports rose from £E. 318,853 to £E. 355,643. Exports to Uganda were negligible. (Tables XXX and XXXI).

Trade with Kenya.

129. Details of trade with Kenya are shown in Tables XXXII and XXXIII.

Trade with Japan.

130. Owing to smaller purchases of cotton piece goods (1,709 tons in 1948 against 1,930 in 1947) imports from Japan declined from £E. 904,669 in 1947 to £E. 732,314 in 1948. Exports to Japan, which took no salt at all in 1948, only amounted to £E. 9,401. (Tables XXXIV and XXXV).

Trade with Palestine.

131. The operations in Palestine naturally interfered with trade, imports falling from £E. 27,527 in 1947 to £E. 17,659 in 1948, and exports and re-exports from £E. 605,334 to £E. 414,582. (Tables XXXVI and XXXVII)

*Domestic Production.**Cotton.*

132. The total production of all seed cottons for the season 1947/48 amounted to 1,039,959 kantars of 315 rotls, as against 1,061,595 kantars in 1946/47, and an average for the past ten seasons of 1,134,841 kantars. Of the 1947/48 season's crop approximately 94.6 per cent was sakel type cotton. Table XLIV gives comparative figures of area, production, unit yield and exports.

Cotton prices in world markets have shown divergent trends. In Alexandria, the average monthly price of spot Karnak rose from 56.40 tallaris * per kantar in December, 1947, to 90.35 tallaris in December, 1948, a gain of 60 per cent; that of Ashmouni, during the same period, from 46.95 tallaris to 54.45. Spot cotton prices in New York, by contrast, were slightly lower on the year. The shortage of dollars is presumably responsible for these different trends. The price of Karnak cotton is now more than double that of American, whereas before the war the premium in favour of Karnak was only some 15 to 20 per cent.

It is forecast that in 1948/49, for the first time since the beginning of the war, world production (estimated at 28,035,000 bales) will exceed

* the tallari, unit of price for cotton sales at Alexandria is equivalent to twenty piastres or a shade over four shillings sterling.

world consumption (estimated at 26,450,000 bales). By 31st. July, 1949, world stocks, it is expected, will have risen to 15,305,000 bales, an increase of 1,585,000 bales on the year.

Gum Arabic.

133. For the season 1947/48, production, as estimated from the arrivals in markets (Table XLV), was an all-time record and amounted to 37,000 metric tons, of which 35,800 tons were hashab and 1,200 tons talh. The corresponding figures for 1946/47 were: total production 27,000 metric tons; hashab 25,650 tons; talh 1,350 tons. The 1947/48 output was thus no less than 37 per cent above that of the previous season. All the gum producing provinces participated in these increases. It seemed probable that, in addition to favourable climatic conditions, the fact that the grain harvest was only average induced many people not normally gum collectors to tap gum in order to maintain their incomes.

Prices at El Obeid during the past two seasons have fallen from £E. 1,700 mms. per kantar in January, 1947, to £E. 1,007 mms. in January, 1949. During the same period, prices in the United Kingdom fell from 73/- a cwt. to 64/6d. The level of stocks in the Sudan altered very little during the year.

During the period 1942/47, the Sudan produced, it is estimated, 74.2 per cent of the world's supplies of gum Arabic, French West Africa 14.8 per cent, Tanganyika 4.8 per cent., and Nigeria 6.2 per cent. Although output in Nigeria and Tanganyika has been expanding rapidly in recent years, particularly in the former, they are still, as these percentages indicate, relatively small producers.

New industrial uses for gum are not being discovered on any scale and such enlarged demand as has arisen is being at least partially offset by the increasing use of substitutes in adhesives. The continued expansion of the world output of gum at the present rate, therefore, will inevitably lead to lower prices.

A careful watch must be kept on world trends during the next few years, for demand appears to be highly inelastic and a policy of stabilising world output, in co-operation with the other main producing countries may become expedient.

Dura (Millet).

134. Owing to poor rains in 1947, the 1947/48 grain harvest was below normal. Supplies were supplemented by the large carry-over from the previous season's bumper crop and by limited sales from government grain reserves. The prospects for the 1948/49 crop were much better than for the previous season. Wholesale dura prices in all the main markets were considerably higher at the end of the year than at the beginning, though they reacted, because of better 1948/49 harvest prospects, from the peak levels reached in August and September. Prices at the end of the year were between four to seven times their pre-war levels, the ratio varying in different markets,

Sesame, Groundnuts, Melonseed.

135. Arrivals in the principal markets indicated that the 1947/48 production of groundnuts was some 29 per cent., and that of melonseed no less than 99 per cent higher than 1946/47. Sesame figures were practically unchanged. During the past four seasons the production of groundnuts had increased steadily, arrivals in the main markets rising from 16,637 kantars in 1944/45 to 156,633 kantars in 1947/48. (Table XLVII). Prospects for 1948/49 were that both the sesame and groundnut crops would be good. The prices of sesame and groundnuts declined sharply during the last quarter of the year but were still four times and three times, respectively, the 1938 level.

Animals and Animal Products.

136. In the western Sudan, the main cattle raising area of the country, conditions for animal husbandry were normal, but in other parts of the country, for the second year in succession, inadequate rains caused losses. In Equatoria and Bahr el Ghazal, trypanosomiasis took its toll. Experiments were continued in the use of the recently discovered drug, antrycide, for the protection from this disease of cattle in districts bordering on tsetse fly areas.

Sales of animals in 1948 in the principal markets of the Sudan, both in number and value, were generally in excess of the 1947 figures; the exception was sales of goats. Slaughterings of sheep, in the principal towns, were more in 1948 than in the previous year; those of cattle and goats were fewer.

The number of cattle exported was higher than in 1947; that of sheep was slightly lower. But in value the exports of both were appreciably higher. Camel sales in Egyptian markets remained, it is estimated, at a very high level; some 54,600 camels, valued at approximately £E. 1,335,000, being sold (as against some 50,000, valued at about £E. 1,200,000, in 1947).

The export of hides, skins and leather, in 1948, did not greatly change in volume or value from that of 1947. (Tables XLI, XLII and XLIII).

Exports of Pulses.

137. Exports of pulses were lower in value and volume than in the previous year. Exports of haricot beans fell from £E. 135,933 (2,634 tons) in 1947 to £E. 125,804 (2,491 tons) in 1948; those of horse beans from £E. 66,332 (2,346 tons) to £E. 25,561 (847 tons); and of chick peas from £E. 113,035 (2,976 tons) to £E. 80,086 (2,544 tons). (Table L).

Exports of Minor Products.

138. Exports, in value and volume, of ivory were much lower than in 1947; those of beeswax, senna and donnuts, were slightly lower. Garad exports, by contrast, were higher; but they were still, in volume, well below 1944/45 levels. (Table LI).

Exports of Fish and Marine Products.

139. In quantity and value, the exports of fish, trochus shells and mother of pearl, were all substantially lower than in the previous year. (Table LII).

Wholesale Price Index and Wholesale Prices of Important Commodities.

140. The two most heavily weighted commodities in the wholesale price index are cotton and dura; and the very sharp rises in the prices of these commodities were largely responsible for the jump in the wholesale price index (1938=100) from 310.7 for the last quarter of 1947 to 490.5 for the last quarter of 1948. The basis of the wholesale price index has been revised since 1947. To make it more truly representative more commodities are now included, and the "weights" assigned to various commodities and groups of commodities have been adjusted in the light of somewhat fuller statistical information. (Tables XXXIX and XL).

Cost of Living and Retail Prices.

141. The index of the cost of living for Sudanese with monthly incomes of less than £E. 12 (1938=100) rose from 229.3 on 31st. December, 1947, to a peak level of 304.6 on 31st. August, and then receded slightly to 288.7 on 31st. December, 1948. Over the whole year the rise was approximately 26 per cent. A similar, but less marked tendency was shown by the indices of the higher income groups. (Table XXXVIII).

Retail prices of both imported and locally produced goods in the capital advanced. The price of dura, after rising sharply from 90 mms. a ruba on 31st. December, 1947, to 180 mms. in August, 1948, subsequently reacted, owing to the better 1948/49 harvest prospects, to 130 mms. on the 31st. December, 1948. The rise over the whole year was more than 44 per cent. A rise of this magnitude in the price of the staple foodstuff was a fundamental factor in the increased cost of living, particularly for the lower income groups. Substantial price rises were also recorded for sugar (which was raised from P. T. 3 to P. T. 4 a rotl,) for milk (from 15 mms. a rotl to 25 mms), for most vegetables, and for clothing; smaller rises were shown for meat, coffee and kerosene. These price changes in the capital were in most cases representative of similar tendencies in the majority of districts in the Sudan.

The underlying cause of this inflationary trend was the very large increase in the value of primary products. The (F. O. B.) value of the 1947/48 outputs of cotton and cotton seed, alone, reached the huge total of £E. 18,456,000, an increase over the previous year's figure of no less than £E. 8,401,000. A large part of this increase accrued as additional income to Sudanese cultivators whose spending increased the effective monetary demand for goods. Increased effective demand, in contact with an insufficient flow of consumer goods, is bound to raise retail prices. Immediate steps were taken to diminish effective demand and so mitigate the inflationary pressure which, but for such steps, would have been much more marked.

Movement Control.

142. At the beginning of the year the movement of 17 classes of commodities was still restricted, in order to avoid an inequitable distribution of supplies. As the general supply position changed during the year, certain relaxations were made in respect of the movement of Maria Theresa dollars, tea, cotton lint, cotton seed, sugar and soap manufactured in the Fung District of the Blue Nile Province. The restriction on cotton piece goods, which covered many categories at the beginning of the year, was reduced until by its end only imported greys and zarag were still under control. Only one new control was imposed : to prevent the free movement of dura out of the Upper Nile Province. The net result of these amendments was that by the beginning of 1949 the movement of only twelve classes of commodities remained under restriction.

Import and Export Licensing.

143. Import licensing continued and the Order was subjected to three amendments : the first allowed goods of Eritrean origin to be imported into the Sudan from Eritrea without licences, the second included parcels imported by air freight in the same category as postal parcels, and the third empowered the Controller of Supply to charge a fee, payable on the lodging of an import licence application. The fee to be paid was subsequently fixed at ten piastres per application.

There was little change in the system of export licensing.

36,074 applications for import licences were received. Of these 19,410 were approved in whole or in part, and 15,094 were rejected. At the end of the year some 1,570 applications were pending.

There were 3,379 applications for export licences, of which 2,833 were approved, 544 rejected and 2 undecided.

Rationing and Distribution.

144. To a considerable extent, the year was one of decontrol. All textiles except greys and zarag, sugar, timber, vehicle tyres and tubes and motor spares and accessories were freed from controlled distribution. Owing to a deterioration in the supply situation, petrol rationing, which had been lifted in 1946, had to be re-imposed in February, 1948. Essential commodities such as wheat and flour, jute goods, steel, refrigerators, coffee, whisky, American passenger cars and load carriers remained under controlled distribution.

International Allocation.

145. Liaison with international controls was maintained through the Sudan Agent in London. The main commodities concerning the Sudan which remained under international allocation were wheat and flour, coconut and palm oil, dairy products, tinned meats, and fertilizers.

Certain surpluses outside international allocation, notably fertilizers and coconut oil, became available for purchase, and linseed oil was freed from international control. Jute goods were under allocation by the Government of India.

Motor Transport.

146. A most difficult situation arose in regard to fuel supplies. During February information was received of a very severe cut in the previous year's offtake, and it was necessary to take immediate steps to re-impose rationing and control of fuels. Protracted negotiations at the highest levels succeeded in securing a small measure of relief, but not enough to prevent very severe dislocation of commercial carriage as well as difficulties regarding supply of fuel for pump schemes etc., in sufficient quantities to prevent loss of crops.

Only a few American vehicles arrived and none was ordered for civil operation during the year. The waiting list for American vehicles continued to increase, although there were distinct signs that purchasers were not so ready to take up vehicles even when available. A large number of surplus military vehicles to a certain extent met the demand for replacements and increases. Vehicles from other sources continued to arrive in small quantities.

During the year the supply position made it possible to decontrol spare parts and all sizes of tyres, tubes and batteries.

Price Control.

147. The system of authorised rates and margins of profit remained in force for all imported goods except those for which maximum prices were published. Unbleached cotton piece goods were distributed as in 1947 at published maximum prices which were increased during the year but which still contained an appreciable element of subsidy.



FOREIGN TRADE STATISTICS.

TABLE I.

				I M P O R T S *			
				U.K.	Egypt	Other countries	Total
				£E.	£E.	£E.	£E.
1920	...	...	...	1,506,679	3,868,335	1,631,851	7,006,865
1930	...	...	...	2,117,522	1,335,370	2,724,518	6,177,410
1935	...	...	...	1,687,897	1,040,872	2,641,110	5,369,879
1940	...	...	...	1,086,707	1,999,154	2,548,028	5,633,889
1943	...	...	...	620,160	3,183,761	5,397,291	9,201,212
1944	...	...	...	728,681	2,241,903	6,977,348	9,947,932
1945	...	...	...	1,267,581	1,692,124	7,058,908	10,018,613
1946	...	...	...	2,734,550	2,153,237	6,541,756	11,429,543
1947	...	...	...	3,888,360	3,507,553	8,811,216	16,207,129
1948	...	...	...	6,650,142	4,686,772	10,816,343	22,153,257

* Includes other Governments' imports prior to 1943, but excludes throughout import of currency notes and subsidiary coinage from Egypt.

				E X P O R T S A N D R E - E X P O R T S			
				U. K.	Egypt	Other countries	Total
				£E.	£E.	£E.	£E.
1920	...	...	...	2,146,959	2,323,494	605,518	5,075,971
1930	...	...	...	3,336,780	596,776	1,312,457	5,246,013
1935	...	...	...	2,203,636	653,575	2,145,285	5,002,496
1940	...	...	...	2,005,095	1,042,110	2,397,592	5,444,797
1943	...	...	...	2,651,578	1,527,818	2,428,242	6,607,638
1944	...	...	...	3,728,404	2,558,552	2,982,040	9,268,996
1945	...	...	...	4,526,025	2,670,846	3,897,709	11,094,580
1946	...	...	...	3,449,116	1,929,430	4,661,865	10,040,411
1947	...	...	...	5,973,211	2,813,375	6,609,095	15,395,681
1948	...	...	...	14,738,298	3,322,903	6,232,552	24,293,753

FOREIGN TRADE STATISTICS

TABLE II.

						I M P O R T S *		
						Private	Government	Total
						£E.	£E.	£E.
1920	...	...	...	...	3,988,210	3,018,655	7,006,865
1930	...	...	...	...	4,381,271	1,796,139	6,177,410
1935	...	...	...	...	3,751,221	1,618,658	5,369,879
1940	...	...	...	...	3,697,233	1,936,656	5,633,889
1943	...	...	...	...	7,311,463	1,839,749	9,201,212
1944	...	...	...	...	7,250,297	2,697,635	9,947,932
1945	...	...	...	...	7,885,953	2,132,660	10,018,613
1946	...	...	...	...	9,664,762	1,764,781	11,429,543
1947	...	...	...	...	13,500,290	2,706,839	16,207,129
1948	...	...	...	...	14,607,109	7,546,148	22,153,257

* Includes other Governments' imports prior to 1943, but excludes throughout import of currency notes and subsidiary coinage from Egypt.

						EXPORTS.		
						Exports	Re-exports	Total
						£E.	£E.	£E.
1920	...	...	...	...	4,712,652	363,319	5,075,971
1930	...	...	...	...	4,953,282	292,731	5,246,013
1935	...	...	...	...	4,567,279	435,217	5,002,496
1940	...	...	...	...	5,022,978	421,819	5,444,797
1943	...	...	...	...	6,016,920	590,718	6,607,638
1944	...	...	...	...	8,638,695	630,301	9,268,996
1945	...	...	...	...	10,555,878	538,702	11,094,580
1946	9,267,144	773,267	10,040,411	
1947	14,865,848	529,833	15,395,681	
1948	23,665,251	628,502	24,293,753	

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TABLE III.

INDICES OF VALUE, VOLUME AND PRICE.

(1938 = 100)

	RETAINED IMPORTS			EXPORTS		
	Value	Price	Volume	Value	Price	Volume
1944 ...	161.3	286.2	56.4	189.5	196.0	96.7
1945 ...	162.9	265.9	61.3	228.2	199.0	114.6
1946 ...	184.5	258.0	71.5	209.0	224.0	93.3
1947 ...	271.0	274.2	99.0	291.0	312.7	93.5
1948 ...	370.8	331.2	112.0	443.3	480.8	92.8

These indices take into account camel exports and other miscellaneous credits not allowed for in reports before 1947.

TABLE IV.

ESTIMATED VISIBLE BALANCE OF TRADE WITH WORLD (i)

Item	1948	1947	Item	1948	1947
	£E.	£E.		£E.	£E.
Imports (C.I.F)	22,153,000	16,207,000	Exports and re-exports (F.A.S.)	24,294,000	15,395,000
			Estimated camel exports ...	1,335,000	1,200,000
			Estimated deliveries aircraft petrol tanks ...	110,000 (ii)	268,000
			Estimated adjustment to convert F.A.S. to F.O.B. values ...	1,971,000 (iii)	536,000
Total ...	22,153,000	16,207,000	Total ...	27,709,000	17,399,000
			Estimated visible balance of trade	+5,556,000	+1,192,000

(i) Imports and exports of currency are excluded.

(ii) For first quarter only, afterwards included in re-exports.

(iii) The raising of general export duties from 1 to 3 per cent. and of the duty on cotton to 5 per cent. meant a large rise on this item over the 1947 figure.

TABLE V.
ESTIMATED VISIBLE BALANCE OF TRADE WITH ALL
COUNTRIES EXCEPT EGYPT. (i)

Item	1947	1948	Item	1947	1948
	£E.	£E.		£E.	£E.
Imports (C.I.F)	12,699,000	17,466,000	Exports and re-ex- ports (F.A.S)	12,582,000	20,971,000
			Estimated deliveries in aircraft petrol tanks	268,000	110,000 (ii)
			Estimated adjust- ment to convert F.A.S. to F.O.B. values	368,000	1,608,000
Total ...	12,699,000	17,466,000	Total	13,218,000	22,689,000
Estimated visible balance of trade				+ 519,000	+ 5,223,000

(i) Imports and exports of currency are excluded.
(ii) For first quarter only, afterwards included in re-exports.

TABLE VI.
SUMMARY BY TRADE ROUTES.

	1945	1946	1947	1948
	£E.	£E.	£E.	£E.
RED SEA.				
Imports	6,905,430	8,041,984	11,184,321	16,874,874
Exports	8,362,647	7,482,210	13,473,364	22,214,991
Re-exports	166,670	283,902	172,629	191,849
TOTAL	15,434,747	15,813,096	24,830,314	39,281,714
NORTHERN NILE.				
Imports	1,732,308	2,213,922	4,037,279	4,082,168
Exports	2,117,642	1,688,000	1,308,013	1,375,692
Re-exports	178,781	226,461	152,067	229,705
TOTAL	4,028,731	4,128,383	5,497,359	5,687,565
FRONTIER STATIONS.				
Imports	1,380,875	1,173,637	985,529	1,196,215
Exports	75,589	96,934	84,471	74,568
Re-Exports	193,251	257,904	205,137	206,948
TOTAL	1,649,715	1,528,475	1,275,137	1,477,731
GRAND TOTAL ...	21,113,193	21,469,954	31,602,810	46,447,010

TABLE VII.

PRINCIPAL IMPORTS

	Unit of quantity	Quantity		Value		Percentage of total value	
		1947	1948	£E.	£E.	1947	1948
Cement ...	Tons	10,474	31,119	64,858	214,400	0.4	1.0
Cigarettes ...	"	399	407	430,493	472,316	2.6	2.1
Coal and Coke	"	31,942	75,009	129,326	325,508	0.8	1.5
Coffee ...	"	9,091	11,442	807,559	1,059,334	4.9	4.8
Dura ...	"	—	—	—	—	—	—
Dyestuffs, tan- stuffs and colours ...	—	—	—	100,668	82,015	0.6	0.4
Kerosene ...	"	9,847	9,086	68,818	79,678	0.6	0.4
Metals and manufacture	—	—	—	1,044,069	1,392,918	6.4	6.3
Machinery and appliances...	—	—	—	598,950	1,240,837	3.7	5.6
Oil fuel ...	Tons	74,960	77,020	409,359	483,579	2.5	2.2
Oranges and Mandarines	"	309	722	12,650	30,967	0.1	0.1
Petrol ...	"	26,585	35,970	213,458	390,390	1.3	1.8
Piece goods of mixed cotton and artificial silk...	"	390	611	559,374	797,917	3.4	3.6
Piece goods, cotton ...	"	5,999	7,690	3,501,706	4,572,778	21.6	20.6
Rice ...	"	2,757	6,562	100,849	247,821	0.6	1.1
Sacks and Hessian ...	"	5,218	5,586	496,793	752,014	3.1	3.4
Soap, common	"	1,425	930	108,594	91,992	0.7	0.4
Spirits, wines and beers ...	1000 litres	2,268	2,429	307,972	275,687	1.9	1.2
Sugar...	Tons	20,129	50,557	642,227	1,950,923	4.0	8.8
Tea ...	"	2,517	1,951	633,049	465,956	3.9	2.1
Timber ...	C.M.	11,012	23,351	178,127	425,350	1.1	1.9
Tyres, motor car Number		22,019	17,730	225,627	142,630	1.4	0.6
Vehicles and transport equip- ment. ...	—	—	1,122	739,966	503,122	4.6	2.3
Wheat ...	Tons	7,496	11,943	212,013	395,988	1.3	1.8
Wheat flour ...	"	1,267	1,193	47,171	59,328	0.3	0.3
Other...	—	—	—	4,573,453	5,699,809	28.2	25.7
TOTAL				16,207,129	22,153,257		

TABLE VIII.

UNIT IMPORT VALUES

	Unit of quantity	1938	1945	1946	1947	1948
		£E.	£E.	£E.	£E.	£E.
Cement	Tons	2.2	6.5	5.9	6.2	6.9
Coal	"	1.6	5.5	4.2	4.0	4.3
Coffee	"	25.1	72.0	76.7	88.8	92.6
Kerosene	"	3.5	7.0	7.0	7.0	8.8
Oil fuel	"	2.5	5.5	5.4	5.5	6.3
Oranges and Manda- rines	"	20.2	40.9	47.1	40.9	42.9
Petrol	"	5.2	8.0	8.0	8.0	10.9
Piece goods, cotton ...	"	119.0	418.4	377.4	583.7	594.6
Piece goods of mixed cotton and artificial silk... ..	"	255.1	1,627.7	1,865.5	1,434.3	1,305.9
Rice	"	8.8	31.9	32.7	36.6	37.8
Sacks and hessian ...	"	22.2	64.0	64.9	95.2	124.0
Soap	"	19.8	37.5	65.4	76.2	98.9
Tea	"	100.8	160.6	173.8	251.5	238.8
Sugar	"	19.2	26.3	27.8	31.9	38.6
Timber	c.m.	—	11.1	12.4	16.2	18.2
Wheat	Tons	10.5	25.4	33.6	28.3	33.2
Wheat flour	"	8.9	60.1	32.2	37.2	49.7

TABLE IX

PRINCIPAL IMPORTS BY SUDAN GOVERNMENT

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Beer, wines and spirits	1000 litres	72	30	6,933	3,025
Sugar, refined ...	tons	20,114	50,524	641,775	1,949,926
Chemicals ...	"	708	—	23,633	208,239
Pharmaceuticals ...	"	237	—	69,939	128,841
Paints, prepared ...	"	114	335	11,387	57,165
Tyres and tubes ...	Number	4,182	9,664	13,895	39,097
Timber ...	c.m.	962	10,182	18,913	220,203
Lubricating oils and greases ...	tons	676	904	23,145	28,774
Coal and coke ...	"	29,366	70,083	118,252	300,144
Cement ...	"	755	2,344	5,023	14,817
Glass and glassware...	"	—	—	4,305	10,276
Asbestos manufactures	"	765	2,260	24,861	69,322
Manufactures of base metals ...	—	—	—	233,161	625,815
Machinery and appliances ...	tons	—	—	194,351	589,693
Vehicles and transport equipment	—	—	—	174,868	137,486
Scientific instruments	tons	32	—	18,855	38,350
Cotton piece goods ...	"	1,936	4,925	944,104	2,566,891
Railway sleepers ...	Number	—	191,990	—	181,450
Other... ..	—	—	—	179,439	376,634
		TOTAL ...	...	2,706,839	7,546,148

TABLE X.

PRINCIPAL EXPORTS.

Item	Unit of quantity	Quantity		Value		Percentage of total value	
		1947	1948	1947	1948	1947	1948
Beeswax ...	tons	132	123	34,508	30,259	0.2	0.1
Cattle ...	number	19,001	21,583	277,538	318,158	1.9	1.4
Chillies ...	tons	382	354	60,868	57,451	0.4	0.2
Cotton ...	"	52,589	50,118	8,437,502	16,015,707	56.7	67.7
Cotton seed ...	"	89,483	90,387	1,607,117	2,338,850	10.8	9.9
Dates ...	"	5,617	8,486	197,383	203,771	1.3	0.9
Donnuts and products ...	"	6,073	4,486	79,373	49,250	0.5	0.2
Dura ...	"	4,250	487	72,355	10,511	0.5	—
Fish ...	"	1,929	1,241	119,395	82,995	0.8	0.4
Garad ...	"	985	2,397	10,435	30,938	0.1	0.1
Groundnuts ...	"	—	—	17	15	—	—
Gum Arabic ...	"	25,969	34,656	1,390,776	1,656,351	9.4	7.0
Hides and skins	"	2,362	1,039	331,339	131,931	2.2	0.6
Other hides and skins ...	"	24	—	61,415	—	0.5	—
Maize ...	"	22,311	20,881	473,976	590,476	3.2	2.5
Melonseed ...	"	11,318	17,974	421,671	547,610	2.8	2.3
Mother of pearl shell ...	"	288	136	47,589	19,331	0.3	0.1
Oil cake ...	"	8,687	16,468	136,117	340,094	0.9	1.4
Onions ...	"	449	360	5,341	4,024	—	—
Potatoes ...	"	1	3	44	135	—	—
Pulses ...	"	20,859	11,866	609,903	380,450	4.1	1.6
Salt ...	"	47,495	5,347	73,581	51,318	0.5	0.2
Senna ...	"	599	322	37,049	25,223	0.3	0.1
Sesame ...	"	—	—	—	—	—	—
Sheep ...	number	36,906	36,070	111,922	128,318	0.8	0.5
Trochus shell	tons	2,039	1,477	78,853	58,714	0.5	0.3
Other ...	"	—	—	189,781	593,371	1.3	2.5
TOTAL ...				14,865,848	23,665,251		

TABLE XI.

UNIT EXPORTS VALUE.

Item	Unit of quantity	1938	1944	1945	1946	1947	1948
		£E.	£E.	£E.	£E.	£E.	£E.
Beeswax ...	tons	72.3	138.4	163.7	233.2	261.4	246.0
Cattle ...	number	4.7	8.8	9.8	11.6	14.6	14.7
Chillies ...	tons	48.6	160.5	166.1	166.6	159.3	162.3
Cotton ...	"	55.9	85.3	88.3	90.0	160.4	237.4
Cotton seed ...	"	2.4	6.3	6.5	6.5	17.9	23.7
Dates... ..	"	8.9	31.3	30.0	36.0	35.1	24.0
Dura	"	5.4	8.3	8.3	7.9	13.1	21.6
Fish	"	13.7	59.6	70.0	76.1	61.9	66.6
Garad	"	3.5	12.9	10.7	9.6	10.6	12.9
Gum Arabic... ..	"	27.6	37.9	38.9	50.6	53.6	51.9
Hides and skins	"	47.3	137.6	136.2	186.6	140.3	178.3
Maize... ..	"	5.5	8.6	12.0	—	21.2	28.3
Melonseed	"	6.9	28.5	34.9	36.6	37.3	30.5
Mother of Pearl shells	"	20.3	168.9	182.5	195.8	165.2	142.1
Oil Cako	"	3.2	6.8	7.9	12.2	15.7	20.7
Onions	"	10.3	12.4	10.9	8.9	11.9	11.2
Potatoes	"	—	36.3	34.0	29.6	44.0	45.0
Pulses	"	9.3	25.6	22.7	25.8	29.2	32.4
Salt	"	4.1	4.5	8.7	2.6	1.5	8.8
Semn	"	26.1	42.9	56.1	48.7	61.9	—
Sesame	"	11.0	30.0	19.0	—	—	—
Sheep	number	1.0	2.1	2.2	2.6	3.0	3.6
Trochus Shell	tons	21.8	22.5	19.8	24.5	38.7	39.8

TABLE XII.
FOREIGN TRADE—CLASSIFIED BY COUNTRIES.
(12 months ended December)

	Exports		Retained imports		Apparent visible balance of trade	
	1947	1948	1947	1948	1947	1948
	£E.	£E.	£E.	£E.	£E.	£E.
1. <i>Scheduled territories and transferable accounts group.</i>						
Australia	59,823	41,787	59,392	343,228	+ 431	— 301,441
Ceylon	7,906	8,735	191,785	201,576	— 183,879	— 192,841
Cyprus	61,281	34,510	100,982	58,353	— 39,701	— 23,843
Ethiopia	34,500	42,042	277,925	272,418	— 243,425	— 230,376
Great Britain ...	5,895,329	14,623,528	3,810,478	6,535,372	+ 2,084,851	+ 8,088,156
India and Pakistan	3,238,639	2,867,094	1,372,928	1,525,842	+ 1,365,711	+ 1,341,252
Iran	199	1,957	676,051	954,132	— 675,852	— 952,175
Kenya	8,156	1,241	284,724	264,477	— 276,568	— 263,236
Mauritius	—	—	361,403	545,878	— 361,403	— 545,878
Netherlands ...	64,457	137,163	155,664	122,570	— 91,207	+ 14,593
Palestine	604,577	414,576	24,670	17,653	+ 579,907	+ 396,923
South Africa ...	7,319	048	300,600	377,838	— 293,281	— 373,790
Spain	4,697	5,309	388,850	1,888,283	— 384,153	— 1,882,974
Uganda	1,384	393	316,725	350,271	— 315,341	— 349,878
Other	128,543	605,603	331,513	448,189	— 202,970	+ 157,414
TOTAL	10,116,810	18,787,986	9,153,690	13,906,080	+ 963,120	+ 4,881,906
2. <i>Dollar group.</i>						
Canada	5,685	8,535	386,628	482,639	— 380,943	— 474,104
U.S.A.	956,919	575,982	735,177	638,992	+ 221,742	— 63,010
Other	1,639	—	49,781	—	— 48,142	—
TOTAL	964,243	584,517	1,171,586	1,121,631	— 207,343	— 537,114
3. <i>Egyptian Group.</i>						
Egypt	2,662,043	3,239,901	3,356,221	4,603,770	— 694,178	— 1,363,869
Eritrea	21,321	21,855	153,325	143,799	— 132,004	— 121,044
TOTAL	2,683,364	3,261,756	3,509,546	4,747,569	— 826,182	— 1,485,813
4. <i>All other countries</i>						
Belgian Congo ...	22,711	32,049	225,331	246,535	— 202,620	— 214,486
Belgium	92,508	79,579	246,386	101,871	— 153,878	— 22,292
France	52,567	351,320	107,079	85,893	— 54,512	+ 268,427
Italy	207,653	210,472	259,257	60,650	— 51,604	+ 149,822
Japan	15,918	9,401	940,668	732,314	— 924,750	— 722,913
Syria	1,093	3,496	23,477	1,221	— 22,384	+ 2,275
Tripoli	426,811	139	1,394	1,276	+ 428,205	+ 1,415
Other... ..	282,170	341,536	41,670	522,267	+ 240,500	— 180,731
TOTAL	1,101,431	1,030,992	1,842,474	1,749,475	— 741,043	— 718,483
GRAND TOTAL ...	14,865,848	23,665,251	15,677,296	21,524,755	— 811,448	+ 2,140,406

TABLE XIII.

SUMMARY BY PERCENTAGES OF TRADE WITH PRINCIPAL COUNTRIES

(12 months ended December)

	Percentage of total exports.		Percentage of total retained imports	
	1947	1948	1947	1948
1. Scheduled Territories and Transferable Accounts Group.				
Cyprus	0.4	0.1	0.6	0.3
Ethiopia	0.2	0.2	1.8	1.3
Great Britain	39.7	61.8	24.3	30.4
India and Pakistan	21.8	12.1	12.0	7.1
Iran	—	—	4.3	4.4
Italy	0.2	—	0.2	—
Kenya	0.1	—	1.8	1.2
Mauritius	—	—	2.3	2.5
Palestine	4.1	1.8	0.2	0.1
South Africa	—	—	1.9	1.7
Spain	—	—	2.5	8.8
Uganda	—	—	2.0	1.6
Other	1.8	3.4	4.7	5.2
TOTAL	68.3	79.4	58.6	64.6
2. Dollar Group.				
Canada	0.1	—	2.5	2.2
U.S.A.	6.4	2.5	4.7	3.0
Other	—	—	0.3	—
TOTAL	6.5	2.5	7.5	5.2
3. Egyptian Group.				
Egypt	17.9	13.7	21.4	21.4
Eritrea	0.1	0.1	1.0	0.7
TOTAL	18.0	13.8	22.4	22.1
4. All other countries.				
Belgian Congo	0.1	0.1	1.4	1.1
Belgium	0.6	0.3	1.6	0.5
France... ..	0.4	1.5	0.7	0.4
Italy	1.2	0.9	1.4	0.3
Japan	0.1	0.1	6.0	3.4
Other	4.8	1.4	0.4	2.4
TOTAL	7.2	4.3	11.5	8.1
GRAND TOTAL	100.0	100.0	100.0	100.0

TABLE XIV
PRINCIPAL IMPORTS FROM UNITED KINGDOM

	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Fish preserved ...	kilog net	35,081	20,185	5,656	3,295
Sugar... ..	tons net	4,777	15,614	201,934	625,045
Whisky	1000 litres	59	63	21,048	22,626
Cigarettes and tobacco	kilog net	399,738	409,157	429,139	474,043
Disinfectants ...	tons net	177	204	24,831	26,373
Pharmaceuticals ...	"	365	493	108,932	184,839
Indigo	"	18	71	7,245	34,273
Prepared paints ...	"	234	469	25,533	77,108
Soap, toilet and common ...	"	555	423	55,841	58,071
Fertilisers	"	2,304	2,291	57,048	64,107
Motor car tyres ...	number	13,255	15,529	95,743	116,129
Sewing cotton ...	kilog net	21,469	39,249	57,272	140,079
Fabrics of wool ...	tons net	32	32	97,198	59,048
Cotton piece goods, bleached ...	"	196	237	191,703	264,669
Cotton piece goods, dyed in the piece...	"	140	200	139,099	186,566
Cotton piece goods, printed	"	81	79	105,410	116,197
Cotton piece goods, dyed in the yarn ...	"	24	29	34,557	44,687
Clothing, ready made	"	71	48	44,683	45,307
Lubricating oil and greases	"	629	1,170	21,545	43,332
China and glassware	"	387	228	68,686	33,180
Asbestos manufactures	"	886	3,117	33,089	104,299
Crude iron and steel	"	1,898	2,140	61,626	73,447
Zinc plates and sheets	"	714	784	26,996	43,542
Hoops and strips ...	"	935	1,453	26,885	54,736
Railway track materials	"	212	—	31,058	—
Bolts, nuts and rivets	"	1,454	446	44,339	32,442
Household utensils ...	"	99	172	20,513	30,568
Tools	"	583	415	49,358	70,336
Steam, gas and oil engines and parts...	"	389	1,203	88,953	269,903
Agricultural machinery	"	196	—	36,102	64,138
Pumps and parts ...	"	64	—	16,590	48,951
Sewing machines and parts	"	112	—	18,856	5,861
Other machinery ...	"	762	—	145,568	290,066
Wireless and telegraphic apparatus ...	"	155	—	86,562	137,447
Railway locos and parts	"	15	111	3,644	17,244
Motor vehicles and chassis	number	424	591	130,528	296,648
Motor boats and parts	tons net	2	22	372	10,279
All other items ...	—	—	—	1,274,158	2,481,261
TOTAL ...				3,888,360	6,650,142

TABLE XV.

PRINCIPAL EXPORTS TO UNITED KINGDOM.

	Unit of quantity	Quantity		Value £.	
		1948	1947	1948	1947
Haricot beans ...	tons net	—	—	—	—
Other dried beans ...	„	—	—	—	—
Cotton seed ...	„	44,443	13,165	1,152,634	231,248
Beeswax ...	„	71	132	17,900	34,508
Sheepskins ...	„	693	656	122,419	101,356
Cotton, Sakel ...	„	38,868	30,257	12,474,744	4,811,433
Cotton, American ...	„	2,154	782	316,959	111,727
Dom nuts (all kinds)	„	57	118	9,818	12,391
Gum, bleached ...	„	25	58	2,070	5,007
Gum, talh ...	„	503	651	14,514	17,544
Gum, hashab ...	„	7,400	9,185	349,547	507,963
Other... ..	—	—	—	162,923	270,371
Total exports ...				14,623,528	6,103,548
Re-exports ...				114,770	77,882
Total exports and re-exports...				14,738,298	6,181,430

TABLE XVI.

PRINCIPAL IMPORTS FROM EGYPT.

	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Rice	tons	6,562	2,564	247,819	92,281
Oranges	"	629	87	27,605	4,196
Lentils	"	828	426	39,265	18,679
Sugar... ..	"	11,501	236	498,742	9,242
Molasses	"	375	669	9,706	20,885
Confectionery	"	921	447	185,790	86,634
Tobacco and cigarettes	kilog net	16,225	26,887	19,664	31,524
Cotton seed oil	tons	196	—	28,899	—
Perfumery, alcoholic	litres	26,075	27,877	38,900	75,049
Soap, common and toilet	tons	673	647	63,725	49,417
Cotton piece goods, mixed artificial silk and cotton	"	610	387	795,895	555,939
Cotton piece goods, grey	"	185	57	140,910	29,511
Cotton piece goods, dyed in the piece	"	54	88	66,519	75,019
Cotton piece goods, printed	"	23	63	22,944	54,945
Cotton piece goods, dyed in the yarn	"	94	391	53,976	247,498
Cement	"	18,591	8,423	118,361	51,495
Glass and glassware	"	323	370	37,650	34,143
Base metal manufactures	—	1,548	—	150,252	110,587
Photographic and cine material and cinema films	—	—	—	20,687	28,785
Postal parcels	—	—	—	1,438,826	1,180,672
All other items	—	—	—	680,637	751,052
TOTAL IMPORTS ...				4,686,772	3,507,553

TABLE XVII.

PRINCIPAL EXPORTS TO EGYPT.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Cattle	number	21,583	19,001	318,158	277,538
Sheep	"	36,070	36,906	128,318	111,922
Fish	tons net	1,237	1,923	82,426	116,552
Dates... ..	"	8,289	5,477	200,585	193,771
Haricot beans	"	1,361	1,803	67,714	90,193
Lupines	"	744	1,394	19,807	34,914
Chillies	"	351	379	56,911	60,311
Cotton seed	"	42,896	62,938	1,106,055	1,132,865
Melon seed	"	15,217	9,595	464,795	358,579
Charcoal	"	—	1,445	—	13,413
Hides and skins	"	909	632	136,866	71,488
Gum hashab	"	690	398	33,472	22,021
Garad	"	2,365	984	30,543	10,421
Gold metal	troy ozs	312	1,230	4,966	18,479
Other items... ..	—	—	—	588,222	149,576
Total	—	—	—	3,238,838	2,662,043
Re-exports	—	—	—	83,002	151,332
Total exports and re-exports	—	—	—	3,321,840	2,813,375
Estimated camel exports	—	54,600	50,000	1,335,000	1,200,000
Grand total	—	—	—	4,656,840	4,013,375

TABLE XVIII.

PRINCIPAL IMPORTS FROM INDIA AND PAKISTAN

Item	Unit of quantity	Quantity		Value £.	
		1948	1947	1948	1947
Tea	tons net	520	636	122,261	174,456
Pepper	"	—	236	—	36,768
Other spices... ..	"	254	478	18,301	46,808
Essential oils	"	25	49	42,186	112,309
Cotton yarn... ..	"	—	1	—	690
Sewing cotton	"	—	29	—	27,179
Cotton piece goods :					
Grey	"	903	1,525	373,043	466,332
Bleached	"	70	89	53,268	57,481
Dyed in piece	"	44	139	28,227	73,763
Printed	"	37	83	32,730	54,084
Dyed in yarn	"	85	105	42,428	52,896
Sacks... ..	"	4,972	4,641	619,165	427,787
Hessian	"	714	468	117,455	56,192
Matches	millions	—	160	—	9,638
Table linen, sheets, etc.	tons net	3	50	1,159	26,066
Manufactures of alu- minium	"	52	355	15,005	115,246
Other... ..	—	—	—	62,970	138,885
Total				1,528,198	1,876,582

TABLE XIX.

PRINCIPAL EXPORTS TO INDIA AND PAKISTAN.

Item	Unit of quantity	Quantity		Value £.	
		1948	1947	1948	1947
Kashrangeig... ..	tons	4,331	7,440	109,329	165,926
Lubia helwa	"	66	2,658	1,950	63,200
Chick peas	tons net	914	2,221	24,940	85,266
Cotton sakel	"	7,022	17,669	2,395,628	2,822,229
Cotton American	"	19	—	3,465	—
Domnuts... ..	"	1,834	603	13,404	5,616
Gum bashab	"	5,049	1,056	237,321	58,924
Gum talh	"	1,494	817	41,007	22,018
Other items... ..	"	—	—	40,050	15,460
Totals				2,867,094	3,238,639
Re-exports				1,356	3,654
Total exports and re-exports				2,868,450	3,242,293

TABLE XX.

PRINCIPAL IMPORTS FROM U.S.A.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Wheat	tons	—	—	—	—
Paper and cardboard	kilog. net	181,774	1,560	11,379	189
Lubricating oils and greases	tons net	1,538	1,591	60,099	51,593
Machinery	—	—	—	112,031	25,300
Electrical machinery	—	—	—	2,176	3,588
Tractors and parts	tons net	52	96	13,203	18,346
Motor vehicles ...	number	351	396	138,263	218,782
Bodies and parts of motor vehicles...	tonsgross	300	140	106,817	45,521
Cotton piece goods	tons	150	403	104,676	292,749
Other... ..	—	—	—	92,001	79,907
Total				640,645	735,975

TABLE XXI.

PRINCIPAL EXPORTS TO U.S.A.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Hides and skins ...	tons net	423	490	70,647	85,031
Trochus and mother-of pearl shell ...	„	108	259	15,799	40,796
Senna	„	194	241	8,547	9,945
Gum, all kinds ...	„	5,839	6,033	279,604	333,520
Cotton, ginned saket	„	616	2,541	199,967	474,915
Other... ..	—	—	—	1,418	12,712
Total				575,982	956,919
Re-exports ...				1,653	798
Total exports and re-exports				577,635	957,717

TABLE XXII.

PRINCIPAL IMPORTS FROM ERITREA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Wheat flour... ..	tons net	93	220	6,318	13,118
Macaroni	"	84	—	6,615	—
Beer	1000 litres	733	327	58,393	31,913
Indigo	tons net	—	—	—	—
Machinery and appliances	—	—	—	13,552	57,384
Motor vehicles and chassis	number	4	201	335	44,552
Matches	millions	112	17	5,706	591
Photographic and cinema films and materials	—	—	—	4,732	23,036
Other... ..	—	—	—	111,051	62,928
Total				206,702	233,522

TABLE XXIII.

PRINCIPAL EXPORTS TO ERITREA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Dates... ..	tons	196	138	3,049	3,160
Onions	"	272	449	3,390	5,341
Cotton seed	"	—	—	—	—
Hides and skins	"	6	5	4,245	586
Trochus shell	"	—	—	—	—
Garad	"	—	—	—	—
Other... ..	—	—	—	11,171	12,234
Total				21,855	21,321
Re-exports				62,903	80,197
Total exports and re-exports				84,758	101,518

TABLE XXIV.

PRINCIPAL IMPORTS FROM IRAN.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Motor spirit ...	tons	35,970	26,161	390,351	210,014
Kerosene ...	"	9,686	9,845	79,675	68,705
Gas oil and fuel oils ...	"	77,020	72,711	483,579	398,070
Other ...	—	—	—	656	192
Total ...				954,261	676,981

TABLE XXV.

PRINCIPAL EXPORTS TO IRAN.

	Quantity		Value £E.	
	1948	1947	1948	1947
Total exports ...	—	—	1,957	199
Re-exports ...	—	—	129	930
Total exports and re-exports ...			2,086	1,129

TABLE XXVI.

PRINCIPAL IMPORTS FROM SOUTH AFRICA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Jams and tinned fruit	tons net.	292	758	24,453	60,687
Footwear of rubber	1000 prs	25	100	5,747	22,256
Coal	tons net	66,608	22,738	286,278	92,488
Other... ..	—	—	—	101,641	137,456
Total				418,119	312,887

TABLE XXVII.

PRINCIPAL EXPORTS TO SOUTH AFRICA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Cotton scarto	tons net	—	—	—	—
Gum hashab	„	63	107	2,962	5,932
Other... ..	„	—	—	1,086	1,387
Total				4,048	7,319
Re-exports				40,076	12,287
Total exports and re-exports...				44,124	19,606

TABLE XXVIII.

PRINCIPAL IMPORTS FROM ETHIOPIA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Cattle	number	195	656	1,056	4,079
Coffee	tons net	2,581	2,806	335,337	347,738
Other... ..	—	—	—	3,111	14,058
Totals				339,504	365,875

TABLE XXIX.

PRINCIPAL EXPORTS TO ETHIOPIA.

Item	Unit of quantity	Quantity		Value £E.	
		1948	1947	1948	1947
Soap	tons net	8	12	689	876
Cotton, American ...	„	—	—	—	—
Cotton, saket ...	„	—	—	—	—
Salt	„	2,000	3,395	18,730	29,920
Other	—	—	—	22,623	3,704
Total				42,042	34,500
Re-exports				67,086	87,950
Total exports and re-exports				109,128	122,450

TABLE XXX.

PRINCIPAL IMPORTS FROM UGANDA

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Sugar... ..	tons net	2,258	8,587	48,981	241,843
Coffee	„	3,086	337	198,662	30,129
Tea	„	288	373	60,014	80,716
Timber	c.m	473	—	5,891	—
Other... ..	—	—	—	5,305	2,955
Total				318,853	355,643

TABLE XXXI.

PRINCIPAL EXPORTS TO UGANDA.

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Salt	tons net	103	39	1,086	377
Other... ..	—	—	—	298	16
Total				1,384	393
Total re-exports				2,128	5,372
Total exports and re-exports				3,512	5,765

TABLE XXXII.

PRINCIPAL IMPORTS FROM KENYA

Item	Unit of quantity	Quantity		Value £.	
		1947	1948	1947	1948
Bacon and ham ...	tons net	46	20	7,324	44,741
Butter ...	"	49	35	9,475	7,630
Coffee ...	"	670	721	44,671	49,213
Tea ...	"	928	288	205,485	65,275
Other...	"	—	—	32,380	168,894
Total ...				299,335	295,483

TABLE XXXIII.

PRINCIPAL EXPORTS TO KENYA

Item	Unit of quantity	Quantity		Value £.	
		1947	1948	1947	1948
Total ...	—	—	—	8,156	1,241
Re-exports ...	—	—	—	14,611	31,006
Total exports and re-exports ...				22,767	32,247

TABLE XXXIV

PRINCIPAL IMPORTS FROM JAPAN.

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Cotton piece goods, grey	tons	1,930	1,709	940,669	732,314
Other... ..	"	—	—	—	—
Total imports ...				940,669	732,314

TABLE XXXV.

PRINCIPAL EXPORTS TO JAPAN.

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Salt	tons	28,550	—	13,818	—
Dom nuts, whole ...	"	247	—	2,100	—
Gum hashab	"	—	200	—	9,400
Others	"	—	—	—	1
Total		28,797	200	15,918	9,401
Re-exports		—	—	—	—
Total exports and re-exports		28,797	200	15,918	9,401

TABLE XXXVI.
PRINCIPAL IMPORTS FROM PALESTINE.

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Oranges and mandarines	tons	207	51	7,984	1,823
Fruit juices	kilog.net	26,933	—	4,441	—
Pharmaceutical preparations	tons	16	—	5,038	—
Clothing, ready made	kilog.net	392	—	1,234	—
Glass and glassware...	—	—	—	1,848	—
Hardware, iron and steel	tons	1	—	1,508	—
Other manufactures of iron and steel	„	2	—	770	—
Telegraph poles	number	—	7,015	—	15,535
Others	—	—	—	4,704	301
Total imports ...				27,527	17,659

TABLE XXXVII.
PRINCIPAL EXPORTS TO PALESTINE.

Item	Unit of quantity	Quantity		Value £E.	
		1947	1948	1947	1948
Dura	tons	1,049	—	18,878	—
Maize... ..	„	5,472	3,654	105,538	102,622
Haricot beans	„	624	502	33,952	27,643
Horse beans... ..	„	1,777	48	31,110	1,643
Oil cakes	„	6,928	7,047	108,500	199,372
Cottonseed	„	12,688	3,045	228,388	80,082
Melonseed	„	4,677	—	8,813	—
Hides... ..	„	57	—	5,101	—
Other hides	„	1	1	4,494	1,037
Cotton scarto	„	36	—	3,889	—
Mother of Pearl shells	„	76	10	3,921	673
Other	—	—	—	51,993	1,504
Total				604,577	414,576
Re-exports				757	6
Total exports and re-exports				605,334	414,582

TABLE XXXVIII.
COST OF LIVING INDICES.
 (Sudanese) (1938=100)

				Monthly income under £E. 12.	Monthly income over £E. 12.
December 31, 1944	...	...		160.4	168.5
„ 1945	...	...		170.2	176.8
„ 1946	...	...		183.4	190.2
„ 1947	...	...		229.3	195.8
„ 1948	...	...		288.7	244.0

TABLE XXXIX.
WHOLESALE PRICE INDICES.
 (1938=100)

		Food drink and tobacco	Industrial raw materials	Other manufactured goods	All wholesale goods
Average for the year 1944		199.2	185.7	436.0	212.3
„ „ „ „ 1945		199.6	195.1	346.6	209.2
„ „ „ „ 1946		228.6	231.2	365.0	240.2
1st quarter 1947	...	220.1	291.4	352.5	258.7
2nd quarter 1947	...	231.7	308.5	409.0	275.9
3rd quarter 1947	...	262.7	314.5	375.3	292.0
4th quarter 1947	...	298.2	314.1	377.2	310.7
1st quarter 1948	...	325.9	507.5	441.2	407.0
2nd quarter 1948	...	392.1	508.4	447.1	442.5
3rd quarter 1948	...	465.5	518.2	482.5	490.5
4th quarter 1948	...	448.4	548.4	479.0	490.5

TABLE XL.

WHOLESALE PRICES OF SOME IMPORTANT COMMODITIES (Actual prices are in £s.)
(Indices 1938—100)

Commodity	Market	Unit of Quantity	Actual price or Index	1938 Average	1947				1948			
					1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Dura	Wad Medani	Kantars	Actual Index	.161 100	.200 124	.200 124	.310 193	.466 290	.630 391	.852 529	1.185 736	1.004 624
Cattle	El Obeid	Head	Actual Index	2.240 100	4.028 180	5.455 244	5.803 259	5.010 224	5.551 248	5.293 236	4.906 219	4.692 209
Camels	El Obeid	Head	Actual Index	3.472 100	11.130 321	11.420 329	11.580 334	13.820 398	12.587 363	11.116 320	12.880 371	13.768 396
Sheep	El Obeid	Head	Actual Index	.574 100	1.428 249	1.528 266	1.298 226	1.717 299	1.530 267	1.476 257	1.499 261	1.444 252
Goats	El Obeid	Head	Actual Index	.233 100	.846 363	.753 316	.798 343	.762 328	.916 393	1.168 501	.707 303	.737 316
Gum Hashab ...	El Obeid	Kantars	Actual Index	.453 100	1.587 350	1.373 304	1.373 304	1.356 300	1.015 224	1.038 229	.893 197	.987 218
Gum Talh	Singa	Kantars	Actual Index	.194 100	.767 395	.793 409	.790 407	.592 305	.480 247	.510 263	.510 263	.605 312
Sesame	Tendelti	Kantars	Actual Index	.297 100	1.550 556	1.643 553	1.816 611	1.760 592	1.757 592	1.885 635	1.833 617	1.212 408
Groundnuts ...	Tendelti	Kantars	Actual Index	.201 100	.758 377	.920 458	1.060 527	.956 476	1.120 557	1.175 585	.863 429	.683 340

TABLE XLI.
ANIMALS SLAUGHTERED IN PRINCIPAL TOWNS.

	Cattle	Camels	Sheep	Goats
1946	34,274	1,871	192,225	24,800
1947	40,062	1,917	222,932	25,136
1948	39,033	1,892	258,692	21,353

TABLE XLII.
ANIMAL EXPORTS.

	Cattle		Camels *		Sheep		Goats	
	No.	Value	No.	Value	No.	Value	No.	Value
		£E.		£E.		£E.		£E.
1944 ...	34,611	306,270	41,500	825,000	104,620	227,694	3,226	4,123
1945 ...	36,281	354,059	45,500	1,040,000	116,954	263,786	—	—
1946 ...	30,314	352,217	46,500	1,055,000	62,744	162,077	—	—
1947 ...	19,001	277,538	50,000	1,200,000	36,906	111,922	—	—
1948 ...	21,583	318,158	54,650	1,335,000	36,070	128,318	—	—

* As estimated from recorded sales in Egyptian markets.

TABLE XLIII.
EXPORTS OF HIDES AND SKINS.

	Value or quantity	1944	1945	1946	1947	1948
Hides	Value £E.	129,154	171,813	70,921	115,116	131,931
	Tons	1,372	2,124	800	1,062	1,039
Sheepskins ...	Value £E.	58,697	87,988	145,568	169,899	213,362
	Tons	570	703	857	1,125	1,235
Goatskins	Value £E.	23,265	19,426	31,280	46,324	31,619
	Tons	148	49	117	175	145
Other hides and skins	Value £E.	77,908	129,297	90,354	61,415	13,338
	Tons	11	124	37	24	10
Leathers, heavy and light	Value £E.	58,679	104,579	109,794	30,323	47,727
	Tons	162	208	194	120	149
Total	Value £E.	347,703	513,103	447,917	423,077	437,977
	Tons	2,263	3,208	2,005	2,506	2,578

**TABLE XLIV.
COTTON STATISTICS
FEDDANS UNDER CULTIVATION.**

	Sakel type irrigated				Ameri- can irrigat- ed	Ameri- can rain- grown	Total all cottons
	Gravity irriga- tion	Pump irriga- tion	Flood irriga- tion	Total Sakel			
Average 1938/48	214,135	16,413	65,576	296,124	6,451	55,595	358,170
1944/45 ...	217,109	18,953	72,683	308,745	5,306	20,113	334,164
1945/46 ...	205,100	18,282	74,428	297,810	5,131	6,497	309,438
1946/47 ...	214,689	19,469	80,068	314,226	3,265	5,929	323,420
1947/48 ...	217,151	21,851	74,819	313,821	5,107	31,177	350,105
1948/49 ...	217,583	22,386	68,037	308,006	5,001	75,235	388,242

**PRODUCTION (in Kantars of 315 rotls)
(Seed cotton)**

Average 1938/48	860,720	49,437	151,192	1,061,349	19,876	53,616	1,134,841
1944/45	1,067,732	62,803	228,259	1,358,794	16,867	22,074	1,397,735
1945/46	687,614	47,368	148,617	883,599	9,951	7,668	901,218
1946/47	837,638	63,332	145,069	1,046,039	8,695	6,861	1,061,595
1947/48	734,307	71,740	178,031	984,078	13,512	42,369	1,039,959
1948/49*	889,949	88,420	130,000	1,108,369	18,011	78,360	1,204,740

* Estimated yield (December, 1948, forecast)

YIELD PER FEDDAN (in Kantars)

Average 1938/48 ...	4.0	3.0	2.3	3.6	3.1	1.0	3.2
1944/45 ...	4.9	3.3	3.1	4.4	3.2	1.1	4.2
1945/46 ...	3.4	2.6	2.0	3.0	1.9	1.2	2.9
1946/47 ...	3.9	3.3	3.3	3.3	2.7	1.2	3.3
1947/48 ...	3.4	3.3	3.3	3.1	2.6	1.4	3.0
1948/49* ...	4.1	3.9	3.9	3.6	3.6	1.0	3.1

* Estimated yield (December, 1948, forecast)

**EXPORT OF LINT COTTON
(Metric tons)**

**PERCENTAGE OF TONNAGE
EXPORTED TO VARIOUS COUNTRIES**

	Cotton	Cottonseed	Country	Sakel American			
				1947	1948	1947	1948
Average 1907/11	4,190	2,786					
„ 1912/16	3,185	5,542					
„ 1917/21	3,538	6,266	U.K. ...	58	82	92	99
„ 1922/26	9,608	19,392	India ...	34	16	—	1
„ 1927/31	23,972	53,902	U.S.A. ...	5	2	—	—
„ 1932/36	36,282	74,197	Others ...	3	—	8	—
„ 1937/41	63,334	77,458		100	100	100	100
„ 1942/46	55,280	95,894					
„ 1947	52,589	89,483					
„ 1948	50,118	90,387					

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TABLE XLV.

GUM

GUM ARRIVALS—BY PROVINCES.

(in thousands of kantars)

	1943/44	1944/45	1945/46	1946/47	1947/48	Average over past five seasons	Per cent Average to total
HASHAB.							
Kordofan ...	255.3	204.2	351.7	374.0	547.0	346.4	66.5
Darfur ...	16.9	9.0	9.7	37.0	41.7	22.9	4.4
Kassala ...	27.1	34.0	25.3	53.2	70.6	42.0	8.1
Blue Nile ...	72.1	90.7	112.3	97.2	128.4	100.1	19.2
Upper Nile	7.9	9.2	8.8	10.1	10.6	9.3	1.8
Total ...	379.3	347.1	507.8	571.5	798.3	520.7	100.0
TALH.							
Kordofan ...	1.2	2.1	1.9	1.1	1.4	1.5	6.9
Darfur ...	—	—	—	—	—	—	—
Kassala ...	6.8	12.0	11.2	19.6	20.3	11.2	51.9
Blue Nile ...	5.6	6.7	7.0	8.9	4.0	8.8	40.7
Upper Nile	.1	—	—	.5	—	.1	.5
Total ...	13.7	20.8	20.1	30.1	25.7	21.6	100.0

TABLE XLVI

GUM EXPORTS (METRIC TONS)

Period	Quantity	Period	Quantity
Average 1908/12 ...	14,188	Average 1933/37	20,604
„ 1913/17 ...	13,842	„ 1938/42	20,344
„ 1918/22 ...	13,906	„ 1943/37	20,621
„ 1923/27 ...	21,145	1948	34,658
„ 1928/32 ...	19,835		

TABLE XLVII.

MARKET ARRIVALS OF OTHER AGRICULTURAL COMMODITIES.

(Kantars)

Crop	1943/44	1944/45	1945/46	1946/47	1947/48
Sesame	308,500	344,404	269,298	344,129	340,473
Groundnuts	10,789	16,637	30,987	120,906	156,633
Melonseed	166,452	228,034	169,570	228,319	454,379

TABLE XLVIII.

TOBACCO ARRIVALS (Kantars).

EL FASHER.

	Quantity	Value £fr.
1944	18,303	33,806
1945	23,070	40,910
1946	21,815	85,072
1947	41,508	65,318
1948	14,175	25,177

TABLE XLIX.
DOMNUT ARRIVALS.

	Tohamiyam			Derudeb			Total both markets		
	Quantity tons	Value £E.	Average value £E.	Quantity tons	Value £E.	Average value £E.	Quantity tons	Value £E.	Average value £E.
1944 ...	386	1,505	3.896	2,151	8,881	4.128	2,537	10,386	4.093
1945 ...	595	2,981	5.010	2,810	11,928	4.264	3,405	14,909	4.378
1946 ...	785	5,215	6.643	4,049	31,144	6.699	5,434	36,359	6.691
1947 ...	587	3,660	6.235	5,281	33,261	6.298	5,868	36,921	6.291
1948 ...	306	1,025	3.335	2,764	10,119	3.661	3,070	11,144	3.630

TABLE L.
EXPORT OF PULSES.

	Haricot beans		Horse beans		Chick peas		Peas	
	tons	Value £E.	tons	Value £E.	tons	Value £E.	tons	Value £E.
1944	2,209	58,528	718	23,401	276	9,379	313	12,030
1945	376	10,047	542	16,506	591	14,715	198	8,576
1946	5,962	161,402	—	—	1,518	46,888	—	—
1947	2,634	135,933	2,346	66,332	2,976	113,035	58	2,658
1948	2,491	125,804	847	25,561	2,544	80,086	17	387

TABLE LI.
EXPORTS OF MINOR PRODUCTS.

	Raw ivory		Beeswax		Senna		Garad		Domnuts (all types)	
	Quantity Kilos	Value £E.	Quantity Tons	Value £E.	Quantity Tons	Value £E.	Quantity Tons	Value £E.	Quantity Tons	Value £E.
1944 ...	9,634	10,892	146	20,213	204	8,768	4,098	52,982	2,062	85,019
1945 ...	10,633	12,204	89	14,575	200	11,222	4,105	44,116	2,265	83,238
1946 ...	6,886	7,832	145	33,818	549	26,716	1,695	16,262	7,149	136,752
1947 ...	12,680	13,062	132	34,598	599	37,049	935	10,435	6,073	79,373
1948 ...	2,663	2,750	123	30,259	321	25,223	2,397	30,938	5,581	67,101

TABLE LII.

EXPORTS OF FISH AND MARINE PRODUCTS.

	Fish		Torchus shell		Mother of Pearl	
	Tons	Value	Tons	Value	Tons	Value
		£f.		£f.		£f.
1944 ...	1,714	102,104	489	10,995	149	25,164
1945 ...	1,628	114,021	537	10,660	239	43,624
1946 ...	1,939	145,324	2,130	52,300	165	32,316
1947 ...	1,929	119,395	2,039	78,853	288	47,589
1948 ...	1,241	82,985	1,477	58,714	136	19,331

TABLE LIII.

SHIPS ARRIVING AT PORT SUDAN.

	British		American		Other		Total	
	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage
1944	213	454,018	64	279,555	216	294,902	493	1,028,475
1945	226	500,269	10	51,131	241	293,079	477	844,479
1946	223	632,673	20	84,284	273	292,222	516	1,009,179
1947	332	1,280,870	41	176,823	365	488,412	738	1,946,105
1948	360	1,353,063	39	160,781	390	670,303	789	2,184,147

CHAPTER VIII—AGRICULTURE AND FORESTS.

General.

148. On the appointment of Miralai Abdulla Bey Khalil, O. B. E., M. L. A., Leader of the Legislative Assembly, as Minister of Agriculture in 20th December, 1948, the Department of Agriculture and Forests became the Ministry of Agriculture.

149. The 1948 rains varied from very poor in the north to very good in the south. Throughout the central belt some districts had excellent rains while others had practically none. The dura harvest seemed likely to be good. The Nile flood did not reach a high peak, and areas flooded in Northern Province were much below average.

150. The 1947/48 crop of long staple cotton was below average, the Gezira cotton producing about three and a half large kantars per feddan. Full details of the cotton crop are given subsequently in this report.

151. The 1948/49 cotton prospects were good. The Gezira crop was expected to produce nearly four kantars per feddan, but it was feared that the long cold spell at the end of the year might affect the final yield. The Gash and Baraka floods were remarkably dissimilar, with a record watered area in the Gash and an abnormally small area at Tokar. The Nuba Mountains acreage under American cotton was further increased and despite badly distributed rains the crop was expected to be a large one. The yield from the American cotton in Equatoria was estimated to be about the same as in the 1947/48 season.

152. Retirements and resignations more than counterbalanced new appointments during the year, and the staff position, especially as regards field staff, remained difficult.

Northern Province.

153. The 1947/48 winter crops were good, but the 1948 rains were exceptionally light, and the area under summer crops was below normal. The Nile flood never reached a high level and basins in Berber area had only 20,000 feddans flooded as compared with a yearly average of 30,000. Grazing was bad, forage in short supply, and the condition of animals poor. Cash crops were good, except for Egyptian beans which suffered from aphis attack, and a lot of money remained in cultivators' hands so that prices in the main markets advanced during the year.

154. The demand for new pump schemes showed the first signs of slackening and it became possible to assess what machinery, staff, oil and water would be required in the future. The total number of approved and recommended non-government pump schemes was 385; of which 51 were Co-operative. Analysis of costs and returns on co-operative schemes, which keep audited accounts, indicated that, at existing prices, a reasonably well run scheme could pay off all its capital cost in two crop years.

155. The ten government schemes grew over 7,500 feddans of winter crops, chiefly wheat and beans, and 6,000 feddans of summer crops, chiefly dura, maize, and lubia. At Aliab and Borgeig the first trial of farm boards in handling the scheme crops was successful. Sound development towards self-management was made by some of the farm boards. This was particularly noticeable at Borgeig, Ghaba and Nuri, but at other places, notably Kulud, the work of boards deteriorated.

Blue Nile Province.

(a) GEZIRA IRRIGATION SCHEME.

156. The canalized area remained as in 1946/47. The following crops were grown in 1947/48 :-

	Sudan Plantations Syndicate feddans	Kassala Cotton Company feddans	Total feddans
Cotton	166,946	39,400	206,346
Dura	83,587	19,717	103,304
Lubia	46,657	8,731	55,388
Wheat	1,033	—	1,033
Groundnuts	3,512	305	3,817
Vegetables	2,198	968	3,166
	303,933	69,121	373,054

157. The cotton crop was established without difficulty but fell away in October. On rainfall criteria the estimated yield was 3.5 kantars per feddan. The final average yield of 3.39 kantars was another striking example of the relation between rainfall and yield. 34,092 feddans were sprayed against jassids and 22,560 feddans received ammonium nitrate at the rate of 80 kilograms per feddan.

158. The following table shows the average yields per feddan for the past three years :—

	1945/46	1946/47	1947/48
Sudan Plantations Syndicate	3.407	4.207	3.374
Kassala Cotton Company	3.177	3.552	3.482

159. Like the cotton, dura started well but later had a starved appearance and yields were disappointing. The entire crop of cotton was disposed of to the Raw Cotton Commission (United Kingdom) and shipped to England, except for a small quantity of the lower grades which were sold to India.

160. Conditions were favourable for the establishment of the crop in 1948 except for an abnormally violent storm in late September which, in its path, battered the plants out of the ground. Beneath the egrets' roosts the ground was strewn with white bodies. Resowing of small areas continued until October.

The following areas of crop were sown in 1948 :-

						feddans
Cotton	..	..	..	..	..	206,778
Dura	..	..	..	..	..	114,200
Lubia	..	..	..	..	..	54,422
Groundnuts	..	..	..	..	..	2,336
Wheat	..	..	..	..	..	2,619
Vegetables	..	..	..	..	..	3,186

161. The dura grew well throughout and gave a much better yield than in 1947 except in the southern blocks where dura midge spoiled a potentially heavy crop. This pest has caused very heavy losses of both irrigated and rain grown crops in recent years.

162. The areas of cotton affected by late storms made a good recovery and the main crops developed without a check until, by the end of November, a visual estimate of 4½ kantars per feddan was the opinion of many. The crops seemed to stand still during December and estimates fell to the region of the forecast formula, 4.21.

163. The comparative ease of establishment of the dura and cotton enabled earlier attention to be given to the lubia crop which was consequently better than usual.

164. Labour was adequate.

165. 77,840 feddans were sprayed against jassids by Messrs. Pest Control Ltd., by tractor-drawn sprayers, except at Turabi where a successful trial was made with helicopter spraying. There is evidence that the jassid pest is increasing in the southern half of the scheme. Other pests and diseases were not serious. 37,646 feddans were given a dressing of 80 kilograms ammonium nitrate per feddan.

166. The areas of the different varieties of cotton sown were :—

						feddans
Domains Sakel	..	..	..	..	..	101,834
X1730A	..	..	..	..	..	101,944

167. There was a demand for expansion of the type of agricultural education given by the Barakat Training Farm, but immediate expansion was restricted to sixty entries. Accommodation was the limiting factor and it was only by the prompt help of the Sudan Plantations Syndicate in erecting the necessary buildings that it was possible to allow an entry of sixty. Of the 19 trainees who left at the end of the season, twelve took up holdings and seven were working on their father's holdings.

(b) *White Nile Schemes Board.*

168. The number of tenancies and the areas of the various crops in 1947 were :—

	No. of Tenancies	Area in feddans				
		Cotton	Dura	Wheat	Lubia	Veg. and Gardens
Abdel Magid ...	1,999	9,995	6,294	3,871	5,994	67
Fatisa ...	321	1,288	987	227	945	125
Hashaba ...	455	1,820	1,487	434	1,137	62
Wad Nimr ...	68	340	215	76	204	22
Dueim ...	95	380	277	94	235	113
Um Gerr ...	444	2,219	1,758	444	1,422	281
Total ...	3,382	16,042	11,018	5,146	9,937	670

Abdel Magid was sown with X1730A and the pump schemes with Sakel cotton. Although a poor year for growth, the application of manure and the spraying treatment against jassids gave good yields. The following table shows the cotton yields, expressed in kantars (315 rotls) per feddan for the last three seasons :—

	Kantars per feddan		
	1945/46	1946/47	1947/48
Abdel Magid ...	3.00	3.00	3.07
Fatisa ...	1.94	1.92	3.63
Hashaba ...	2.00	1.64	4.01
Wad Nimr ...	3.32	2.80	2.91
Dueim ...	2.23	2.42	2.84
Um Gerr ...	2.69	3.78	3.25

169. At Abdel Magid, dura yielded 5 ardebs per feddans and an excellent crop of lubia was produced. Good yields were also obtained from wheat on the free feddan, but on the fringe areas, owing to neglect by the tenants, the crop was poor.

170. On the pump schemes the lubia crop was fair, wheat yields were good and dura gave from 4 to 5 ardebs per feddan.

171. The 1948 cropping was as follows :—

	Areas in foddans.				
	Cotton	Dura	Lubia	Wheat	Vegetables & gardens
Abdel Magid	9,985	5,991	5,991	3,882	99
Fatisa	1,288	1,209	932	14	123
Hashaba	1,978	1,704	1,138	26	62
Wad Nimr	340	215	204	76	22
Dueim	380	272	218	89	102
Um Gerr	2,517	1,650	1,365	453	272
Total	16,488	11,041	9,848	4,540	680

All the cotton grown was of the variety X1730A. The crop was got in without much difficulty except at Abdel Magid where sowing was retarded by heavy rains in mid-August. Once again dressings of ammonium nitrate were given, and practically the whole crop was sprayed against jassid attack. By the end of the year the cotton was looking well and yields should be above average. Dura yields were good except at Um Gerr and the average yield is expected to be about 5 ardebs per feddan. A very good crop of lubia had been established by the end of the year and there was a marked improvement in this respect at Um Gerr. The area under wheat was less than in 1947 owing to most of the Hashaba and Fatisa tenants preferring to grow dura on their free foddans. The 'beladi' variety of wheat was grown on all schemes except at Wad Nimr where 'Hindi' was sown. At the end of the year the crop was looking well.

Tenants councils continued to work well but still needed supervision.

(c) *Private Schemes.*

172. In 1947/48 these schemes had 15,758 foddans of X1730A cotton which yielded 50,372 kantars. The same variety was sown again in 1948 on approximately 16,000 foddans. Estimates of yield varied widely but a total yield of 60,000 kantars should be exceeded.

(d) *Rain Cultivation.*

173. The rains varied greatly throughout the province. In the north there was practically no rain, in Kosti District rains could be termed satisfactory, while in the Fung area there were long periods of drought but sufficient rain to produce average dura crops. Apart from some areas which were burned off early, harigs again did well,

Although the rainfall was not heavy at Jebel Moya, its distribution proved just right for the catchment and the new hafir filled in a night, catching 60,000 tons of water. In Kosti District surveys were made and sites selected for cattle hafirs. A site for a cultivation hafir was also selected, and a complete programme of agricultural reconnaissance of the east bank of the Nile in Kosti district was begun.

Kassala Province.

(a) *The Gash Delta.*

174. At the end of 1947 the areas and estimated yields of the 1947/48 Gash cotton crop were as follows :—

Variety.	Effective area (feddans)	Estimated yield (Kantars of 315 rotls)
Sakel	8,365	14,936
Evelyn's Domains Sakel	4,809	6,732
X1730A	19,856	42,531
Bar X1730L	114	228
Bar 4/5	96	144
	33,240	64,371

175. Apart from serious damage done by leaf curl to the early sown Sakel, pest and disease incidence was light. The crop progressed favourably and picking was carried out well. The final yield was better than had been expected—73,128 kantars, made up as follows :—

Variety.	Effective area (Feddans)	Yield (Kantars)	Yield per feddans (Kantars)
Sakel	8,365	16,130	1.93
Evelyn's Domains Sakel	4,809	6,881	1.43
X1730A	19,856	49,809	2.51
Bar X1730L	114	172	1.51
Bar 4/5	96	128	1.32
Total	33,240	73,120*	2.20

* There were 8 kantars of sweepings which brings the total yield to 73,128 kantars.

The seed cotton was sent to Port Sudan where it was classified and ginned.

176. The 1948 Gash flood was very erratic in the early stages but steadied towards the end of July. From mid-August to the 10th September there was an excellent continuous flow. 360 million cubic metres of water were estimated to have passed Magauda head regulator. Despite this comparatively small discharge a record area of land was flooded. 48,878 feddans were sown with cotton and 16,493 feddans were allotted to dura. An effective area of 46,537 feddans of cotton was established. 600 feddans of heavy grass were cleaned by disc cultivators drawn by heavy tractors, and the rest of the area was hoed well by hand. After a severe attack of thrips the cotton recovered and, except for leaf curl on the limited area of early sown sakel, was looking very well at the end of the year. The provisional estimate of yield was 90,000 kantars of seed cotton. The distribution between the several varieties was as follows :—

Variety.	Effective area (feddans)	Estimated yield in kantars (315 rotls).
Domains Sakel	16,801	29,265
Evelyns Sakel	2,549½	4,500
X1730A	26,051½	54,190
Bar X1730L	900	1,440
Sakel Bar 14/7	105	224
Bar X1730L1	125	375
LCR Sakel	5	6
	46,537	90,000

177. There was a great demand for dura allotment, particularly by Beja tribesmen from the north, and the area sown was extensive. Very little damage was caused by birds, but there was considerable loss from smut as many cultivators did not treat their seed with copper carbonate. The crop was considered to be the best for many years. Implements for sedge eradication did not arrive but good results were obtained from the cultivation of other heavily grassed areas by tractors pulling one-way discs on watered land before sowing. Sowing immediately after this treatment was found to be more laborious than usual but the expense of second and later hoeings was almost eliminated.

178. The canal committees functioned satisfactorily and were of constant help to the station inspectors.

(b) *Tokar Delta.*

179. The 1947/48 cotton crop of 41,580 feddans at the end of 1947 was estimated to yield fully 100,000 large kantars of seed cotton. A prolonged spell of dull cold weather in the first two months of 1948 caused the crop to be late in maturing. Pests and diseases did little damage except for a heavy attack of Asal on 3,000 feddans,

180. There was an abundant supply of labour for picking, and of camels for transporting the crop from field to market.

181. The final yield was 104,911 large kantars, averaging 2.5 large kantars per feddan. The arrangements for handling the crop were the same as the five previous seasons. The British Raw Cotton Commission having bought the crop, the Ministry arranged for the seed cotton to be purchased and handled by the six principal firms in the trade who delivered the lint and seed to warehouse in Port Sudan ready for export.

182. The value of the crop at Tokar was £E. 1,637,699.583 mms, which was easily a record. The cultivators' share of this averaged £E. 10.927 mms per large kantar of seed cotton. The increased wealth in the delta was reflected in the large number of new and improved houses built.

183. An extensive programme of flood protection and flood direction earthworks was undertaken in the first half of 1948.

184. Application of the new policy of reducing excessively large holdings was continued and all such holdings were reduced to a maximum of 500 feddans in the eastern and central sections of the delta. A scheme for the closer association of the cultivating population with the agricultural administration of the delta was brought into being by the formation of a local agricultural advisory committee and five delta territorial agricultural sub-committees.

185. The 1948 Baraka flood was late, exceptionally small in volume, and most unsatisfactory in the distribution of flushes. After an early and prolonged haboob season the first flush reached the delta on 8th August. There were six flushes in August and one light flush in September. This compared with ten to twelve flushes in an average season. The total area covered by the flood was estimated at 26,000 feddans, of which 19,000 were well or moderately well flooded. Fortunately two heavy rainstorms in October produced a heavy flush of water on the low areas and provided a further potential cultivation area of some 9,000 feddans. 24,200 feddans were sown to cotton and 9,160 feddans to grain. Germination was satisfactory, and the crops made good early growth. Strong hababai winds in October battered the young cotton plants and heavy weed growth dried out considerable patches of land and necessitated four weedings. 20,685 feddans of cotton and 7,735 feddans of grain were effectively established. Rains in December helped the growing crops and estimates of yields were 3,325 tons of grain and 47,600 large kantars of seed cotton.

(c) *Gedaref District.*

186 Rainfall varied greatly in different parts of the district. The Butana in particular had poor rains and cattle suffered from starvation. Other areas had very good rains and overall crop yield was good. 30,000 tons of dura were sold in the markets and this represents a portion only

of the total production. Large quantities were stored underground much grain was transported direct from threshing floors to neighbouring districts, and some was undoubtedly smuggled across the frontiers. 6,000 tons of simsim were sold openly and smuggling across the frontier was on a large scale. 350,000 feddans of harig land were fire-protected, for the 1949/50 season and 40,000 feddans were fire-protected for grazing. Exceptionally poor rains at Kafai adversely affected the experimental work there but cotton and groundnut yields gave promise for the future.

Mechanised Crop Production.

187. The final yield from the reduced area of dura in the 1947/48 season was 840 tons of grain. The results from the experiments made during that season showed that labour was still required to thin, weed after sowing, and harvest the crop. It was decided therefore to bring local cultivators into partnership with the scheme and to allot a holding of 28 feddans to each. In 1948 this policy proved a success although the results brought out the importance of cultivators living on the scheme.

188. It is the intention to develop the scheme on this system of partnership with participating cultivators, but the interests of large cultivators have not been forgotten. It is not anticipated that they will have a place on the scheme but they, or their representatives, will be given facilities to learn how to use machinery, with a view to running fully mechanised farms of 200 to 300 feddans of their own.

189. A Research Engineer, appointed by the Ministry, was of great assistance in adapting old machinery and in advising on the best type of implement and tractor to be used. With his help it was hoped shortly to be able to produce crops with a still greater reduction of hand labour.

190. Experiments on varieties, cultural operations, sowing dates and spacing of dura were continued, and a large number of other crops was tried out. No oil seed has yet been proved suitable for this soil and rainfall, and the search continues.

Kordofan Province.

191. In 1947 the first step in the re-expansion of cotton growing in the Nuba Mountains was taken. The area sown was assessed at 22,717 feddans and the crop produced 29,676 kantars (315 rotls) of seed cotton. The figures of yields for the period 1943 to 1947 are :—

	Yield in Kantars (315 rotls)				
1943/44	11,461
1944/45	19,411
1945/46	5,645
1946/47	2,104
1947/48	29,676

192. In 1948 the rainfall throughout the Nuba Mountains was below average and unfavourably spaced. Heavy falls occurred before they were required but there was a prolonged drought during the critical growing period in July and early August, and in all areas the rains terminated abnormally early. Cotton seed for sowing was readily taken up by cultivators and it is estimated that 65,700 feddans were sown. The poor mid-season rains stunted the crops early growth and the abrupt cessation of the rainy season shortened the growing period and resulted in an early maturing crop. Pests and diseases did not do much damage although pink and Egyptian boll worms and cotton stainers were in evidence in most areas. The assessed areas and estimated yields were as follows :—

Ginnery Area.				Feddans	Estimated yield in Kantars (315 rotls)
Um Berembeita	..	..	..	7,000	2,600
Abu Gebeiha	..	..	..	7,600	7,300
Kalogi	..	..	..	7,000	7,300
Talodi	..	..	..	11,400	12,700
Kadugli	..	..	..	15,700	23,800
Dilling	..	..	..	9,000	4,100
Lagawa	..	..	..	8,000	9,500
Total	..	..	..	65,700	67,300

193. The variety of cotton sown was BAR SP 84, except at Lagawa where the seed sown had to be locally grown seed to some extent mixed. There were, in addition, 95 feddans of BAR SP 84 cotton sown on the Abu Habl scheme, expected to produce 190 kantars of seed cotton.

194. In general the rainfall was more favourable for grain cultivation than for cotton, but cotton areas were everywhere increased from the previous season. The grain crops in the Nuba Mountains area were estimated to produce 83,500 tons. The 'Goz' land dukhn varied greatly but was expected to yield a little above average.

195. The high prices of sesame prevailing during the summer encouraged widespread sowing, and, on large areas where dukhn had been killed off by the July drought, sesame was sown. Climatic conditions favoured the crop, and pest incidence was negligible until harvest. As a result the yield was the highest on record and the province's total crop was estimated at 20,000 tons, more than the normal annual consumption of the whole Sudan.

196. The area sown to groundnuts was approximately the same as in 1947, but yields were poor. The melon crop was well below average, while gum prospects were slightly above average.

197. The Soil Conservation Board's hafir digging team commenced work in October on a big programme of work in the province. At the end of the year 18 hafirs (about 160,000 cubic metres) had been dug, three in Eastern Kordofan and the rest in Northern Tegale. A road making team worked ahead of the digging machinery grading and scraping traces to permit access of the "carry-alls" and at the same time opening up extensive areas for agricultural development.

198. A field scale experiment was started at Sunjikai near Dilling, situated approximately on the 600 millimetre isohyet, to study the possibilities of groundnuts production by mechanised cultivation. The preliminary results showed the superiority of Barberton groundnuts over all other varieties tried and the marked improvement of yield from phosphatic manures. The first year's work provided invaluable experience and data which indicated that, given suitable types of machinery, groundnut production by mechanised cultivation is likely to be an economic enterprise in this area.

199. As a result of the disastrous midge attack of 1947 on the dura crop, operations on the Abu Hahl scheme were restricted to an experimental scale. Dura midge did little damage and both quick maturing and heavy duras yielded about $5\frac{1}{2}$ ardebs per feddan. Yields of cotton up to the end of the year demonstrated the necessity of planting early.

200. Experimental work on "harig" grass protection was undertaken at Tegale. Grass fires were abnormally prevalent in the province.

Equatoria and Bahr el Ghazal Provinces.

201. The area sown to cotton in 1947 was assessed at 8,390 feddans. The variety was SP 84 and yielded 12,693 large kantars of seed cotton. There was some delay in getting the Nzara ginning factory ready and part of the crop from the Yambio district had to be sent to Maridi for ginning. 1948 started badly with a very small carry over of grain from the preceding poor season. A drive was made to get quick maturing crops sown as early as possible with the result that by July supplies were improved. Weather conditions throughout the year were favourable from the cultivators' point of view. The rains of April were good in most districts enabling early crops to be sown, the usual short dry period of June scarcely materialised, and rains continued well into December in the southern districts of the provinces. In most areas rainfall for the year was above the average of the preceding 25 years. Crops were good; the early maize, simsim and groundnuts did well, and the late maturing duras were excellent. Cassava, following the scarcity season when it was the main food of numbers of people, has increased in popularity and efforts were made to extend its cultivation in the east and in Jur and Dinka areas. Neither Equatoria nor Bahr el Ghazal can be considered self-sufficient in food production, but the situation in 1948 was considerably better than in normal years.

202. In the Maridi ginning factory area, the cotton acreage was smaller and sown late, after food crops were established. More cotton was sown in the Nzara ginning factory area than in the previous season but poor germination on about a quarter of the sown area reduced the yield estimate. The variety sown in both districts was again SP 84 and the estimated yield was 11,430 large kantars of seed cotton from an assessed area of 9,480 feddans. The prices paid were Grade I—800mms, Grade II—600mms and Grade III—400mms per 100 rotls of seed cotton.

203. In December 1948 the Ministry's first division staff at Maridi was incorporated in the agricultural section of the Equatoria Projects Board by secondment to that body.

204. In Yambio District the agricultural section obtained seed of Nigerian oil palms of proved worth and about 60 per cent germinated before the end of the year.

205. The Jaggery sugar plant was completed at Sakure during the year by the Equatoria projects Board. The small hand cane presses continued to work throughout the year.

206. Dura was grown as a cash crop in one resettled area and from an area of 350 feddans the yield was estimated to be about 100 tons.

207. At Tonj the experimental work on the toiches using tractor pulled implements was continued.

Pomology and Horticulture

208. The date crop in Northern Province in 1948 was by far the heaviest on record. Crop tests showed that 1,770,389 palms yielded about 45,500 tons valued at ££. 766,500. Prices were much more stable than during the previous year and, considering the low production costs, must be considered highly satisfactory.

209. It was a poor year for mangoes, only about half the weight of the 1947 yield being harvested. 4,970 grafted plants were distributed and planted under supervision.

210. Citrus yields were slightly better and the Government crop was estimated to be worth about ££. 7,000. In spite of all efforts the demand for grafted citrus trees still exceeded the supply.

211. Selective propagation of citrus and mango continued at the Horticulture Section nurseries in the central provinces. Distribution was hampered by the petrol shortage. Approximately 6,000 grafted citrus plants were sold and 8,000 remained available for distribution at the end of the year. The production of mango grafted plants was limited by the number of parent trees available for in-arch grafting but 600 were distributed. Total receipts were ££. 2,200.

212. In Kassala there was a considerable drop in onion and banana prices, while dura prices soared to high levels,

213. Horticultural shows in many of the main centres had record attendances and provided reliable evidence of the great interest taken by all classes of the community in the products of amenity and commercial gardens.

Forestry Division.

214. Noteworthy events of the year included the posting of a conservator of forests to Kordofan, the increased acreage of plantations established in the southern division, and the virtual completion of war-time arrears of re-afforestation in the southern Blue Nile reserves. On the utilisation side the arrivals at markets and exports of gum broke all records, and negotiations were completed with Sudan Railways to supply their entire needs in wooden sleepers, amounting to 175,000 per annum. The forest demarcation and reservation programme made satisfactory progress, although signs were not lacking of a marked increase in land pressure by agricultural and grazing interests particularly in the centre and north.

215. Areas planted or sown amounted to 2,770 feddans. The total area of gazetted central forest reserves now amounts to 57,305 feddans, with 4,625 feddans of provincial reserves. Proposed reserves which have been surveyed, but in which reservation proceedings are not yet complete, amount to 376,863 feddans.

216. Projects undertaken on behalf of the Soil Conservation Board included Tutti Island sand fixation experiment, sand-trap fences and enclosures on the Khartoum, Omdurman and Khartoum North perimeter lands, firelines, and experiments with 'live' fire breaks.

217. 10 forest rangers completed the rangers' school training course and 15 new trainees were enrolled. The southern training school moved from Gumbiri to Yambio. Exhibits were staged at the main agricultural shows.

218. 294,439 cubic feet of sawn timber, including railway sleepers, were produced in the division's sawmills and sawyers' camps, compared with 285,686 cubic feet in 1947.

219. Arrivals of hashab gum at markets in the 1947/48 season amounted to the record total of 35,700 tons (the previous record of 28,900 tons was in the 1939/40 season). Exports during 1948 of all kinds of gum also showed a record total of 34,655 tons valued at £E. 1,586,352.

220. 392,694 stacked cubic metres of firewood were cut and supplied to Sudan Railways and Steamers, to other Government departments as a free service, and to the public in the Khartoum area. 16,242 tons of firewood were railed to the Khartoum area as a price control and anti-deforestation measure. Charcoal despatched from eastern division forests to the Gezira and Khartoum area amounted to 18,000 tons.

221. 47,000 poles from 'thinnings' in plantations were cut and sold. Of these 45,468 were sold at Suki timber depot to meet the demand for building timber in the Gezira.

222. Exports of garad (used by Egyptian tanners) rose to 2,397 tons, but exports of donnuts, slices and drilled buttons fell to 5,486 tons.

Mechanical Division.

223. The main features of the year were the start made on the replacement of obsolete and inefficient plant on pumping schemes, the coming into operation at Wad el Huri of a plant depot as a separate unit covering the operations of excavating and agricultural machinery and the re-opening of all Nuba Mountains ginneries.

224. Machinery for new projects began to arrive and it was possible to commence work on the seasoning kilns and reorganisation of Katire saw mill. Some new oil mill plant for Kordofan and Equatoria also reached the Sudan but not in sufficient quantities to justify starting work on erection. Equatoria Projects Board also received consignments of sugar factory and oil mill machinery and a considerable amount of work was done by the division on planning for this Board.

Cotton Area and Output in the last five years.

225. The following table gives the area, in feddans, of cotton growing for the last five seasons under the various methods of cultivation :—

Season	Rainland	Artificial Irrigation	Floodland	Total
1943/44	15,775	238,673	52,778	307,226
1944/45	20,113	241,368	72,683	334,164
1945/46	6,497	228,515	74,428	309,440
1946/47	5,929	237,423	80,068	323,420
1947/48	31,177	244,109	74,819	350,105

The output of saket and American cotton for the same period expressed in kantars of 315 rotls of seed cotton as weighed in at the ginneries was as follows :—

Season	Saket	American	Total
1943/44	810,299	29,740	840,039
1944/45	1,357,736	37,354	1,395,090
1945/46	884,580	17,765	902,345
1946/47	1,042,938	15,582	1,058,520
1947/48	985,082	56,895	1,041,477

Cotton Yields.

226. The following table shows the final yield of cotton from all the various centres of production for season 1947/48 :—

Type of cotton and locality	Amount stated as harvested		Amount received at ginning factories		Equivalent in bales of 430 lbs.
	Area feddans	kantars (315 R)	kantars (315 R)	lint kantars (100 R)	
<i>A. Sakel Type.</i>					
S.P.S. Ltd. ...	113,949	332,558	700,463	759,882	174,949
K.C.C. Ltd. ...	92,397	367,904			
<i>Total Gezira area</i>	206,346	700,462	700,463	759,882	174,949
Tokar Delta ...	41,579	104,911	104,680	111,320	25,629
Gash Delta ...	33,240	73,120	73,335	76,645	17,646
GOVERNMENT ESTATES					
Abdel Magid ...	9,985	30,702	* 30,661	* 32,895	7,573
Fatisa ...	1,288	4,661	* 21,346	* 20,677	4,760
Hashaba ...	1,820	7,305			
Um Gerr ...	2,219	7,205			
Wad Nimr ...	340	990			
Dueim ...	426	1,207	2,395	2,803	645
Gondal ...	642	2,447			
Research Farm ...	178	696	†† 696	†† 866	199
PRIVATE ESTATES.					
White Nile ...	15,758	50,372	51,486	58,567	13,484
<i>Total Sakel Type</i>	313,821	984,078	985,082	1,063,655	244,885
<i>B. American Irrigated</i>					
Private Estates Zeidub ...	5,107	13,512	13,512	14,321	3,297
<i>Total American Irrigated</i> ...	5,107	13,512	13,512	14,321	3,297
<i>C American Rain Grown.</i>					
Kordofan ...	22,787	29,676	30,187	28,537	6,570
Equatoria ...	8,390	12,693	12,696	12,448	2,866
<i>Total rain Grown</i>	31,177	42,369	42,883	40,985	9,436
<i>Total American Type</i> ...	36,284	55,881	56,395	55,306	12,733
<i>Total all varieties</i>	350,105	1,039,959	1,041,477	1,118,961	257,618

* Extracted from Sudan Plantations Syndicate returns.

†† Ginned at the Gezira Research Farm.

Cotton Ginned

227. The Torit ginning factory was moved to Nzara during the year. Dilling and Um Berembeita ginneries did not operate.

The total quantity of cotton received at ginneries amounted to 1,040,781.56 kantars of 315 rotls seed cotton. The out-turn from this amounted to :—

1,118, 95.83	kantars of 100	rotls	lint
13,786.41	„	„	scarto
92,934	tons of		seed

The amount of seed excludes the amounts produced at the southern ginning factories. The total production of seed from these factories amounted to roughly 5,180 tons of which 1,781 tons were exported and the remainder was used for sowing, suction gas fuel or destroyed. The ginning out-turn for lint was again satisfactory, the average lint figure for sakel and American being 107.9 and 98.06 rotls respectively per kantar of seed cotton. The oil extraction plant at Sennar produced 177 tons of oil.

Cotton sales.

228. Except for a small quantity sold to India, the crop was sold to the British Raw Cotton Commission and shipped to England.

Cotton Crop Prospects

229. The following table gives the areas cropped with cotton, and the probable yields for the current season :—

						Feddans	Estimated Yield (kantars of 315 rotls)
<i>Sakel Type</i>							
S.P.S. Ltd.	Sakel	..	..	..	..	104,834	374,431
K.C.C. Ltd.	X1730A	..	..	..	..	101,944	460,787
<i>Total Gezira</i>						206,778	835,218
Research Division	..	..	..	..	..	228	1,200
Gondal	..	..	..	..	..	642	2,500
Tokar Delta	..	..	..	..	..	20,685	50,800
Gash Delta	..	..	..	..	..	46,537	90,000
GOVERNMENT ESTATES.							
Abdel Magid	..	..	..	..	..	9,985	40,000
Fatisa	..	..	..	..	..	1,288	5,900
Hashaba	..	..	..	..	..	1,820	7,650
Um Gerr	..	..	..	..	..	2,517	11,180
Wad Nimr	..	..	..	..	..	340	1,300
Dueim	..	..	..	..	..	421	1,480
PRIVATE ESTATES.						16,000	60,000
<i>Total Sakel (a)</i>						397,241	1,107,288
<i>American Type</i>							
(a) IRRIGATED.							
Zeidab	..	..	..	..	..	5,001	18,011
<i>Total Irrigated (b)</i>						5,001	18,011
(b) RAIN GROWN.							
Kordofan	..	..	..	..	..	65,806	69,800
Equatoria	..	..	..	..	..	9,485	11,430
<i>Total Rain Grown (c)</i>						75,291	81,230
<i>Total American (b+c)</i>						80,292	99,241
<i>Total Sakel and American a + (b and c)</i>						387,533	1,206,469

Locusts.

230. There was no invasion by swarms of the desert locust into the winter breeding area on the Red Sea littoral early in 1948 and a local outbreak in April was suppressed. No reports of tropical migratory locusts were received.

Research Division.

231. This report covers the period from May, 1947 to April, 1948. The main research was directed at Gezira problems, with other work principally in the rainland area near Gedaref, where important large scale trials of mechanical crop production were being made. The new Research Farm at Yambio in Equatoria Province was prepared for the first sowing of crops.

232. Close correlations exist between yields of cotton in the Gezira and rainfall in the area. Using these correlations the estimated average yield for the whole area was 3.5 kantars per feddan. The actual yield was 3.39 kantars per feddan. There is no doubt that the discrepancy would have been considerably larger had not 34,000 feddans of cotton been sprayed against jassids. This method of estimating crop yields in advance is believed to be unique. A more important aspect of the correlation between yield and rainfall is that it directs research to discovering the way in which rainfall influences yield. If this mechanism is discovered in full it may well be possible to modify it favourably to the crop. In fact part of this mechanism is known already, for the known adverse effect of the rainfall of the year previous to sowing is related to the extent of weed growth during that year. This effect can be ameliorated by weeding the land in the year before it is to grow cotton. A second, and more important part of the rainfall effect works in a way at present unknown. Its discovery is one of the most important tasks of the Research Division.

233. The most serious pest of cotton, the jassid, made a heavy attack in the northern half of the Gezira and on some of the White Nile schemes. The attack was countered by the spraying of 45,000 feddans with D. D. T. by Messrs. Pest Control, Ltd. A very large amount of crop was saved by this measure. Although spraying is a powerful and profitable method of bringing jassid attack under control, considerable effort was directed to the search for a means of controlling the insect in the dead season before the cotton is sown. It was found that the insects spend the dead season mainly in gardens and riverside cultivations, but spraying of these failed to prevent attack on nearby cotton. It appeared that the multiplication of the pest on cotton is so rapid that it can quickly reach damaging numbers no matter how few jassids are present to start with. It is interesting to recall that the spraying commercially of 45,000 feddans of cotton followed the the first successful experimental sprayings in so short a period as five years.

234. Cotton pests apart from jassids caused some damage. Early thrips caused the worst damage on record in the central Gezira, and late thrips caused some serious local damage on some of the White Nile schemes. As usual in a season of the light early rain, flea beetle did considerable damage to young seedlings, some control being exercised by dusting with benzene hexachloride. Blackarm in the Gezira scheme was light, with a few heavily infested patches, but with light rains no widespread attack developed. Leaf-curl, though severe in some areas, was on a reduced scale compared with the previous season. It was

suggested that a capsid bug was responsible for boll shedding, which causes loss of crop in the Tokar Delta. It was not however certain that this loss was not due to severe growing conditions, and it was planned to investigate the phenomenon in the following season. In the Gash Delta thrips attack did considerable damage and control measures were being considered. It has been suggested that X1730A cotton, though showing no leaf curl symptoms can harbour the virus and that from such plants the disease can be transmitted by white fly to the susceptible sakel cotton. This important point was investigated but attempts at experimental transmission of the disease from X1730A to susceptible sakel were not successful. Leaf curl is a serious disease in the Gash Delta and inspections made there showed much ratoon cotton which acts as a reservoir for the disease and tends to early infection of the following year's cotton.

235. On the Gezira Research Farm a wide variety of field experiments was made, covering cultural treatments, manuring, rotations, variety testing and development studies. Yields on rotation experiments were low or very low; in many cases these low yields were due to the thrips attack mentioned above. Generally speaking the yields on the various rotations under trial were in accord with the result of the previous seasons. The old-established three-course rotation has now been running for 20 years, and must be taking its place among the world's classical rotation experiments.

236. Long term fallow-hoeing experiments continued to demonstrate the large increases in yield which follow this cultural practice. The standard Gezira rotation includes cotton which follows two fallow, and the effect of hoeing both these fallows is being investigated. Hoeing both fallows gives better results than hoeing only one fallow; which it is most profitable to hoe if only one is hoed depends on which receives the higher rainfall, since that fallow carries the larger crop of weeds. An experiment in the northern Gezira in which fallows were watered as well as hoed gave large increases of crop in the following year, but a similar experiment in the central Gezira gave conflicting results.

237. Sowing date and variety trials were conducted at various sites. Early sowing usually results in improving the grade of the cotton and such experiments are therefore of great importance. Early sowings are liable to severe attack by blackarm disease, but the new blackarm resistant strains offer a practical means of safely advancing the sowing date. Apart from the question of grade, early sowings usually out-yield the later sowings. The very important influence of grade on the price of cottons makes attempts to improve it of prime importance. Hair and spinning tests on experimental cotton indicated marked differences in grade of cottons picked at dates as little as 9 days apart, and showed how the grade of the crop may be influenced by such factors as technique of picking and maturation date.

238. Important advances have been made in recent years in the control of weeds by chemicals. No results are yet available on the

control of fallow weeds by such means. The control of weeds in cotton has been studied and some success achieved. It was also found that certain chemical weed killers adversely affected the germination of cotton seed.

239. In previous years small scale experiments on the early stopping of watering had shown that a loss of 5 per cent of cotton only was to be expected if watering ceased in mid-February, and 10 per cent loss if it stopped at the end of January. In the season under review watering was stopped early on 870 feddans of the commercial area, and the loss of crop determined by comparison with a similar area which received normal watering and resembled the experimental area closely in soil fertility and cultural treatments. The experiment was carried out in ten areas situated in various parts of the scheme. The government also made similar experiments on its own areas. On the main experiment a loss of crop of 8.1 per cent resulted from early closure of water, and this loss was small compared with the amount of water saved. This is a most important result, and in principle, though not at the moment in practice, shows how stored water might be used effectively than at present.

240. Cotton breeding policy followed the lines of the previous year's work, with increased attention to the breeding of jassid resistant strains of the commercial cottons. Production of blackarm resistant sakel carrying one factor for resistance, and blackarm resistant 1730 carrying both one and two resistance factors were carried a stage further. Bulking up was continued, and the new strains were tested against their respective controls with promising results. Leaf-curl resistant sakel was bulked and tested for hair characters against ordinary sakel. The results were disappointing. The main hairiness genes were transferred to Domains Sakel from various hairy types. The presence of leaf hairs provides a mechanical protection against jassid attack, but the introduction of genes for hairiness must not be accompanied by any loss of the lint quality of the sakel parent. The results of this season's crosses will be tested in the cotton season 1948/49.

241. At Zeidab, where American cotton is grown, selections for earliness were made. An earlier maturing cotton would cause a reduction in damage from pink bollworm and the capsid bug.

242. In the Nuba Mountains, half the area was sown with the new strain, blackarm resistant S. P. 84, and this out-yielded the old pump scheme strain. In the following season almost the whole area should be sown with the new cotton.

243. The value of commercial cotton depends to large extent on its uniformity and reliability, and much work was done on the purification and maintenance of the lint characters of the two Gezira varieties. The technique was also applied to blackarm and leaf curl resistant strains. Its most advanced stage, Evelyn's selected Domains Sakel, was bulked to commercial proportions in the Gash Delta. Its characters are more uniform than those of the existing commercial strain, and it is likely to replace this in due course.

244. Reference has been made to the weed mechanism of the depressive action of the rainfall of the year previous to the sowing of cotton. Many years of small scale experimentation are now being followed by large scale trials in the commercial area. Weeding of the fallows in 1946 was followed by an average increase of nearly 0.5 kantars per feddan on the crop of 1947/48. The beneficial effect of fallow weeding is now well established the technical problem of what instruments are best able to do the work is now the principal object of study.

245. Many experiments were done with irrigated dura, a crop of great importance in the economy of the Gezira. In rotations where dura follows cotton, early pulling of this crop, with or without extra irrigation, gave increased yields of dura, but the general level was low. When a fallow intervenes between the cotton and the dura, early pulling out of the cotton does not affect the yield of dura. In a complete fertilizer experiment with dura, potash gave no response, phosphate possible small increases, while nitrogen as usual gave large increase. The manures were applied separately and in combination. Very small applications of nitrogen gave increases in yield, and may be more economic than large applications. A number of experiments were done on methods of planting dura, aimed at providing early information applicable to the mechanisation of irrigated dura.

246. On the Research Farm, Dwarf White Milo considerably out-yielded feterita in heads, but gave much less straw. In the northern Gezira, its superiority in head was much less. Wad Fahl, in a farm trial, out-yielded Dwarf White Milo. Good progress was made in propagating promising varieties, and among them Wad Fahl is of particular interest as its use is extending in the Gezira. In a Northern Province trial, Dwarf White Milo out-yielded six other varieties.

247. Among rain-grown duras, propagation and selection were carried out, including work on some introduced combine types. At Ghadambaliya, variety, spacing, sowing date, manuring and discing trials were done.

248. In trials at Kadugli, groundnut yields of up to one ton of undecorticated nuts per feddan were obtained. Various trials of groundnuts were made on sandy soil in Kordofan, the best yield being 800 rotls per feddan. The crop was grown successfully at Borgeig in Northern Province.

249. Soil survey work was done in all provinces. The survey of the Gezira plain was continued, and a start was made on work on the east bank of the Blue Nile in the Blue Nile Province. The nitrogen status of Gezira soil under irrigation was further studied. The maintenance of nitrogen supplies in this soil is of first importance to its fertility, and the detailed mechanism is at present unknown.

250. Work on the control of the weaver bird, which does great damage to rain-grown dura, was continued. A scouting organisation was developed and continued observations of birds' movements. Studies of the numbers of eggs laid showed that the rate of recovery from any

serious reduction in numbers would probably be slow. During January and February two further explosive trials were made. Both showed that the method was sound, but a great many difficulties were encountered in using explosives on an experimental basis without trained staff. The experience gained from these tests will be used in drawing up a programme for a large scale attack on the birds in 1949. Work was extended to the bird pests of Kordofan and Darfur.

251. Intensive study of the grasshopper problem on the Gedaref plains continued and the general ecology of some 40 species was worked out. *Aiolopus savignyi* is the most dangerous species, particularly in a year with early rains. *Catantops axillaris* attacks only the heads of dura, but it might become a serious pest of other crop plants if these were grown on a large scale. This pest shows marked preference for certain varieties of dura and congregates on the edges of the cultivation. A trap belt of a susceptible variety proved successful in collecting the insect and spraying of such strips will be tried out as a method of control.

CHAPTER IX—VETERINARY

General.

252. Veterinary activities continued to increase but owing to shortage of staff it was impossible to maintain existing services and also meet the demand for their expansion.

253. Unsatisfactory rains in many parts of the country resulted in poor grazing and scanty water supplies over large nomadic pastoral areas. Deaths from starvation, thirst and exhaustion occurred amongst many flocks and herds, particularly in Kassala and Northern Provinces, whilst many animals were sold to avoid such a fate or to buy grain.

254. In May a conference was held at Juba to discuss trypanosomiasis and tsetse fly control. It was agreed that the problem in the Sudan was essentially a veterinary one and a number of recommendations was made to deal with it. The Rinderpest Conference held at Nairobi in October was attended by the Director and Assistant Director (Research).

255. Revenue amounted to £E. 70,529 and expenditure to £E. 150,241 from normal budget resources and to £E. 4,465 from special development funds.

Disease Control.

256. Although cattle plague outbreaks were reported from all provinces no serious epizootics were reported and the mortality from disease must have been the lowest for many decades. The large scale immunisation campaign initiated in 1947 in Darfur Province was continued and approximately 230,000 cattle were vaccinated. In Northern Province, where working cattle play such an important role in agriculture,

over 27,000 cattle were vaccinated and the province was free of the disease for the major portion of the year. The output of vaccine from the branch laboratories at Malakal and Nyala, totalling over one million doses, the highest on record, was not sufficient to supply all demands. It was the maximum amount that could be prepared by the staff available during the periods in which climatic conditions made it possible for the branch laboratories to operate. One batch of vaccine proved to be contaminated with tetanus spores and its use resulted in some casualties, but the source of the contamination could not be definitely traced. Experience during the preceding ten years had shown it to be unnecessary to test individual batches of vaccine for safety ; this will now have to be done, bringing added cost of production and a reduced output.

257. No outbreaks of contagious bovine pleuro-pneumonia were reported amongst herds in Kassala, Northern and Khartoum Provinces, but there was little improvement in the incidence of this insidious disease in the main cattle-rearing provinces of the west and south. In some areas there was an extension of the disease; in others losses were less than in previous years. Vaccination and quarantining were the principal measures adopted to hold the disease in check. A record total of 103,775 doses of vaccine were issued from the Khartoum laboratory, but this amount was not sufficient to satisfy all demands.

258. The campaign against bovine trypanosomiasis in the non-tsetse areas of the southern Sudan, started in September, 1947, was continued, and by April, 1948, over 360,000 head of cattle had been inoculated with dimidium bromide. The result of this operation was extremely satisfactory. An area of about 20,000 square miles, where exceptionally heavy losses from trypanosomiasis had occurred during recent years, was virtually cleared of the infection. Some cattle died of photosensitisation as a result of inoculation, but it was estimated that the number of deaths did not exceed one per cent of those treated. Plans were made at the end of the year to inoculate a further 200,000 cattle in 1949 and following the successful experimental laboratory and field trials with antrycide it was decided to use this drug instead of dimidium bromide.

259. The incidence of trypanosomiasis in camels was low, but an increasing number of cases of antrypol-resistant *T. evansi* infections have been reported in recent years. Although the results of experimental work were incomplete at the end of the year the indications were that antrycide would probably be as effective as antrypol, and that it would consequently be of particular value in curing antrypol-resistant infections.

Trade in Livestock and Livestock Products.

260. The export trade in cattle and sheep was held up for two months owing to the railway strike. Nevertheless, exports were greater than in 1947, and the total value of livestock and livestock products amounted to over £E. 2,250,000. Principal exports were 54,650 camels valued at £E. 1,335,000 ; 1,970 tons of hides valued at £E. 269,569 ; 1,380 tons of sheep and goat skins valued at £E. 244,981 ; 21,583 head of cattle valued at £E. 318,158 and 36,070 sheep valued at £E. 128,318,

261. Recorded sales of cattle, sheep and camels in the main internal animal markets showed an increase over 1947. Average prices were slightly lower. There was little change in the total number of cattle, camels and goats slaughtered in the principal towns of the Sudan, but over a quarter of a million sheep were slaughtered, an increase of 35,000 over 1947.

262. The Khartoum slaughterhouse was reconstructed to facilitate the production of better flayed hides. The Inspector of Hides toured extensively and demonstrated improved methods of flaying and curing. Diagrams illustrating methods of flaying, framing, dry salting and folding were distributed throughout the country. A consignment of drysalted hides forwarded for tanning tests was well reported on by tanners in the United Kingdom. 208,099 airdried and 78,674 drysalted hides were graded by the hides section of the department at Omdurman, Wadi Halfa and Port Sudan. The majority of the airdried hides were graded "thirds" and the drysalted "seconds." There will be no great improvement until frame drying becomes more common in the pastoral areas and hoist-flaying and control of flayers are enforced in the principal slaughterhouses.

Laboratory Services.

263. The professional research staff was three under strength and this seriously handicapped research work and limited the production of biological products.

264. Research work on the chemotherapeutic and chemoprophylactic values of antrycide in bovine trypanosomiasis was carried out throughout the year. Dr. D. G. Davey (co-discoverer of the drug) and other technicians of Imperial Chemical (Pharmaceuticals) Ltd., visited the Sudan and co-operated and assisted in much of this experimental work. The early experiments were so encouraging that it was decided to carry out field trials in the southern Sudan. The first trial was carried out in a tsetse-free area where 237 cattle, in which the incidence of trypanosomiasis was high, were inoculated, and it proved a spectacular success. There were neither casualties nor sickness amongst the treated animals during the six months which followed, whereas trypanosomiasis continued to take a heavy toll amongst neighbouring herds. The second field trial involved 84 cattle which were infected in a tsetse-free area, driven to a heavily infested tsetse fly area and kept there for eight months. 81 of the cattle were alive and most of them in good condition at the end of the trial. Fourteen out of the fifteen untreated controls that accompanied these cattle died of trypanosomiasis within 90 days.

265. The pasture research officer carried out a survey of pastures in Upper Nile Province in connection with the Jonglei canal proposals. Towards the end of the year a start was made on the survey of the pastures of the western half of Equatoria Province,

CHAPTER X—IRRIGATION

266. The 1948 Nile was again, over the full year, above average, but the distribution was unfavourable to Sudan cropping needs, which depend on high peak discharges in August and September. These particular months in 1948 were disappointing.

267. The Sudan's annual credit of stored water, amounting to 922 million cubic metres on the 1st. of January, was disposed of as follows :—

	Millions of M3
Evaporation losses, etc. in Sennar reservoir	136
Gezira Scheme—Irrigation water	538
" " Domestic water in summer	17
Compensation for pump irrigation elsewhere in the Sudan ..	105
Balance unused, and released to the river before the flood ..	126
Total	922

As usual these figures give a false impression, as they do not show up the "free areas" of the Sudan's established pumping rights. Introducing this factor the correct proportions are :—

For the Gezira	555 million M3
By pump schemes	248 million M3

A recent survey of all pump schemes in the three northern provinces has been made. On this assessment, and adding liabilities for licences issued but not yet taken up, and applications filed, the total consumption by pumps will amount to considerably more than half the total of the present Gezira consumption.

268. In the Gezira scheme cropped areas amounted to :—

	1947/48	1948/49
	feddans	feddans
Cotton	217,189	217,686
Dura	117,959	123,020
Lubia	62,168	57,199
Wheat	4,856	6,979
Other crops	8,000	6,741
	410,172	411,625

A certain amount of emergency grain was grown on fringe areas wherever suitable land, after several seasons of similar cropping, could be found.

269. Irrigation for the 1948/49 season was opened on 19th July, the normal date. Early rains restricted demands, and full canal capacity was not required until early September. In mid-November the seasonal reduction had commenced.

270. Cropped areas on the White Nile schemes were :—

	1947/48	1948/49
	feddans	feddans
Cotton	6,094	6,544
Dura	4,748	5,080
Lubia	3,958	3,897
Wheat	1,277	661
Other crops	595	684
	<hr/>	<hr/>
	16,672	16,866
	<hr/>	<hr/>

The 1948/49 figures include a new extension area of 234 feddans in the Um Gerr scheme.

271. In the Gash Delta the flood, although slight in total volume, maintained an even and continuous flow over long periods. The resultant flooded areas were satisfactory, producing 46,537 feddans of cotton and 16,000 feddans of dura.

272. Basin areas in Northern Province did not benefit by the August flood peaks which were below average, but recovered slightly in September when river conditions were more favourable. The total flooded areas for the season totalled just over 49,000 feddans, a low average figure compared with a potential 100,000 feddans in years of high Nile.

273. The final instalment of the protection work at Wadi Halfa was completed in 1948, bringing the total length of river bank protected to 42 kilometres.

274. Real progress was made in the development field. New machinery and plant arrived, and if delivery dates for the remaining essential dragline excavators can be confirmed they will considerably facilitate the scheduled extension programme. Supplies of steel were, however, very doubtful.

CHAPTER XI—PUBLIC WORKS

Expenditure

275. Total expenditure (subject to amendment on completion of final accounts) was as follows :—

Personnel and Allowances.

	£E.	£E.
Main budget	223,000	
Development budget	25,000	248,000
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<i>Recurrent Expenditure</i>		
Main budget (Chapter II)	205,000	
Rechargeable, military units.	15,000	
,, Royal Air Force	35,000	
,, Other government units	25,000	280,000
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<i>New Expenditure</i>		
Main budget (Chapter III)	61,000	
Development budget	161,000	
Appropriation accounts	712,000	
Services for military units	15,000	
,, Royal Air Force	35,000	
,, other government units	75,000	
Miscellaneous	25,000	1,084,000
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Value of stores supplied to other government units and other authorities		553,790
Value of workshop services chargeable to other units		29,846
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<i>Total expenditure</i>		<u>2,195,636</u>

Civil Buildings.

276. Although pre-war standards of maintenance were aimed at during 1948, increasing difficulty was experienced in adhering to the maintenance programmes owing to urgent capital works which constantly demanded the diversion of limited supervisory staff. Despite this, government buildings as a whole were kept in a reasonable state of repair.

277. A large programme of capital works was carried out. The Wadi Seidna and Hantub secondary schools were extended to take 500 boys each, with full boarding and residential accommodation, and construction commenced of the third northern secondary school at Khor Teggat near El Obeid and the first southern secondary school at Rumbek. The four year expansion programme at the Institute of Education at Bakht Er Ruda was continued, the principal buildings added being a complete elementary teachers' training school with full

boarding and residential accommodation. Teachers' training colleges were also completed at Mundri and Bussere. At the intermediate level, a boys' intermediate school was built at Kassala and extensions were carried out to the Shendi school. Few elementary schools were built by the Department in 1948, as it was decided to attempt accelerated production by building them through the agency of provincial and local government administrations; but this proved difficult in many cases and later in the year the responsibility was handed back to the department, which completed boys' schools at Port Sudan, Abu Haraz and Um Keddada, and girls' schools at Port Sudan, Kamlin, Um Keddada and Atbara, as well as a large number of masters' quarters at existing schools. The main items of the medical programme were new out-patients' blocks at Omdurman and Malakal hospitals, additional wards at Gedaref, Nahud and Yei, a new administrative block at Malakal and new dispensaries and medical assistants' quarters at Showak, Kassab and Hillet Hakuma. The new Khartoum civil hospital was under planning, but progress was retarded by lack of the necessary additional architectural staff. A large number of buildings was completed for general administrative purposes of which the most notable was the Legislative Assembly building in Khartoum, designed and built within a space of only six months, at a cost of £E. 18,500. Other buildings of importance completed were Dueim Civic Centre, Kassala prison (first instalment), Gedaref prison extensions, an additional wing to the Port Sudan post office, the Wadi Seidna mosque and extensions to the Economics and Trade offices in Khartoum. 64 new quarters for officials were added to the housing pool during the year.

Military and Royal Air Force Buildings.

278. Work for the British forces was on a much reduced scale, the only building of note being the British Other Ranks Club in Khartoum.

For the Sudan Defence Force a new headquarters was built for the Equatoria Corp No. 3. Company at Gerinti, enabling it to move from Wau, the accommodation so vacated being taken over by the province administration.

Aerodromes.

279. All aerodromes were kept in good repair and no difficulties were encountered except at Khartoum, where the increasing volume and weight of traffic necessitated almost continuous resurfacing and strengthening of runways. There were no capital works of importance.

Water supplies.

280. A tabulated statement of revenue, including free services, is set out below;—

	1944	1945	1946	1947	1948
	£E.	£E.	£E.	£E.	£E.
Port Sudan	27,025	28,489	28,610	31,568	33,869
Tokar	1,939	2,730	3,462	3,568	4,297
El Obeid	8,127	8,339	8,772	10,191	10,741
Kordofan, Darfur and Blue Nile	27,151	25,574	30,905	34,486	36,882
Juba	2,649	2,318	2,308	2,215	2,972
Torit	—	—	—	885	916
Kosti	—	—	—	—	260
Wadi Halfa	3,126	3,349	3,625	3,707	3,685
Malakal	1,735	2,110	1,984	1,978	2,296
Wadi Seidna	—	—	—	134	1,742
	71,752	72,909	79,666	88,732	97,660

Difficulties were encountered in running several of the supplies. At Fasher the complete failure of the reservoir to fill in the 1947 rains threw an overwhelming load on the borehole supplies, necessitating emergency drilling on a large scale and a most serious crisis was narrowly averted. At El Obeid where the reservoirs had only half filled in 1947, the position was little better: water had to be severely rationed and restricted and the position was critical when heavy rains in early June relieved the situation. The total absence of floods during 1948 in the Khor Arbaat, the source of supply for Port Sudan, though not causing any immediate difficulty, resulted in a serious fall in water table level and foreshadowed the probable need of emergency measures in 1949. At Juba, Malakal and Wadi Halfa, though no actual water shortage occurred, the installations were working to full capacity and no further connections can be accepted until extensions, for which plant has long been on order, have been carried out.

As far as new installations were concerned the Kosti combined water and electricity scheme was virtually completed by the end of the year and new water yards established at Gabir, Um Hosh, Abu Karinka, Mazrub and Da'ain. Work was commenced on the impounding reservoir at Fasher which will take two seasons to complete. In addition a detailed investigation into the El Obeid water supply problem was made and a comprehensive scheme of improvement drawn up, spread over four phases and estimated to cost £E. 177,500.

Electricity Supplies.

281. A tabulated statement of revenue, including free services, is set out below:—

	1944	1945	1946	1947	1948
	£E.	£E.	£E.	£E.	£E.
El Obeid	5,696	6,744	7,934	8,043	8,433
Juba	3,160	4,037	4,782	4,465	4,166
Malakal	3,138	4,464	4,387	3,633	3,485
Wadi Soidna	—	—	—	268	3,485
	11,994	15,245	17,103	16,409	19,569

Work on existing supplies was generally confined to routine maintenance. At El Obeid great difficulty was experienced in meeting the load, and new consumers had to be refused and certain restrictions imposed. The new engines and generators for this supply started to arrive at the end of the year.

Roads and Bridges.

282. Progress was still retarded by lack of plant and up to the end of the year, though most of the ancillary machines and some graders had arrived, delivery prospects of the tractors and the remaining graders were still very uncertain. Survey work was continued, the new trace from El Obeid to Talodi being completed and a service track along it cleared. In Equatoria the Amadi-Lingasi road was nearly finished. Work on the Gash bridge at Kassala was continued, the piled foundations, piers and abutments being duly finished before the Gash flood arrived in June and the superstructure commenced in October when conditions enabled work to be resumed. Several steel bridges were provided in Upper Nile Province.

Mechanical Engineering.

283. The mechanical engineering section was heavily engaged in the installation of the Kosti water and electricity scheme, in the detailed planning of the Kassala combined scheme, of the Bakht er Ruda water supply, in detailed preparations for the extensions to most of the existing public utility schemes, and in the running and maintenance of existing services. In addition the demand for workshop services, and for air conditioning, refrigeration and garden irrigation schemes was on an ever increasing scale.

Stores Section.

284. The total expenditure brought to account was £E. 1,182,584 compared with £E. 823,377 in 1947. The value of stores issued was £E. 1,279,222 of which £E. 199,806 was in respect of petrol. The general supply position showed some improvement particularly as regards timber and fittings, but mild steel and corrugated iron remained in very short supply and shortage of cement at one period caused delay in the building programme. With this exception stocks generally proved adequate to meet the heavy demands. Stores to the value of £E. 366,138 were

obtained from the United Kingdom. The total tonnage handled was approximately 65,000 tons, and 27,000 requisitions were dealt with during the year.

Architectural Section.

285. 403 sheets of working drawings and 375 pages of schedules of quantities were issued from the central projects office covering the design of buildings—or groups of buildings—in 14 different places in the northern Sudan.

Geological Survey.

286. This section was again preoccupied with water development and with administering the drilling section created in 1946. 33 bores for water, of which 25 were successful, and two sites for dam foundations were drilled during the year, involving a total footage of 10,171 ft. The construction of underground dams by injecting cement through cored holes below a shallow surface dam was successfully carried out in the Nuba Mountains. In addition to examination of and reports on a large number of bore and well samples, laboratory work included the examination of soil samples in connection with brick-making and water storage schemes. A catalogue of books and periodicals in the Geological Survey library was completed and circulated.

CHAPTER XII—COMMUNICATIONS

SUDAN RAILWAYS AND STEAMERS.

General.

287. The gross revenue for the year amounted to £E. 4,647,623 and the net revenue to £E. 975,285, compared with a net revenue in 1947 of £E. 1,286,117. The ratio of expenditure to earnings was 79 per cent as compared with 71.5 per cent in the previous year. The high ratio in 1948 was largely due to higher costs of stores and personnel; other contributory factors were the strike in the early part of the year, and the disastrous fire in the Atbara main stores which resulted in the loss of material to the value of some £E. 93,000.

The substantial increase in the 1948 expenditure as compared with that for 1947 was mainly attributable to the following:—

	£E.
Cost of Living allowance—increased rates as from 1st. January, 1948	213,861
Stores—overall increase on price levels	52,402
Fuel—increase in price of fuel oils	47,612
Losses from fire in main stores, Atbara, in October, 1948 ..	92,835
Additional expenditure resulting from the strike in March and April, 1948	24,442

It was fortunate in 1948 that revenue increased with the rising tide of expenditure. The stage was reached, however, at which a further increase in the rate of expenditure would have to be covered by increases in freight rates and charges.

288. The provision for depreciation charged to working expenses amounted to £E. 305,870. After making appropriations for loan charges, capital and renewals accounts, etc., totalling £E. 575,285, the balance accruing to government was £E. 400,000.

The following table gives a summary of the main figures during the last five years :—

Year	Revenue	Expenditure	Ratio of Expenditure to earnings	Gross Profit	Appropriations from Gross Profit	Balance accruing to Central Government.
	£E.	£E.	per cent	£E.	£E.	£E.
1944 ...	3,730,651	2,940,496	78.8	790,155	195,155	595,000
1945 ...	4,141,914	3,059,732	73.9	1,082,182	487,182	595,000
1946 ...	4,005,164	3,017,886	75.3	987,278	392,278	595,000
1947 ...	4,510,338	3,224,221	71.5	1,286,117	836,117	450,000
1948 ...	4,647,623	3,672,338	79.0	975,285	575,285	400,000

N.B. — Expenditure includes the full charge for depreciation.

289. The total recorded capital expenditure to 31st. December, 1948, was £E. 14,412,884. Of this total £E. 11,364,815 was on account of the railways and £E. 3,048,069 on account of the steamers and other ancillary services.

Expenditure capitalised in 1948 totalled £E. 368,596, but a considerable proportion of this amount represents the difference between replacement and original costs of assets renewed during the year, comparatively little of which can be regarded as true betterment.

290. At the end of the year the route mileage of the railways was 2,013 (3,242 kilometres) and the mileage of the river services operated was 2,325 (3,744 kilometres).

Railways.

291. The number of passengers carried, together with the relevant revenue for 1947 and 1948, are shown in the following table :—

	1947		1948	
	Number	£E.	Number	£E.
Sleeping Car	10,642	18,469	9,893	15,393
First class	28,382	93,836	25,796	77,560
Second class	63,936	94,939	59,660	79,771
Third class... ..	106,262	101,537	86,225	81,224
Fourth class	1,331,546	309,198	1,242,381	297,698
	*		*	
	1,530,126	617,979	1,414,062	551,646

* Not including sleeping car.

292. Revenue earning goods, carried including military traffic, amounted to 839,661 tons compared with 954,150 tons in 1947. Goods receipts increased by £E. 135,632, from £E. 2,513,059 in 1947 to £E. 2,648,691 in 1948; the average earning per ton mile was 1.589 pence against 1.640 pence in the previous year. Livestock receipts decreased from £E. 112,923 in 1947 to £E. 111,934 in 1948 and the number of head from 276,782 to 251,174.

Export Goods Traffic.

293. The following table gives details of the principal export goods traffic carried to the ports during 1948 with comparative figures for the previous four years :—

Commodity	1944	1945	1946	1947	1948
	Tons	Tons	Tons	Tons	Tons
Beans and peas	10,577	4,012	10,072	22,507	13,347
Benzine	946	146	105	35	232
Butter	627	567	275	591	341
Cement	104	60	46	—	160
Charcoal	155	1,718	4,761	722	71
Chillies	274	421	418	394	392
Coffee	908	128	517	198	437
Cotton, unginced	9,871	11,692	5,856	7,191	10,477
Cotton, ginned	41,727	64,959	41,663	49,098	49,895
Cotton, scarto	375	654	508	634	347
Cotton, seed	76,868	111,582	70,499	86,704	85,673
Dates	2,333	5,368	2,015	2,855	3,463
Domnuts	1,526	1,920	7,969	7,238	5,023
Dukhn and dura	28,354	15,908	15,888	38,482	18,199
Empties, benzine, Kerosene and oil	465	675	449	367	64
Firewood	222	425	1,198	1,146	384
Fish	1,670	1,657	1,835	1,637	1,217
Flour, dura, dukhn or maize ...	640	366	194	112	120
Forage	2,691	3,080	2,919	2,051	540
Garad	3,981	4,120	1,890	806	2,803
Groundnuts	628	534	671	975	375
Gum hashab	10,997	21,493	28,038	25,644	35,115
Gum talh	983	1,505	1,800	1,578	2,133
Hides and skins	3,014	2,078	2,288	2,650	3,318
Joinery work	471	4,038	97	229	24
Maize	2,341	447	1,184	23,181	20,321
Melonseed	7,735	11,580	7,135	12,665	20,420
Motor vehicles and parts packed	64	38	93	51	267
Oil cake	6,103	3,892	4,584	13,880	15,936
Oil lubricating	626	251	35	228	108
Provisions... ..	1,506	1,356	218	206	133
Railway and tramway materials	143	1,489	32	68	75
Senna mecca	157	271	631	627	295
Simsim or sesame	3,588	425	110	21	82
Timber	1,001	230	846	1,127	188
Vehicles, assembled	1,411	2,257	333	1,665	241
Various	14,470	15,648	8,450	9,574	7,860
Total, excluding military stores	239,552	296,990	225,622	317,207	200,076
Military stores	9,459	9,491	1,419	914	886
Total	249,011	306,481	227,041	318,121	300,962

N.B.—The above figures represent tonnage of commodities consigned to the different ports and therefore include commodities consigned for local consumption at the ports.

Import Goods Traffic.

The following table gives comparative figures of the tonnage of the principal import commodities carried during the past five years :—

Commodity	1944	1945	1946	1947	1948
	Tons	Tons	Tons	Tons	Tons
Sudan Government	25,281	32,976	31,531	11,716	22,034
Public	166,720	167,004	175,668	210,092	222,265
Total	192,001	199,980	207,199	221,808	244,299
Beans and peas	509	774	1,270	998	695
Benzine	46,714	42,860	26,644	34,448	31,972
Cement	15,911	20,646	24,348	11,799	23,603
Coal or patent fuel	739	617	1,423	1,079	1,009
Coffee	821	2,172	6,645	5,180	3,532
Confectionery	329	283	675	1,225	1,357
Cotton seed	4,100	4,095	3,406	4,305	4,391
Dates	210	164	971	1,074	190
Dura, dukhn and maize	258	9,213	30	1,367	1,261
Empties, benzine, kerosene or oil	917	634	415	490	148
Flour	691	761	5,487	2,099	1,241
Hoops, iron and fastening studs for cotton bales	916	1,265	1,075	1,051	1,502
Iron, wrought or cast, and steel	3,307	1,752	5,807	6,184	6,016
Liquors and beer	654	745	894	2,645	2,471
Machinery, agricultural, ginning and irrigation	212	493	622	813	1,426
Manure, chemical or artificial	—	42	3,332	366	3,315
Motor road vehicles and parts packed	621	1,007	1,724	2,197	2,274
Oil, fuel and burning	19,903	23,853	24,414	28,251	28,759
Oil, lubricating	2,744	2,676	2,444	3,078	3,252
Perishables	113	80	154	24	22
Pipes and tubes	537	521	630	933	1,232
Potatoes	254	42	106	169	247
Provisions... ..	2,654	2,724	2,313	2,587	1,911
Railway and tramway materials	1,246	195	106	1,633	62
Rice	1,409	1,807	2,051	1,791	4,191
Sacks and sacking	6,381	4,912	4,210	5,361	6,111
Salt	18,089	20,862	25,905	24,630	26,798
Soap	215	110	1,127	1,137	809
Sugar	18,046	19,432	19,425	25,394	26,948
Tea	123	357	513	1,309	2,190
Textile piece goods	6,215	6,529	6,655	5,521	4,943
Timber	1,086	1,488	1,467	4,557	6,472
Vehicles assembled	6,200	1,259	904	1,039	1,123
Wheat	—	42	8,088	5,646	9,320
Various	19,310	15,505	18,835	24,866	28,709
Total excluding military stores...	181,434	189,917	204,095	215,246	239,502
Military stores	10,567	10,063	3,104	6,562	4,797
Total	192,001	199,980	207,199	221,808	244,299

(Imports via Juba are not included in the above figures)

Local Goods Traffic.

The following table gives details of local traffic carried in 1948 with comparative figures for the previous four years :—

Commodity	1944	1945	1946	1947	1948
	Tons	Tons	Tons	Tons	Tons
Beans and peas	2,258	15,375	11,196	2,361	1,861
Benzine	1,024	1,561	395	319	624
Bricks	2,734	1,037	3,305	1,802	1,550
Butter	459	865	1,064	995	830
Cement	5,304	8,996	6,110	5,549	11,760
Charcoal	11,502	10,941	14,731	15,713	12,753
Coffee	4,955	4,014	2,792	2,829	2,464
Cotton—unginned	43,313	65,909	44,713	49,270	37,205
Cotton—ginned	23,545	179	200	92	119
Cotton, scarto	387	200	228	202	112
Cotton—seed	11,670	9,304	7,877	2,422	2,179
Dates	13,325	13,805	12,203	17,365	18,090
Dom nuts... ..	2,951	2,195	4,332	2,393	623
Dukhn and dura	185,401	83,938	159,112	135,493	60,188
Empties, benzine kerosene & oil	1,333	1,155	1,307	1,482	961
Firewood	50,231	33,457	45,564	42,219	21,709
Flour	4,959	3,999	2,502	2,295	1,404
Forage	3,323	1,852	1,291	1,131	730
Garad	1,253	1,924	1,144	815	1,245
Groundnuts	3,617	3,948	3,410	5,310	4,115
Gum hashab	5,906	11,793	13,385	9,752	8,992
Gum talh	48	109	172	341	44
Hides and skins	1,723	1,489	1,335	1,160	1,082
Household effects	1,495	1,517	1,650	1,297	1,046
Iron, wrought or cast, and steel	3,274	3,346	3,699	3,258	2,859
Joinery work	1,912	4,825	812	584	470
Lime	1,166	1,346	1,211	1,763	1,327
Machinery, agric: ginning and irrigation	697	1,059	1,051	1,145	1,302
Maize	2,957	6,982	6,941	804	636
Motor vehicles and parts—packed	621	431	478	762	639
Oil cake	6,455	7,522	6,578	3,111	885
Oil, fuel and burning	642	1,156	1,189	698	724
Oil, lubricating	610	625	347	185	154
Oil, simsim	5,644	4,894	4,001	4,787	4,151
Onions	6,103	5,955	6,323	5,626	4,757
Perishables	2,172	2,343	2,350	1,785	1,912
Potatoes	489	744	721	155	164
Provisions... ..	2,007	2,207	1,980	1,722	1,311
Railway and tramway materials	1,041	902	973	1,749	1,138
Rice	222	763	527	349	292
Ropes	1,006	832	920	876	728
Sacks and sacking materials ...	4,972	4,503	3,565	3,054	1,880
Salt	1,693	1,014	333	154	140
Sand, stone and rubble	7,597	6,929	6,035	10,530	20,933
Simsim or sesame	5,748	7,617	6,840	5,332	9,599
Soap	2,765	2,532	2,334	1,323	1,235
Sugar	8,229	11,954	7,003	6,640	8,549
Tea	1,615	1,742	1,732	1,213	659
Telegraph and telephone poles ...	514	450	478	1,211	1,163
Textile piece goods	1,742	1,700	1,915	1,253	531
Timber, unwrought	12,224	4,764	7,545	5,131	5,202
Tobacco, native	1,284	1,449	1,495	1,677	533
Vegetables, dried	1,386	1,900	1,278	1,317	847
Vehicles, assembled	5,827	6,860	3,895	3,551	1,569
Wheat	14,885	13,548	7,001	12,444	2,111
Various	25,136	33,314	26,125	24,492	23,233
Total	494,351	425,860	458,183	411,288	293,319
Military stores	9,760	9,529	3,969	2,933	1,081
Total	504,111	435,389	462,152	414,221	294,400

Steamers.

294. The following table shows the working results of the three branches of steamer services during 1948, as compared with 1947 :—

	Revenue		Working expenses		Net receipts		Ratio of expenditure to earnings	
	1947	1948	1947	1948	1947	1948	1947	1948
	£E.	£E.	£E.	£E.	£E.	£E.	%	%
Southern Reaches	233,893	221,457	390,261	417,678	(loss) 156,368	(loss) 196,221	166.9	188.6
Halfa—Shellal Reach	105,609	98,592	96,730	103,750	(profit) 8,879	(loss) 5,158	91.6	105.2
Dongola Reach	32,685	31,674	41,138	47,054	(loss) 8,453	(loss) 15,380	125.9	148.6
	372,187	351,723	528,129	568,482	(loss) 155,942	(loss) 216,759	141.9	161.6

On the southern reaches the number of passengers carried in all classes totalled 26,273, compared with 30,067 in 1947, the receipts being £E. 23,742 and £E. 36,695 respectively. Goods transported decreased from 95,999 tons in 1947 to 85,876 in 1948, and the goods revenue from £E. 154,878 to £E. 154,084.

Port Sudan.

295. 776 ships called at Port Sudan during the year, compared with 685 in 1947. Of these, 697 were purely merchant ships, 15 coasters, 33 naval, 20 transports and 11 other vessels; the comparative figures for 1947 were 599, 53, 11, 21 and 1 respectively.

296. The comparative financial results of the port working are shown below :—

		1947	1948
		£E.	£E.
Revenue	.. .. .	386,033	450,053
Expenditure	.. .. .	248,537	284,632
Profit	.. .. .	137,496	165,421
Ratio of expenditure to earnings	..	64.4%	63.2%

297. The total tonnage dealt with, including military stores, amounted to 598,587 tons, as against 634,712 tons in 1947. Inwards traffic, at 325,019, showed an increase of 3,337 tons of the 1947 figures,

while outwards traffic, totalling 273,568 tons was 39,462 tons less than in the previous year. Inwards and outwards transshipment traffic amounted to 5,446 tons in each case, an increase of 527 tons over the previous year.

298. The tonnage per foot run on the main quays was 170.2, on south quays 58.4 at berths 17 and 18, and 100.2 at berths 15 and 16. The comparative figures for 1947 were 156.5, 109.7, and 136.0 respectively. The large reduction in tonnage at berths 17 and 18 was due to the falling off of coal imports and coal bunker traffic. No salt was shipped from berth No. 15 as against approximately 37,000 tons in 1947. The average tonnage per hatch hour, excluding the south quays, decreased from 13.0 in 1947 to 12.2 in 1948.

299. All navigational lights were inspected and maintained during the year.

Catering Services.

300. Gross revenue for the year amounted to £E. 205,556, as compared with £E. 211,925 in 1947. Expenditure increased sharply from £E. 188,215 to £E. 215,251.

Tokar-Trinkitat Light Railway.

301. The receipts from the Tokar-Trinkitat light railway amounted to £E. 4,937 as compared with £E. 3,193 in 1947.

Goods and Cattle Traffic.

302. There was a decrease in exports from 317,207 tons in 1947 to 300,076 tons in 1948. Imports, however, increased from 215,246 tons in 1947 to 239,502 tons. These figures exclude military stores. 50,242 tons of ginned cotton and 85,673 tons of cotton seed were forwarded to Port Sudan during the year; the comparative figures for 1947 were 49,732 tons and 86,704 tons respectively. The number of cattle exported increased from 22,905 in 1947 to 23,691; there was a further decrease in the export of sheep from 65,009 in 1947 to 64,716.

Passenger Traffic.

303. The number of passengers carried by rail showed a decrease of 116,064 as compared with 1947, and receipts also decreased by £E. 66,333. The heavy reduction was largely attributable to a decrease in military movements, the strike of the railway employees, and the cholera epidemic in Egypt. The number of passengers on the steamers also decreased by 5,232 and receipts by £E. 20,331 compared with 1947's

Permanent Way.

304. Heavy washouts occurred in October on the Suakin line, and the line was closed to traffic for six days. 140.80 kilometres of main

line track were resleepered with new wood sleepers and 3.00 kilometres with second-hand steel sleepers. 15 kilometres of main line track were relaid with 75-lb. rails.

Locomotive Running.

305. All demands for locomotive running were met. Mechanical failures remained high at 63 as against 62 in 1947, and delays increased from 90 to 154. Approximately half the failures were due to hot boxes, and tube and element troubles.

Railways Technical School.

306. During the summer vacation the Railways Technical School was transferred from Atbara to Gebeit, and the pupils gained valuable experience by assisting in the re-erection of the instructional workshops.

Accidents.

307. On the 9th February a collision occurred at Wad el Huri between a goods train and an engineering ballast train, resulting in the death of a fireman. A service car on hire to the Public Works Department was completely destroyed by fire at Shereik on the 31st. May. A disastrous fire broke out at the Main Stores, Atbara, on the 5th October. Six store sheds and the oil storage area were destroyed, together with stores to the value of approximately £E. 93,000. A further fire occurred at El Obeid on the 1st. November, which completely destroyed a buffet-sleeping car, a sleeping car and a first class coach.

Staff.

308. The interests of all Sudanese staff continued to receive close attention with a view to ensuring that all qualified for higher responsibilities be given promotion as vacancies occur. A further seven Sudanese officials were sent to the United Kingdom for advanced training.

Further strikes occurred during the year, the most serious of which lasted from the 16th March until the 17th April inclusive.

The minimum basic rate of pay for adult employees on monthly pay was increased in April to £E. 2.100 mms. This, together with an adjustment in the cost of living allowance, resulted in increased earnings for all such employees. New scales of pay for unclassified staff were also introduced.

CIVIL AVIATION.

Aircraft movements.

309. There was an increase of 1,096 over the 1947 figures in the number of civil aircraft movements in the Sudan. A feature of the year was the decrease in the number of British Overseas Airways Corporation aircraft movements (3,526 as against 6,754 in 1947) and the increase in other operators' aircraft movements from 7,090 in 1947 to 11,414 in 1948. It was noteworthy that four engined aircraft gradually replaced twin engined aircraft, and at the end of the year sixty per cent of the movements at Khartoum were of four engined aircraft. The total number of aircraft movements was 14,940, to which figure should be added 6,715, the number of Royal Air Force movements, giving a grand total of 21,655. Details are as follows :—

	1947			1948			
	BOAC	Other civil	Total	BOAC	Other civil	RAF	Total
Wadi Halfa...	1,248	1,198	2,446	396	2,652		3,048
Kareima ...	—	10	10	—	6		6
Atbara ...	4	288	292	—	196		196
Khartoum ...	3,584	2,006	5,590	2,280	3,726	6,715	12,721
Kosti ...	—	114	114	—	98		98
Malakal ...	688	1,096	1,784	72	1,032		1,104
Bor ...	—	16	16	—	14		14
Juba ...	782	1,764	2,546	116	2,130		2,246
Port Sudan ...	434	320	754	394	602		996
Kassala ...	—	36	36	—	288		288
El Obeid ...	—	68	68	—	256		256
El Fasher ...	4	96	100	—	296		296
Geneina ...	10	78	88	—	118		118
Gordon's Tree Marine Airport	—	—	—	268	—		268
	6,754	7,090	13,844	3,526	11,414	6,715	21,655

Scheduled Services.

310. (a) Sudan Airways schedules will be found in a later paragraph.

(b) The United Kingdom to South Africa "Springbok" service operated by South African Airways using "Skymaster" aircraft was maintained at a frequency of three services weekly in each direction.

(c) British Overseas Airways Corporation operated the following services through the Sudan :—

(i) 2 services weekly in each direction from United Kingdom to Dar es Salaam, using York aircraft

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- (ii) 4 services weekly in each direction from United Kingdom to Nairobi, using York aircraft.
 - (iii) 3 services weekly in each direction from United Kingdom to South Africa using "Solent" flying boats.
 - (iv) 1 service weekly in each direction from Egypt to Aden using Dakota aircraft.
 - (v) 2 services weekly in each direction from Egypt to Addis Ababa and Aden, using Dakota aircraft.
 - (vi) 1 service weekly in each direction from United Kingdom to South Africa, carrying freight only and using Lancastrian aircraft.
- (d) Air France operated a weekly service from France to Madagascar, using Skymaster aircraft.
- (e) The Belgian airline, Sabena, operated a weekly service from Belgium to the Belgian Congo, using Skymaster aircraft.
- (f) Scandinavian Airways System operated a fortnightly service from Denmark to East Africa, using Viking aircraft.
- (g) Ethiopian Airlines commenced a weekly service from Addis Ababa to Malakal towards the end of the year, using Dakota aircraft.

311. Large numbers of aircraft operated by private charter companies operated through the Sudan during the year, comprising approximately half the total aircraft movements.

Aerodromes.

312. (a) Wadi Halfa.

Work was completed on the alterations and extensions to the control tower, and from the operational point of view the organisation is now most satisfactory. As part of a scheme to improve passenger accommodation plans were approved for building a restaurant, thus avoiding a seven mile drive into the town for passengers and crews of transit aircraft.

(b) Khartoum.

- (i) Three concrete hardstandings were constructed capable of taking all aircraft likely to use Khartoum for the next five years.
- (ii) Four hundred yards of the main runway, and all taxi-tracks, were resurfaced, having broken up as a result of heavy traffic.

- (iii) The necessary passenger controls were housed in a new terminal building, and a comfortable waiting room was provided. Gardens were laid out, and flowering shrubs, flowers and lawns planted.

(c) Port Sudan.

It was decided to move the aerodrome to a site selected at Asoteriba. The old site was unsatisfactory as it was usually unserviceable during the rains. The site at Asoteriba will be all-weather, as it will be possible to lay a bitumen runway at very much lower cost than at the old site.

(d) Malakal.

A small passenger shelter was built primarily for the use of Sudan Airways aircraft, whose aircraft reduced their transit time at Malakal to fifteen minutes.

(e) Juba.

Work was started on the construction of three hardstandings, as the existing hardstandings proved inadequate. Plans were approved for the construction of a new terminal building, housing all necessary facilities under one roof, including two waiting rooms and refreshment, bar, security, sanitary and customs control, Sudan Airways, signals, meteorology, aerodrome officer and air traffic control.

Staff.

313. Six Air Traffic Control Officers were recruited, five British and one Egyptian, to be stationed at Wadi Halfa, Malakal and Juba. Six Aerodrome Officers were promoted to Air Traffic Control Officer trainees, and it is hoped they will be able to take over Air Traffic Control duties after three years training. A new post of Superintendent (Aviation), and a new post of Senior Aerodrome Officer, Khartoum Aerodrome, were created and filled. Seven new Aerodrome Officers were recruited to bring the cadre up to establishment.

General.

314. Aircraft history was made in the Sudan by the first flight in Africa of a helicopter, a Westland-Sikorsky owned by Messrs. Pest Control Ltd. After initial tests at Khartoum, the aircraft was tried out in the Gezira. Flying at height of only four feet from the ground, the helicopter sprayed the cotton crop with insecticide powder, the great downdraught caused by the rotor blades causing a more complete spread of the powder than is possible by other methods of crop spraying.

Accidents.

315. There were three air accidents in the Sudan during the year, with no loss of life.

(a) An Anson crashed near Dueim on 20th January whilst en route from Khartoum to Malakal at night. The pilot reported a sudden loss of power, and was unable to maintain height. He succeeded in making a safe landing although the aircraft was destroyed,

(b) On 28th July a Lockheed aircraft of a Belgian Company, Air Transport Ltd., swung on take off at Wadi Halfa, crashed and caught fire. The passengers and crew were able to leave the burning aircraft safely, but the aircraft was completely burnt out.

(c) On 12th October a Dakota of Mercury Aviation Services caught fire in the air at a height of 10,000 feet when flying from Wadi Halfa to Khartoum. The Captain displayed great gallantry by remaining at the controls in the burning cockpit and bringing the aircraft safely to the ground. A crash landing was successfully accomplished in the desert nearly 80 miles north of Kareima. No passenger was hurt, but the Captain and First Officer received burns and abrasions. Owing to the fire no S. O. S. message was sent out. Search and rescue action was taken, and all aircraft on that route were warned to keep watch for the missing aircraft. The survivors were extremely fortunate to be seen by a Royal Air Force Anson aircraft only three hours after the crash. The Anson landed alongside the wrecked aircraft, took on five women and five children and flew them to Khartoum. Later in the day a Dakota aircraft of the South African Air Force landed at the scene of the crash and flew to Khartoum the remainder of the survivors.

SUDAN AIRWAYS.

316. At a meeting of the Air Advisory Board, held in April, 1948, it was decided that it was impracticable for the Sudan Railways to continue to be responsible for the management of Sudan Airways. The Board therefore approved that Sudan Airways should be set up as a separate government department, under the joint managership of Superintendent (Flying and Maintenance) and Superintendent (Traffic), responsible to the Financial Secretary. Sudan Railways continued to undertake the traffic accounts work, but plans were formulated for this to be handed over to Sudan Airways as from 1st. January, 1949.

317. A summary of statistics is as follows :—

AIRCRAFT FLYING HOURS.								hours
Revenue	..	..	..	..	..	..	..	2,072
Non Revenue	..	..	..	..	..	..	..	144
Total	..	..	..	..	..	..	..	2,216
FLIGHTS (REVENUE).								No.
Regular services	..	..	..	..	..	..	..	264
Charters	..	..	..	..	..	..	..	21
Miscellaneous	..	..	..	..	..	..	..	13
Total	..	..	..	..	..	..	..	298
AIRCRAFT MILES (REVENUE).								miles
Total	..	..	..	..	..	..	..	320,183

PASSENGERS (REVENUE).							No.
Public	..	..	..	..	..	..	1,768
Government	..	..	..	..	..	..	993
Total	..	..	..	..	..	..	2,761
PASSENGER MILES (REVENUE).							Passenger miles
Public	..	..	..	..	..	..	804,854
Government	..	..	..	..	..	..	488,336
Total	..	..	..	..	..	..	1,293,190
FREIGHT.							Kilogrammes
Public	..	..	..	..	..	..	19,469
Government	..	..	..	..	..	..	11,401
Total	..	..	..	..	..	..	30,870
MAIL.							Kilogrammes
Total mail carried	..	..	..	..	..	..	11,748
TON MILES.							Ton miles
Public passengers	..	..	..	..	..	..	73,211
Government passengers	..	..	..	..	..	..	47,937
Public freight.	..	..	..	..	..	..	8,792
Government freight	..	..	..	..	..	..	6,666
Mail	..	..	..	..	..	..	4,461
Grand total	..	..	..	..	..	..	141,067
Percentage ton miles used on regular services							Per cent.
							64
REVENUE (SUDAN AIRWAYS SERVICES)							£E.
Charters	..	..	..	..	..	..	3,843
Passengers	..	..	..	..	..	..	37,521
Excess luggage	..	..	..	..	..	..	1,382
Freight	..	..	..	..	..	..	3,912
Mail	..	..	..	..	..	..	1,762
Grand total	..	..	..	..	..	..	48,420
REVENUE FROM HANDLING CHARGES.							£E.
Net	..	..	..	..	..	..	16,748
Recoveries	..	..	..	..	..	..	22,589
Gross	..	..	..	..	..	..	39,337
Total Gross Revenue	..	..	..	..	..	..	87,757
Deducted Statistics.							Miles
Average length of journey (public)	..	..	..	..	..	..	455
" " " " (government)	..	..	..	..	..	..	492
							£E.m/ms.
Average fare paid per passenger (regular services)	..	..	..	..	..	..	14. 300
Receipts per ton mile (regular services)	..	..	..	..	..	..	364
Receipts per capacity ton mile (regular services)	..	..	..	..	..	..	200
Receipts per revenue aircraft mile (all services)	..	..	..	..	..	..	151

Average weight per passenger plus luggage (regular services)	Kilos
	93
Average weight per freight consignment	8
	per cent
Analysis of payloads, passengers	86
" " " " freight	11
" " " " mail	3

318. The bi-weekly, service to Port Sudan was withdrawn after 26th April, 1948, because of the disappointing and uneconomical load factor. This reduced the route mileage, as at 31st. December, 1948 to 1,922 miles, made up as follows :—

	miles
Khartoum—Asmara	425
Khartoum—Juba	742
Khartoum—Geneina	755
	<hr/>
Total	1,922
	<hr/>

The frequency of the Juba and Asmara services was increased from once to twice weekly as from May and June respectively. Development of traffic between Khartoum and Juba was very satisfactory, though the flow was inclined to be one way. There was a noticeable falling off in traffic between Khartoum and Asmara, towards the end of the year, and it may prove necessary to revert to a weekly frequency over this route. A weekly service was maintained between Khartoum and El Fasher throughout the year, extended fortnightly to Geneina. This service started off badly but there were definite signs of a building up of traffic towards the end of the year.

319. Preparation of final drafts of the Ordinance and Regulations (Conditions of Carriage), was delayed pending inquiry into :—

- (i) Insurance premiums relative to passenger legal liability ;
- (ii) the desirability, or otherwise, of Sudan Airways applying for membership of I. A. T. A. If membership is considered to be in the interests of Sudan Airways the standard I. A. T. A. Conditions of Carriage will be compulsory.

320. Arrangements were completed to carry out a series of free publicity flights at various Sudan airports with a view to demonstrating the ease, comfort and expeditiousness of air travel to potential customers who had not yet experienced this form of transport.

321. Several new booking agents were appointed during the year. Sudan Airways were also appointed as booking agents by B. O. A. C. and other regular airline operators.

322. Early in the year approval was given for Sudan Airways to branch out into the work of handling other operators' aircraft. A start

was made at Juba, Malakal and Wadi Halfa, which stations were taken over from B. O. A. C. and staffed by Sudan Airways. At Khartoum air traffic handling of other operators' aircraft was developed over the whole year, and agreement was reached to take over the handling of a number of the smaller operators from B. O. A. C. Net revenue derived from this source, during 1948, was a useful contribution towards the working deficit on Sudan Airways' own services.

323. Expenditure in flying and maintenance was well below budgetary provision. As 1948 was a year of continued development and consolidation, it was not possible to exert the full potential of the three established flying crews. Nevertheless 2,217 hours were flown and all passengers were carried to their destination without injury and rarely with any delay. This total gave an aircraft utilisation of only 550 hours per annum, but there was reason to expect an increase to about 800 hours in 1949. The aircraft were reasonably free of major troubles and there were only two engine failures (one on test). In each case the aircraft was safely landed on one engine. There were in addition two cases of damage to the airframe; neither was serious and both were repaired by Sudan Airways specialist engineers. The supply of spares from the United Kingdom was accelerated during the year, and did not cause the same grave concern as before. Stores and workshops were erected and facilities for maintenance greatly increased. During the period of construction, the work of the engineers was considerably hampered and they must be given credit for having carried on scheduled services during this awkward time of development. Sudan Airways now carry out all airframe overhauls and repairs. The engine overhaul shop is also working, capable of executing all but major repairs.

POSTS AND TELEGRAPHS

General.

324. Once again a disappointing financial year must be recorded. Revenue exceeded that of 1947 by nearly 3 per cent but expenditure rose by 11 per cent; the resulting excess of expenditure over revenue amounted to £E. 111,000. Of this nearly £E. 50,000 represents the value of meteorological and aeradio services rendered on behalf of the British Ministry of Civil Aviation, for which credit had not yet been received at the time of closing the 1948 accounts; had this sum been included the increase of revenue over the 1947 figures would have been 11 per cent. Details of the financial results are given in a later paragraph.

325. A heavy programme of development work was once again executed, but most of it was in preparation for new services expected to be opened to the public in 1949 and 1950.

326. Two major new works were completed and opened to the public during the year. One was a trunk telephone line between Khartoum and El Obeid, which for the first time provides telephone communication between the capital and the gum growing and cattle raising province of Kordofan. The other was the extension of the Omdurman automatic exchange, which enabled a long standing waiting list of potential subscribers to be cleared.

327. The postal and telegraph manipulative staff situation was a little easier than in previous years; the department was just beginning to reap the benefit of an increased intake of apprentices to the posts and telegraphs school some three years ago, but many offices still remained below establishment. It proved impossible to fill vacancies in the establishment of senior posts and telegraph traffic officers. It was also difficult to obtain qualified British and Sudanese engineering staff in adequate numbers; and, in spite of every effort, it proved impossible to recruit the meteorologists needed to maintain the service. In a year during which labour unrest was frequently apparent in the Sudan, it is gratifying to record that the whole posts and telegraphs staff worked without interruption, and fully executed its duty to the public.

328. The establishment of first and second division posts at the end of the year was 25 and 1,123 respectively, as compared with 23 and 1,111 in 1947 (an increase of slightly under 1 per cent on the total). The actual strength was 975, as against 923; of these 85.7 per cent were Sudanese, 10.7 per cent Egyptian, 3.3 per cent British and 0.2 per cent of other nationalities. Third division and unestablished employees (excluding casual labour) numbered 1,660, an increase of 6 per cent over the 1947 figure of 1,577. Two Sudanese officials were sent to the British Post Office for training.

Revenue and Expenditure.

329. The total revenue for the year was £E. 585,741 made up of £E. 414,978 from the public, and £E. 170,764 from government units. The corresponding figures for 1947 were £E. 569,941, £E. 394,104 and £E. 175,838; increases of 2.8 per cent and 5.4 per cent, and a decrease of 2.9 per cent respectively. At the time that the 1948 accounts were closed, credit had not yet been received for the value of aeradio and meteorological services, amounting to about £E. 47,000, performed on behalf of the British Ministry of Civil Aviation. The inclusion of this figure in the revenue shown above would raise the increase over the 1947 revenue to about 11 per cent. Total expenditure was £E. 697,407, as against £E. 626,318 in 1947, an increase of £E. 71,089, or 11 per cent. A large part of this increase was due to an increase in the rate of cost of living allowance to all government servants. There was a considerable increase, too, in the amount spent on the purchase of stores and materials, abroad.

Posts and Telegraphs Offices and Agencies.

330. The seasonal post and telegraph office at Qala en Nahl was converted to a branch office, open throughout the year. Postal agencies were opened at Abidiya, Abu Quta, Geigar, Gharb el Gash, Halfa Degheim, Kodok, Mellit, Omdurman (Murada), Omdurman (Wad Uru), Tabat, Umm Gerr, Wad el Huri and Wagar. At Abu Quta, Kodok and Tabat telegraph services (restricted to telegrams in Arabic script) were provided. The postal agency at Tonj was closed. The total number of post and telegraph offices (including travelling post offices) and agencies open for service at the end of 1948 was 141, as compared with 128 at the end of 1947.

Postal Services.

331. The estimated total number of items of correspondence handled (excluding air letters) rose from 29.1 millions in 1947 to 29.5 millions in 1948, an increase of about 1.4 per cent. Outgoing air letters fell to 137,000 and incoming ones from 156,000 to 74,000, a result of the reduction in full air mail rates made in 1947.

332. On January 1st, a full set of new "ordinary" and "S.G." (service gouvernementale) stamps was put on sale. The general design and colour were the same as those of the old stamps, but the grammar and spelling of the Arabic legends were revised. A fifty-piastre stamp was introduced for the first time. On 1st. October a two-piastre stamp, to commemorate the jubilee of the introduction of the original "Camel Postman" stamp, in 1898, was put on sale. On 23rd. December, to commemorate the opening of the first session of the Legislative Assembly, special ten-millieme and five-piastre stamps were put on sale. In connection with these new issues, first day covers were put on sale and despatched on behalf of purchasers. Nearly forty thousand were sold. A small philatelic section was formed to deal with the despatch of first day covers and philatelic orders received by post. This section also staffs a position at the counter of the Khartoum Post Office which is reserved for philatelic sales. The revenue earned by the section amounted to nearly £E. 30,000 a large part of it in dollars. Special Christmas air letters were again on sale during November and December.

333. There was a further slight improvement in the transit times of mails between the Sudan and the United Kingdom. The one-day railway strike in January had little effect on the postal services. No delay was suffered by first class mail. The second railway strike, which lasted for nearly five weeks in March and April, caused severe dislocation of postal work. First class mail between the more important centres was carried by additional air services, and by improvised lorry services, and suffered little delay, but second class mail, which could only be despatched by infrequent trains manned by volunteer crews, was badly affected. The parcel post was suspended throughout the strike. Provincial and District authorities gave most valuable help in the improvisation of lorry services, and all members of the staff of the department, particularly those in the out-stations, showed much initiative in their efforts to maintain communications and minimise the inconvenience caused to the public.

334. There was a 2 per cent increase in the number of inland parcels handled during the year. Parcels to Egypt decreased by 30 per cent, but the much heavier incoming parcel traffic from that country rose by 6 per cent. There were decreases of 15 per cent and 48 per cent in the numbers of parcels to and from the United Kingdom, and to and from other foreign countries, respectively. The fall in parcels traffic can generally be attributed to present day restrictions on international trade, and currency control.

Remittance Services.

335. The value of inland money order remittances increased by 8 per cent, while the much smaller postal order business decreased by 6 per cent. Remittances by money order to Egypt decreased by 4 per cent, and from Egypt increased by 6 per cent. The value of Egyptian postal orders paid in the Sudan increased by 23 per cent. Money and postal order services to all other countries were still suspended.

Savings Bank.

336. The total amount in deposit rose from £E. 1,210,050 to £E. 1,274,940 during the year; the number of accounts also increased from 36,287 to 38,159. Deposits and withdrawals amounted to £E. 536,388 and £E. 471,458 respectively, as compared with £E. 546,470 and £E. 473,423 in 1947; the total number of transactions was 106,621 as against 115,970.

Private Letter Boxes.

337. A number of suites of private letter boxes, which had been on order for a considerable time, were received from the United Kingdom and installed at many of the principal offices. Altogether 756 new boxes were allotted to applicants, and nearly all waiting lists were cleared.

Telegraph Services.

338. The total number of telegrams handled decreased from 1,820,000 in 1947 to 1,807,000 in 1948 (0.7 per cent). This decrease was on account of a fall of 37 per cent in air navigation telegrams (caused by longer flying stages requiring fewer transmissions of information to intermediate points) and a fall of 29 per cent in meteorological telegrams (caused by a greater use of meteorological broadcasts to replace individual transmissions). Military telegrams also decreased by 43 per cent. There was again an increase of 5 per cent in public telegrams, and of 4.5 per cent in Sudan Government telegrams. Service telegrams increased by 13 per cent. The number of reported errors in telegrams amounted to one error in every 8,700 telegrams handled.

339. The imposition of war emergency restrictions on terminal and transit telegrams by the Egyptian authorities in May caused considerable inconvenience to members of the public who make use of the international telegraph service.

340. Operation of the aeradio services at Wadi Halfa and Juba was transferred from the British Overseas Airways Corporation to International Aeradio Ltd., early in January; in February this company also took over operation of the Malakal station. The aeradio services hitherto operated from the Omdurman aeradio station and the Khartoum telegraph office were transferred to the control tower on Khartoum airfield in April.

Telephone Services.

341. The revenue from telephone rentals during 1948 was £E. 60,375 as against £E. 54,303 in 1947; an increase of 11 per cent. The extension of the Omdurman automatic telephone exchange was completed in the

autumn, and by the end of the year about 200 new subscribers had been connected. The manual exchanges at Wadi Halfa, Wad Medani, Port Sudan, El Obeid, Abu Hamad and Tokar were extended, and about 130 additional subscribers were connected to them. In spite of these extensions there were still 1,118 potential subscribers on the waiting lists at the end of the year.

342. The total number of internal trunk calls made during the year was 630,000 as against 585,000 in 1947. The revenue from trunk call fees was £E. 33,994 as against £E. 29,184 in 1947, an increase of 16 per cent. A new telephone trunk service between Khartoum and El Obeid was opened in December, operated over a three-channel carrier system, which permits three conversations to be held simultaneously. Another three-channel carrier system was put into service between Khartoum and Port Sudan, with consequent improvement in the service between those towns. Trunk telephone service was provided to Karima, Merowe, Korti and Tangasi-es-Suk in January.

343. The total number of international trunk calls made during the year was 32,882. The revenue from these was £E. 13,715 as against £E. 10,034 in 1947, an increase of 37 per cent. The international service was extended to the United States of America, Switzerland and Greece. Wad Medani was added to the towns with access to the international system.

Engineering Services (Line Plant).

344. The construction of two telephone trunk circuits between Kosti and El Obeid, begun in October, 1947, was finished in October, 1948. Work was started in July on the construction of a telephone route from Yambio to Nzara and Li Rangu. Three-channel carrier-telephony equipment was installed on the trunk route between Khartoum and Port Sudan. The work was started in November, 1947, and finished in January, 1948. Work was started in February on the installation of twelve-channel carrier systems between Khartoum and Atbara, and between Khartoum and Wad Medani. A single channel carrier system was installed between Port Sudan and Kassala.

Engineering Services (Town Telephone Systems)

345. The extension of the Omdurman automatic exchange was completed in October, and the extension of Khartoum in December. Together, these extensions provide an additional 1,600 lines for subscribers. A new three-position trunk switchboard suite and the monitor's desk were installed in Khartoum. Private branch automatic exchanges were installed in the Grand Hotel, Khartoum; Mechanical Transport Department, Khartoum North, and the offices of Imperial Chemical Industries, Khartoum. An additional manual switchboard position was installed in the exchange at Port Sudan. Work was carried out on the underground system in Port Sudan in preparation for the forthcoming change-over from manual to automatic working. A private automatic branch exchange

was installed for the railways police at Atbara. Additional equipment was installed in the manual telephone exchange at Wad Medani, providing 35 new lines. A private automatic branch exchange, with an initial capacity of 50 extensions and an ultimate capacity of 100, was installed in the new headquarters of the Sudan Irrigation Department. A small manual private branch exchange was installed in the Hantub Secondary School. The magneto switchboard at El Obeid was replaced by a three-position central battery suite. The manual switchboard at Wadi Halfa was modified to provide accommodation for 35 additional lines. An old Italian switchboard at Abu Hamad was replaced by a 20-line magneto switchboard of modern design. At Tokar the 20-line switchboard was replaced by a modern 50-line magneto board. Small magneto switchboards were installed at Karima and Tangasi-es-Suk, and the exchanges opened for public service.

Engineering Services (Wireless)

346. An additional short wave low powered transmitter was installed at Yambio, and the receiver was replaced by a more modern one. At Fasher all transmitting equipment was moved from the fort to a building on the airfield. A 20-year old medium frequency transmitter at Wau was replaced by a short wave one. The additional very-high-frequency radio-telephony equipment required to complete the police networks in Khartoum, Omdurman, Atbara, Port Sudan and Wad Medani, was received and installed during the early part of the year. A new high-power short wave broadcasting transmitter, whose installation at Omdurman had been in progress since late 1947, was brought into use and operated on full power for the first time on 23rd. December, when the ceremony of opening the first session of the Legislative Assembly was broadcast.

Meteorological Service.

347. The meteorological offices at Wadi Halfa, Fasher and Gencina were moved to the airport control towers. At Juba the office was moved to temporary premises on the airport. Four part-time meteorological stations were opened at Abu Quta, Katire, Yambio Experimental Farm, and Boma, and arrangements were made for one at Tonj. One part-time meteorological station at Wad el Huri was closed. Eleven raingauge stations were opened at Kimba, Lerua, El Odaiya, Khuwei, Mellit, Wada'a, Lafon, Kafai, Goz Regeb, Musmar, Sungikai and six in the Sennar Jebels area. Raingauge stations were closed at Nimule (Agriculture and Forests), Opari, Kerripi, Gakdul and Umm Nabari.

348. A major pre-occupation of the meteorological service during the year was the preparation for the radical changes in procedure internationally adopted from 1st. January, 1949. Instructions were revised or re-written, new forms and charts were prepared and printed, and the observing staff were given instruction in the new procedure.

CHAPTER XIII—SURVEYS

General

349. The demands for survey work in both town and country continued to be greater than the available technical staff could meet. The total staff increased during the year from 121 to 142, but 40 of these were surveyors or draughtsmen under training, and the shortage of petrol and transport meant that full use could not be made of the field staff and inspections had to be restricted.

350. An increase in net revenue from £E. 3,575 to £E. 7,550 resulted from the revision of survey fees and the sale price of maps, and from the increased capacity of the printing section which undertook the production of a number of illustrated coloured booklets for the Ministry of Education.

351. The first four parts of the Survey Handbook, comprising 98 pages and diagrams, was printed. This handbook is designed to cover methods and explanations which are either not found at all or not easily accessible in text books, and to help to standardise the special systems and record-keeping which have gradually become customary in the Sudan. The first four parts cover Field Survey, Field Computations, Office Routine, and Maintenance.

Technical Training of Surveyors.

352. The survey school at Shendi ran two classes throughout the year. The first passing out examinations were held in April, when eight out of ten candidates passed their respective examinations. A considerable amount of time was spent by various members of the department in giving instruction on specific survey matters. One surveyor was granted a British Council scholarship and went to study at Cambridge University.

Principal Surveys.

353. Angular measures on the Khartoum-Kassala chain of geodetic triangulation were completed, though the vagaries of horizontal refraction caused considerable delay in one of the figures in which a 103 ft. Bilby steel tower had to be used. Thirteen stations were occupied and the mean triangular misclosure of 49 triangles was 6".52, with a maximum of—1".46. The resumption of third order triangulation was delayed owing to shortage of petrol.

354. Precise levelling advanced 225 km. along the Nile between Wadi Halfa and Merowe, and reached Sadeik (latitude 19° 49"). Final values were issued for all bench marks between Wadi Halfa and Khor Masur, 30 km. north of Delgo.

355. Two separate parties were in the field providing control for map compilation from air photographs. One compilation is being done in America and will cover an area of 128,000 square kilometres along a belt of country just south of the railway line between El Obeid and

Gedaref. Five new astro-radio points were established in this area and six existing fixed points were indentified on the photographs by ground check. In all, 63 points have been given for controlling this map, 30 having been checked on the ground. The other compilation is being done in the topographical office for the Jonglei investigation team and covers about 56,000 square kilometres in an area stretching from the White Nile and River Sobat to the Ethiopian frontier between latitudes 8° and $10^{\circ}30' N$. Eleven new astro-radio points were established and much information was gathered, which increased the reliability of the interpretation of the photographs. The new maps are extremely interesting in that they cover the Machar Swamps, an area completely unknown before and a detailed knowledge of which is particularly important to the Jonglei investigation team.

356. An experimental survey was undertaken in the southern Gezira, south of the Kosti—Sennar railway line, to test out whether it was possible to use a cheaper form of demarcation than the Gezira beacon system in areas covered by long grass and acacia bush. The mark used was 26 ft. long and made of reinforced concrete. 26 of these marks were established at about $4\frac{1}{2}$ km. apart covering an area of 430 square kilometres. No clearing was necessary and the poles were linked together by triangulation. On the whole the experiment proved a success and a form of accurate demarcation has been devised for this type of country without the necessity and delay of clearing and measuring long lines through grass and bush.

Topographical Section.

357. The air survey policy outlined in 1947, of meeting specific demands rather than embarking on a general programme of revision, was continued and appears to be the best way of using the American photographs and compilations until the best method has been found of revising the standard series from them. Nine sheets of the new standard series, scale 1/100,000, were published, as well as two sheets of the 1/250,000 series and one sheet in four colours of the 1/1,000,000 series. Special maps included a meteorological forecast plotting chart, on Mercator's projection with scale 1/7,500,000 at $22\frac{1}{2} N$., covering the north-east third of Africa; ten strip maps on 1/250,000 and 1/1,000,000 scales for the Sudan Airways; and four provisional sheets, scale 1/50,000 in the Zande area. An investigation was carried out for the Jonglei investigation team of the areas flooded along the White Nile at different levels of the river, and a theoretical investigation was made of this modified method of working with the trimetrogon air photographs which had been devised for the compilation of the Jonglei map.

Cadastral and Towns Sections.

358. Town development, although not maintained at the high level of 1947, continued to place heavy demands on the field and office staffs. There was a decrease in new plot development in the towns, which was welcome as an opportunity to overtake the considerable arrears of routine work. The number of plot boundaries surveyed or pointed out in all classes of town land was 7,955 as compared with 12,358 in 1947.

359. The flow of applications for pump scheme surveys, especially large ones, slowed down since the attention of the public was drawn to the fact that there were limits to the amount of water available for pump schemes. The total number of surveys made for new schemes and extensions to old schemes was 128, covering an area of 30,000 feddars.

360. Work on Aswan Dam compensation appeared to have ended. Authority was received to pay all approved claims relating to 1,415 houses. Disputes and false claims were plentiful, as the lists of houses had been made several years before, and many of them had been totally destroyed by the 1946 flood. No less than 400 claims were received by the Wadi Halfa survey office, many of which had to be settled on the ground by a local board.

Photographic and Printing Section.

361. The structural alterations necessary to allow of the expansion and modernisation of this section were completed in January, and most of the new equipment was in position by the end of the year. Two superintendents were engaged for the photo-litho and litho-printing sub-sections respectively, and a beginning made in training Sudanese staff in the new methods. The output of maps rose from just over 15,000 to over 23,000 and special work included the printing of 41,000 forms for the Stores and Ordnance Department and 30,000 booklets for the Publications Bureau of the Ministry of Education. 760 composite wall and dissected maps were prepared.

CHAPTER XIV—PUBLIC HEALTH

General.

362. On the appointment of Dr. Ali Bedri, M.B.E., on 20th December 1948, the Sudan Medical Service became the Ministry of Health.

The state of public health was satisfactory, although more cases of smallpox occurred than in 1947. This increase was mainly due to a flare up in Kordofan. By extensive vaccination and control measures the incidence decreased throughout the year. Out of a total of 1,412 cases only 279 were seen in the second half of the year. Relapsing fever occurred in sporadic outbreaks, the number of cases still showing a decline. No cases of typhus or yellow fever occurred. Happily there was no recrudescence of cholera in Egypt.

Health of Officials.

363. Statistics for 1948 are given below :—

Nationality	Number of Officials employed.	Total		Average days.		Died	Invalided
		Placed on sick list	Number of days sick	For all officials	For those who were sick		
Sudanese ...	5,144	1,153	12,144	2.36	10.53	4	8
British ...	918	189	1,623	1.77	8.59	—	5
Egyptian ...	271	68	530	1.96	7.79	—	—

The average numbers of days sick for all officials employed, compared with the previous year, were :—

				1947	1948
Sudanese	...	...	...	2.85	2.36
British	...	...	...	1.95	1.77
Egyptian	...	...	...	2.65	1.96

Sudan Defence Force.

364. The health of this force was satisfactory.

PROGRESS OF WORK.

Curative Medicine.

365. Total outpatient attendances showed an increase of half a million over the number recorded for 1947. Inpatient admissions showed a slight decrease. The following table shows the number of admissions, outpatient attendances and operations performed during the last ten years :—

Year	Admissions	Attendances	Operations
1939	105,103	7,119,973	11,253
1940	104,422	6,649,335	11,139
1941	103,023	6,330,711	10,417
1942	114,837	6,750,329	11,353
1943	112,275	6,796,372	12,726
1944	131,077	7,077,919	13,796
1945	131,571	7,897,148	15,455
1946	126,586	8,474,874	15,509
1947	142,294	9,253,351	16,785
1948	140,511	9,820,304	17,573

Preventive Medicine.

366. Ante-malarial measures were extended and more use was made of D.D.T. in oil as a larvicide. Paludrine was used as a prophylactic drug by many and was particularly successful when used in adequate dosage in the Upper Nile Province. Elsewhere in similar dosage it was not so successful. The use of D.D.T. dusting power enabled louse borne diseases such as relapsing fever to be controlled. Maternity and child welfare services were extended, new centres being opened in Khartoum, Port Sudan, Fasher, Juba and Yei. School medical services were maintained. Health education was continued through the medium of public health staff, health visitors and midwives, dispensaries and the graphic museum. The latter also staged exhibits at various agricultural shows. A survey of bilharzia in the Gezira irrigated area was intensified and experiments carried out in the treatment of canals to kill snails.

Maternity and Child Welfare.

367. Work in this sphere continued to increase. At the government clinics in Khartoum area 27,353 attendances were recorded, of these 5,877 were new cases. Home visits during the year numbered 21,013. The infant mortality in Khartoum area per 1,000 births was 86.5.

Ophthalmology.

368. The number of new cases seen at the Khartoum eye hospital showed an increase, although there were fewer admissions and fewer operations were performed. The following figures show the work carried out during the last five years :—

	1944	1945	1946	1947	1948
In-Patients	1,147	1,232	1,199	1,372	1,071
Outpatient attendances	73,133	84,930	88,436	97,352	90,659
New cases	13,503	2,678	17,678	22,276	28,700
Operations performed	1,800	2,462	1,886	2,421	2,048

EPIDEMIC DISEASES.

Cerebrospinal Meningitis.

369. This disease showed the lowest incidence since 1926. The case mortality rate was again high probably for the same reasons as in 1947. In all there were 170 cases with 59 deaths compared with 443

cases and 159 deaths in 1947. The incidence during the last ten years has been :—

Year	Cases	Deaths
1939	2,714	647
1940	4,032	796
1941	1,824	459
1942	2,787	1,027
1943	3,526	765
1944	2,346	405
1945	6,166	666
1946	730	155
1947	443	159
1948	170	59

The distribution by provinces in 1948 was :—

Province	Cases	Deaths
Blue Nile	27	—
Darfur	7	4
Equatoria	76	29
Kassala	2	2
Khartoum	4	2
Kordofan	4	—
Northern	2	2
Upper Nile	10	6
Bahr el Ghazal	38	14
	170	59

Diphtheria.

370. 326 cases with 27 deaths were reported compared with 319 cases and 37 deaths in 1947. Again it was evident that provinces with direct connections with other countries and with foreign elements in their population have a higher incidence of this disease.

The distribution by provinces in 1948 was :—

Province	Cases	Deaths
Blue Nile	65	—
Darfur	7	3
Equatoria	3	—
Kassala	27	2
Khartoum	155	2
Kordofan	26	8
Northern	40	10
Upper Nile	2	2
Bahr el Ghazal	1	—
	326	27

Relapsing Fever.

371. A reduction in the incidence of this disease was again apparent. 287 cases were reported with 8 deaths as compared with 588 cases and 67 deaths in 1947. There is no doubt that the use of D.D.T. powder has proved of immense help in combating this disease. D.D.T. powder was brought into general use as a delousing agent during 1945, and, as can be seen from the table since that year, the number of cases has shown a marked and steady decrease. Incidence during the last ten years has been :—

Year	Cases	Deaths
1939	1,006	92
1940	1,487	45
1941	3,028	110
1942	5,287	559
1943	10,505	668
1944	22,672	310
1945	17,392	444
1946	1,952	65
1947	588	67
1948	287	8

The distribution by provinces in 1948 was :—

Province	Cases	Deaths
Blue Nile	68	1
Darfur	50	1
Equatoria	—	—
Kassala	19	6
Khartoum	24	—
Kordofan	31	—
Northern	8	—
Upper Nile	87	—
Bahr el Ghazal	—	—
	287	8

Smallpox.

372. In all, 1,412 cases occurred with 131 deaths as compared with 973 cases and 160 deaths in 1947. The reason for this increase was a flare up which began amongst West Africans in El Obeid. The large number of cases which occurred there was mainly due to the fact that many cases were, in the first instance, concealed. Stringent measures were taken, and the effect of these is apparent since only 279 cases were reported in the whole country in the last six months of the year. The

distribution by provinces in 1948 was :—

Province	Cases	Deaths
Blue Nile	124	4
Darfur	8	1
Equatoria	10	—
Kassala	152	20
Khartoum	3	1
Kordofan	1,052	99
Northern	3	—
Upper Nile	33	3
Bahr el Ghazal	27	3
	1,412	131

Typhus and Yellow Fever.

373. No cases of these diseases were reported during the year.

Cholera.

374. This disease did not occur in Egypt in 1948. All preparations had been made in the Sudan to protect the country should a recurrence have taken place.

ENDEMIC DISEASES.

Ancylostomiasis.

375. There was no significant change in the incidence of this disease. The village sanitation experiment in Equatoria was continued.

Blackwater Fever.

376. The incidence of this disease showed an increase. Paludrine was used, perhaps, more extensively as a prophylactic against malaria than formerly, but it is too early to say as yet whether it is effective against Sudan strains of malaria. It would be premature to attempt to correlate its use with the incidence of blackwater fever. The incidence during the last six years has been :—

Year	Cases	Deaths
1943	17	3
1944	11	4
1945	14	2
1946	14	3
1947	4	—
1948	12	5

Dysenteries.

377. 3,941 cases were admitted to hospital. Of these 551 were diagnosed as bacillary dysentery. In many cases the diagnosis was clinical. In 1947 3,894 cases of the dysenteries were admitted.

Enteric Fever.

378. There was an increase in the number of cases notified, mostly in Khartoum and Northern Provinces. 202 cases were reported with 15 deaths, compared with 144 cases and 13 deaths in 1947. Distribution by provinces in 1948 was :—

Province	Cases	Deaths
Blue Nile	43	—
Darfur	5	1
Equatoria	5	1
Kassala	18	2
Khartoum	50	3
Kordofan	4	—
Northern	64	6
Upper Nile	13	2
Bahr el Ghazal	—	—
	202	15

Dracontiasis (Guinea-worm)

379. The general incidence of the disease over the whole Sudan showed a slight decrease. A marked decrease was noted in Kassala Province, in Gedaref District, where stringent measures, including the use of gambusia, were taken to protect water supplies.

Hydatid Cyst.

380. Cases of this disease continued to occur amongst the Taposa living in Kapoeta District, Equatoria Province.

Leishmaniasis (Kala-azar).

381. 460 cases with 62 deaths were reported compared with 327 cases and 60 deaths in 1947. The most marked increase took place in Kassala Province, in Gedaref District. Sodium antimony gluconate was still extensively used in treatment. The incidence during the last ten years has been :

Year	Cases	Year	Cases
1939	394	1944	205
1940	460	1945	192
1941	494	1946	246
1942	432	1947	327
1943	225	1948	460

Leprosy.

382. The following table shows the distribution of leprosy in the Sudan :—

Province	Total known cases	Total in settlements		Bacteriologically positive new cases found during year
		Government	Missions	
Bahr el Ghazal	194	155	—	45
Blue Nile	186	51	—	28
Darfur	43	36	—	16
Equatoria	8,447	871	87	229
Kassala	59	24	—	14
Khartoum	47	—	8	21
Kordofan	1,651	110	—	32
Northern	19	—	—	5
Upper Nile	7	—	—	5
TOTAL	10,653	1,247	95	395

The village leper settlements policy continued in Equatoria and there were two B.E.L.R.A. workers carrying out the survey and, supervising the village settlements in the Moru District of that province.

Malaria.

383. 12,546 cases were admitted with 196 deaths as compared with 13,910 cases and 253 deaths in 1947. The use of D.D.T. in oil as a larvicide was extended. Investigations were begun in the proposed extensive use of "residual spraying" in rural areas as an imagocide, as a malarial control measure.

Rabies.

384. 1,166 persons received preventive treatment. In many cases this treatment was given as a precautionary measure as it was often impossible to verify if the biting animal was or was not rabid. Ten deaths occurred from those who had received preventive treatment; in addition, one woman, who had received no preventive treatment, died one year after being bitten by a rabid dog.

Acute Rheumatism.

385. 203 cases were admitted with one death, as compared with 216 cases and 3 deaths in 1947.

Sleeping Sickness.

386. 75 cases were reported in Equatoria Province compared with 47 cases in 1947. The increased incidence occurred in Li Yubu and aYmbio areas of Zande District. 305,790 palpations were carried out

during the year and 3,681 gland punctures were performed. The incidence during the last ten years has been :—

Year	Li Yubu	Yambio	Yei	Kajo-Kaji	Meridi	Imported	Other localities
1939.. ..	103	—	—	4	—	—	—
1940.. ..	80	—	—	—	—	1	—
1941.. ..	69	—	—	1	47	8	—
1942.. ..	48	—	—	2	25	—	—
1943.. ..	60	—	8	1	9	3	—
1944.. ..	37	—	35	—	4	—	4
1945.. ..	16	1	19	—	—	—	3
1946.. ..	21	19	16	—	—	—	—
1947.. ..	18	6	21	—	2	—	—
1948.. ..	32	23	20	—	—	—	—

Schistosomiasis.

387. More extensive surveys in the Gezira irrigated area showed an average rate of 8 per cent infection with *S. haematobium* out of 22,609 examined. In children the rate was 13 per cent. In the rectal form of the disease there was also an increase, no less than 10 per cent of 8,538 children examined were found to be suffering from it. In the White Nile reservoir area the incidence of the vesical disease was much the same as in the Gezira though the rectal type was still much lower. Treatment of discovered cases is being done as the survey progresses, and villages are being re-surveyed after treatment. Results of these re-surveys have been encouraging. Out of 212 cases only 46 were found to be infected ten months later. Treatment of canals with copper sulphate is done at the same time as the survey of the population. Surveys of the canals before and after treatment showed a considerable reduction in the snail population. In two of the canals after treatment no snails at all were found in 30 dips, while prior to sulphation the figures were 39 and 36.

Schistosomiasis in the indigenous population Gezira irrigated area : percentage incidence figures from routine examinations.

	Haematobium						Mansoni					
	Children			Adults			Children			Adults		
	Exam.	Inf.	%	Exam.	Inf.	%	Exam.	Inf.	%	Exam.	Inf.	%
1946 ..	18,728	567	3.02	35,870	430	1.2	8,369	151	1.8	24,155	336	1.4
1947 ..	11,203	351	3.1	17,830	374	2.0	3,367	166	4.9	9,763	300	3.0
1948 ..	8,538	1124	13.0	14,071	680	5.0	8,538	878	10.0	14,071	536	3.8

White Nile reservoir—Bilharzia Mansoni

	Haematobium			Mansoni		
	Exam.	Inf.	%	Exam	Inf	%
Dueim & Kosti ..	9,010	855	9.4	3,226	86	2.6

In Northern Province, although the figures for 1948 showed a decrease, this was not considered a true picture. Examinations of school children in Wadi Halfa area showed an incidence of the vesical disease of from 14 per cent to 27 per cent, while subgrade schools and khalwas in Merowe District showed 10 per cent. Except in Atbara area the rectal form is not common.

Northern Province : Dongola and Merowe Districts :
Schistosomiasis Haematobium.

	No. Examined	Infections found	Percentage
1946	12,124	925	7.6
1947	9,539	791	8.3
1948	3,642	105	2.9

Wadi Halfa District : Schistosomiasis. Haematobium.

	No. Examined	Infections found	Percentage
1946	5,456	1,110	20.0
1947	10,795	1,785	16.5
1948	8,136	900	11.0

Tuberculosis.

388. Admissions to hospital during the last five years were :—

	1944		1945		1946		1947		1948	
	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.
Northern Sudan	677	526	845	508	781	538	682	469	768	466
Southern Sudan	119	106	112	135	107	75	152	87	190	105
West Africans	—	—	—	—	—	—	43	43	61	33

The following table shows the admissions to hospitals for the pulmonary and non-pulmonary forms of tuberculosis during the last ten years. It will be noted that the gradual increase in incidence is being maintained :—

YEAR					Pulmonary	Non-Pulmonary	Total
1939	..	..	..	..	685	396	1,081
1940	..	..	..	..	579	457	1,036
1941	..	..	..	..	631	511	1,142
1942	..	..	..	..	671	505	1,192
1943	..	..	..	..	593	529	1,122
1944	..	..	..	..	796	632	1,428
1945	..	..	..	..	957	643	1,600
1946	..	..	..	..	888	613	1,501
1947	..	..	..	..	877	599	1,476
1948	..	..	..	..	1,019	604	1,623

Undulant Fever.

389. 51 cases were reported, with one death, compared with 51 cases and two deaths in 1947.

Venereal Diseases.

390. 131,302 cases were reported with 47 deaths as compared with 129,427 and 59 deaths in 1947.

Yaws.

391. This disease continued to be found in the southern Sudan.

Suakin Quarantine.

392. The number of pilgrims leaving from Suakin during the last ten years has been :—

1939/40	..	..	..	3,204	1944/45	..	..	..	6,999
1940/41	..	..	..	2,085	1945/46	..	..	..	2,214
1941/42	..	..	..	8,467	1946/47	..	..	..	8,404
1942/43	..	..	..	7,670	1947/48	..	..	..	12,020
1943/44	..	..	..	17,818	1948/49	..	..	..	11,105

All pilgrims were vaccinated against smallpox and inoculated against cholera, with calf lymph and vaccine made in the Stack Medical Research Laboratories. Every pilgrim without a valid yellow fever inoculation certificate was detained at Suakin until he had spent six clear days since leaving the yellow fever endemic area. The health of the pilgrims during the pilgrimage and on their return was satisfactory. A medical mission consisting of two doctors, a medical assistant, a sanitary overseer and subordinate hospital staff were sent to Saudi Arabia. The mission set

up its tented hospital just outside Jedda and also treatment centres at Medina and Mecca. The facilities provided were much appreciated by the Sudan pilgrims, also by the local people, and were an important factor in maintaining the health of the pilgrims. On their return journey, the pilgrimage having been declared clean, the period of detention at Suakin quarantine was for 24 hours only. This period began after all medical formalities had been completed. The following table gives statistics of the work of the mission :—

PLACE	Total Attendances				Admissions			Deaths		
	Suda- nesc.	W. Afri- cans.	Others	Total	Sud.	W/A	Total	Sud.	W/A	Total
Jedda	775	573	4,511	5,859	20	—	20	1	1	2
Mecca	1,079	205	937	2,221	8	4	12	2	5	7
Muna	—	—	—	405	8	—	8	—	—	—
Arafat	—	—	—	298	—	—	—	—	1	1
Medina	1,520	247	2,516	3,580	8	—	8	2	1	3
	3,374	1,025	7,964	12,363	44	4	48	5	8	13

Port Sudan Quarantine.

393. 765 ships entered Port Sudan compared with 681 in 1947.

	1947	1948
Merchant ships etc.,	674	743
Warships	11	33
	685	776

During the year 29 ships arriving within six days from ports in the yellow fever endemic area were quarantined.

Wadi Halfa Quarantine.

394. All river craft, their passengers and crews, arriving from Egypt, were inspected on arrival. 20,714 passengers were examined and 4,514 were admitted to quarantine. Included in these admissions were 731 Saidi labourers.

Kitchener School of Medicine.

395. Of the 28 students in residence, 12 were of the School of Science, and in the School of Medicine 11 preclinical and 5 junior clinical. In the professional examinations in Anatomy 11 candidates were examined of whom 9 passed and two failed and were referred for three months. In pathology 5 candidates sat for the examination and all passed. In physiology 11 candidates were examined; 9 reached the required

standard and two were referred for three months. In public health 5 candidates sat for the examination; 4 reached the required standard and one was referred for three months.

396. Owing to unforeseen circumstances the arrival of the Visitor from the Royal College of Physicians and Surgeons, England, was postponed and the professional examinations were held in his absence in January, 1949.

Graphic Museum.

397. As in the past the teaching facilities which the museum affords were taken advantage of by all students of the School of Hygiene, by the senior class of medical students, medical assistants and junior hospital staff. Talks and demonstrations on hygiene were given to the pupils of secondary and elementary schools on 21 occasions. Recorded visits to the museum by the general public during the year were 5,968, an increase of 2,047 over 1947. The malaria section was completely reorganised and additional material was added during the year. New leaflets in Arabic were prepared on malaria, bilharzia and relapsing fever and 5,000 copies of each printed for general distribution through the medium of the graphic museum and the various health shows. Four special boxes containing models, slogans, posters, leaflets, etc., the basis of health exhibits, were prepared and sent to shows at Wadi Halfa, Abu Guta, Kassala, Sennar and Wad Medani.

Public Health Officers.

398. Four candidates passed their final examination and were awarded the certificate of the Royal Sanitary Institute. Fifteen students were under training. At the School of Hygiene in Juba 4 passed the final examination in 1948, and 3 remained under training.

Nurses' Training School.

399. There were 39 nurses under training. 22 probationers were admitted to the school, 7 were discharged as unsuitable. Nine probationers passed the final examination.

Midwives' Training School.

400. 32 midwives passed the qualifying examination and were awarded certificates. 544 midwives have been trained since the school opened and 404 are still in active practice. Eleven trained midwives attended refresher courses. The distribution of midwives was :—

Khartoum Province	..	..	106
Blue Nile	„	..	91
Northern	„	..	96
Kassala	„	..	38
Kordofan	„	..	49
Darfur	„	..	18
Upper Nile	„	..	6

Dispensers.

401. Three candidates passed their final examination after completion of the three years course.

Laboratory Assistants.

402. One laboratory assistant completed his training at the Stack Laboratories, and three were under training at Juba hospital.

Medical Assistants.

403. 18 trainees passed their qualifying examination from Omdurman civil hospital, while at Juba civil hospital there were 21 trainees, of whom 6 passed their final examination in 1948.

Stack Medical Research Laboratories.

404. 26,695 routine examinations were carried out compared with 32,610 in 1947. 150 bacteriological examinations of water were made in 1948 compared with 69 in 1947. The following quantities of vaccine, made in the laboratories, were issued:—

		1947	1948
		doses	doses
Vaccine lymph	.. ..	887,460	964,280
		c.c.	c.c.
T.A.B. Vaccine	.. ..	8,350	16,050
Anti-Rabic vaccine	.. ..	118,500	87,450
Cholera vaccine	.. ..	19,800	35,100

Research.

405. Research work was carried out on leishmaniasis, tuberculosis, onchocerciasis and the pox virus diseases. Studies were resumed on schistosomiasis after an interval of ten years. *Glossina Tachinoides* was found for the first time in the Sudan at Kijille in Upper Nile Province. This fly is an important West African vector of trypanosomiasis; it fortunately does not appear to exist in the two other southern Sudan provinces.

Wellcome Chemical Laboratories.

406. 679 analyses were carried out for government departments, the services, and private firms, as compared with 776 in 1947. The preparation of new laboratories was begun late in the year. Research work was continued on the toxic principles of *Courbonia virgata*, on the seed oils of four varieties of seeds from the southern Sudan, and on problems regarding the drug stilbamidine.

Missions.

407. The following table shows the work carried out by the medical missions :—

	In patients	Outpatient attendances	Operations
Church Missionary Society :			
Omdurman (Khartoum Province)	1,878	46,553	110
Sallara } (Kordofan Province)	264	26,817	—
Katcha } (Kordofan Province)	1,551	14,705	—
Lui (Equatoria Province)	330	2,337	168
American Mission :			
Nasir } (Upper Nile Province)	97	53,014	—
Doleib Hill } (Upper Nile Province)	109	16,348	—
Wanglel }	—	6,659	—
Sudan United Mission :			
Abri } (Kordofan Province)	302	22,103	—
Heiban }	166	11,801	—
Sudan Interior Mission :			
Abayath } (Upper Nile Province)	—	3,180	—
Paloic }	—	3,199	—
Banjang }	—	2,462	—

CHAPTER XV—EDUCATION.

General.

408. The outstanding event of the year was the creation in December of the Ministry of Education, and the appointment of El Sayid Abdel Rahman Ali Taha to be Minister. New ground had earlier been broken by the appointment in January of Sayid Abdel Rahman as the first Sudanese Assistant Director of Education.

409. Once again the main pre-occupations were the execution of the comprehensive plan of expansion upon which the Ministry is engaged, and simultaneously the planning of further advances. The 1946 ten year plan was under review during the year and a revised plan, designed in particular to make more rapid advances at the elementary and intermediate levels, and in girls' education, were prepared for submission early in 1949.

410. In January, a technical adviser arrived from the United Kingdom and was engaged throughout the year on the preparation of a plan for technical education, including the establishment of pre-apprenticeship schools in the larger towns and a Technical Institute in Khartoum. This was completed by the end of the year and has been forwarded to the Executive Council.

411. Much time and thought were devoted to the problems involved in handing over responsibility for elementary education to local government authorities and plans to cover this transfer were worked out in some detail. This should be a most important development, especially in view of the rapid expansion of elementary and sub-grade schools and the increasing difficulty of maintaining adequate control over them from Khartoum.

412. In the early months of the year the acute shortage of water in the El Obeid area raised misgivings about the suitability of Khor Taggat as a site for the new secondary school in the west. After an exhaustive re-examination of the question, however, it was decided that the project could safely proceed and by the end of the year the buildings were going up apace. In anticipation of the opening of this school in January, 1950, 12 classes were admitted in January, 1949 into Wadi Seidna and Hantub schools resulting in some temporary inconvenience and overcrowding at these seminaries.

413. The supply of qualified Sudanese staff still lagged behind the demand and it continued to be necessary to make up the deficiency by recruitment of teachers from the United Kingdom and Egypt. In 1948 the total number of recruitments from abroad was 34, compared with 15 in 1947 and 16 in 1946. In order to meet the demand for teachers for intermediate schools a special two-year school of teacher training for ex-secondary schoolboys was organised at the Institute of Education.

414. A large building programme was again a feature of the year. In addition to the third secondary school mentioned above, building works in progress included a girls' secondary school at Omdurman, a new intermediate school at Kassala and extensions to the girls' intermediate schools at Wad Medani and El Obeid, and to the boys' intermediate school at Dilling and Shendi. Similarly, in the southern provinces, there was considerable building activity with the erection, amongst other things, of the first southern secondary school at Rumbek, while the Public Works Department and the Provinces were also engaged on a heavy programme in connection with the expansion of elementary education.

415. The number of students from the Ministry studying in the United Kingdom and Egypt in 1948 was 43 and 29 respectively. Of these, 22 were reading for degrees in the United Kingdom.

NORTHERN SUDAN.

Elementary Schools.

416. 1948 brought a considerable increase in the number of elementary schools, the total reaching 162, with an attendance of over 25,000 boys. A large proportion of these schools have boarding facilities, thereby casting the net wider and making it easier for boys in outlying villages to attend. In Northern Province, for example, 12 out of 31 schools have boarders, and in Darfur about one third of the total number. The opening of the Elementary Teachers' Training school at Dilling in 1948 should accelerate the expansion of education at this level.

Sub-Grade Schools and Subsidised Khalwas

417. Below the elementary level there are the sub-grade schools and the subsidised khalwas, both under the control of local government authorities in areas where these exist, but supervised by the province education officers. The sub-grade schools continued to increase in popularity, particularly in the more backward areas. Kassala Province, which opened no fewer than 14 new schools in 1948, tried an experiment in the Beja District in the abolition of the first year class of the elementary schools and the substitution of a much larger number of sub-grade schools. There are there the special problems of language, and the unwillingness of parents to send their sons any distance to school even when boarding accommodation is provided. In Northern Province these schools continued to be popular, and the fact that a few exceptional pupils proceeded direct from them to the intermediate schools testifies to the academic merit of at least some of them. In Darfur, girls attend classes with boys in some schools. Refresher courses for teachers in the summer holidays were of great assistance, and in some places, such as Darfur, members of other departments helped in these courses. The appointment of Maahad graduates improved the standard in Arabic and Religion.

The subsidised khalwas continued to enjoy varied popularity in different localities. In Northern Province, for instance, there were 81 in operation, whereas in Kassala Province only one survived.

Intermediate Schools.

418. One new government intermediate school was opened in 1948 at Kassala. The council of Kassala Ahlia school generously afforded temporary accommodation for the new school from January until the summer and in the second term it was able to occupy its own premises. This school, together with the non-government schools at Kassala and Gedaref, now provides increased opportunities for intermediate education for the boys of the province who had formerly to go to Port Sudan. It is hoped that the next few years will see a rapid expansion of education at this level throughout the country, but the continued shortage of teachers and the impossibility of obtaining sufficient numbers of the Gordon Memorial College diplomates will make it difficult to realise all proposed plans, although the special two-year training school at Bakht er Ruda, opened in mid-1949, should improve the position greatly in this respect.

In general, intermediate schools had a successful year and, except for Atbara school in the first term, remained largely undisturbed by outside influence. Khartoum North headed the list at the end of the year with 100 per cent passes in the final examination.

Junior Secondary Schools.

419. The Omdurman junior secondary school, with its commercial bias, was again flooded with applications. 70 new boys were accepted, making the total number 111, of whom 75 were boarders. The results of the December, 1947, Civil Service Examination were satisfactory, and

out of the 63 who sat 44 obtained the qualifying mark and found employment. Boarding accommodation on previous years had not been adequate, but in May room was found for boarding in the school premises. A large gathering attended the Parents' Day in April, and in December the annual tours to Kordofan and the East were made by first year boys.

The Dueim rural junior secondary school had 52 pupils in 1948. Of the 25 second year boys who finished their course at the end of March 10 found employment with the Ministry of Agriculture and 4 with other departments. The first year term had to be prolonged until 18th April owing to the railway strike and petrol restrictions. The second year boys went on tour as usual, this time to Khartoum, Shendi and Bouga. An improved agricultural science syllabus was introduced, and a new experiment in financial and agricultural training with second year boys proved successful and brought considerable financial profit to each pupil. The farm dairy was reorganised to give each boy as much responsibility for dairy work as possible. Interest in games continued to grow and matches were played against Hantub and other schools.

Secondary Schools.

420. 141 boys were admitted to Wadi Seidna school in January, 1948, raising the total number of boys from 359 to 420. Of this number 218 came from Northern Province, and 183 from Khartoum, Omdurman and Khartoum North.

A good year ended unfortunately with the closure of the school for 1st, 2nd and 3rd years on 17th November, about a month early, for reasons connected with political demonstrations. It was not surprising that schoolboys, many of them of English undergraduate age, should be susceptible to political propaganda from the nearby capital, and it was perhaps inevitable that they should display an interest in matters affecting the future of their country, and that difficulty should be encountered in training them to express their feelings with due temperance and without running counter to school authority. However, the new term showed every sign of a calmer and happier atmosphere, and it was hoped that these untoward occurrences would soon become a thing of the past.

The results of the Cambridge School Certificate examination showed that the academic standard was still rising. 70 out of 83 gained the certificate and 33 of them, a larger number than ever before, won exemption from London Matriculation.

Various school activities flourished. Plays, both Arabic and English, including scenes from Shaw's "Saint Joan," were acted, the school Mulid was again enjoyed by the boys and the local villagers and Parents' Day, attended by over 100 guests, was a great success. The new mosque was completed by the end of the year and it is hoped to add a minaret with funds partly subscribed by generous private donors. The swimming team did well to win an inter-team contest in Khartoum and scouting had a revival under the new scoutmaster. The usual 4th year tours

were conducted during the summer holidays, and in 1948, for the first time, 16 boys visited the southern Sudan where the hospitality of officials and missionaries and the friendliness with which they were received on every side afforded them a most valuable and enjoyable experience.

421. The number of boys at Hantub school increased in 1948 from 286 to 371. Most of these came from Blue Nile, Kordofan and Kassala Provinces. The school had a successful year, both in work and games, until three weeks before the end when the 1st, 2nd and 3rd years stopped work in sympathy with their schoolfellows at Wadi Seidna. Fourth year continued as usual until after their examinations, and, although the interruption was much to be regretted, good relations between staff and boys were maintained and the general atmosphere of the school remained satisfactory. A new staff club was opened in one of the houses during the year and proved very popular.

The Cambridge School Certificate results showed a marked improvement on previous years, 47 out of 57 candidates gaining their certificates, 19 of them in Grade I.

Building continued throughout the year and the mosque was completed. By the end of the year two new boarding houses, an extension to the dining hall and a school bakery (the last under the auspices of the school co-operative society) were also finished. A handsome electric clock was fitted in the school tower. The health of the boys continued to be extremely good and there was very little sickness during the year.

The farming society was particularly active and successful. A new stage was built and several plays were produced, including Shaw's "Saint Joan" and "Arms and the Man" and Galsworthy's "Justice". The Cadet Corps and Scout Troops maintained their keenness and three 4th year boys were awarded the Khojalab Soutmaster's scarf. Swimming in the river was again very popular in the first term and a large raft was moored in deep water as a diving board. Two new sailing boats, built in Khartoum, were sailed upstream to Hantub in March and several boys have already become keen sailors. The usual summer tours for 4th year boys were arranged to the Nuba Mountains and Port Sudan, and 1st. year boys spent some days travelling round the Gezira Scheme.

The matches between Hantub and Wadi Seidna are the highlights of the games season and in 1948, in the first term, Wadi Seidna won the netball and the football was a draw, while, in the second term, Hantub carried off the honours in both. In athletics Hantub maintained its run of victories over Wadi Seidna, and both teams showed an unusually high standard, several long standing records being broken.

Institute of Education, Bakht er Ruda.

422. The new section at Dilling opened in February with staff largely drawn from Bakht er Ruda and an entry of 30 students. Contact was maintained between the two sections by visits. At Bakht

er Ruda the building of Mabruka school and the elementary boarding houses was completed.

63 new elementary teachers were produced, including 8 for the Hadhramaut, Aden and Somaliland, and 55 teachers attended refresher courses. 67 government and non-government teachers completed the second part of their course during the year and the usual short study courses for intermediate headmasters and others were held.

29 school books and booklets were completed while the Publications Bureau maintained the large circulation of its fortnightly "El Sobyana." The publication "El Nur" was dropped in favour of booklets on varied subjects in easy Arabic. Towards the end of the year a mass literacy campaign on the Laubach "Each one Teach one" method was started in Dueim and met with great enthusiasm.

The British Health Visitor started work at Um Gerr and the first training course for Sudanese mistresses in adult work was held at Bakht er Ruda. Plans were also prepared for the extension of adult work both for men and for women, into the Gezira.

Gordon Memorial College.

423. 132 new students were admitted to the College in February, as compared with 106 in 1947. Their distribution was:—

Arts	..	..	..	..	46
Science-Biological side	..	..	..	..	42
Science-Mathematical side	..	..	..	..	21
Law	..	..	..	..	14
Design	..	..	..	..	9

Together with the 13 diplomates who passed into the administration class these admissions brought the total strength of the College at the beginning of the year to 271, distributed as follows:—

Administration and Law	..	..	..	..	36
Agriculture	..	..	..	..	7
Arts	..	..	..	..	100
Design	..	..	..	..	13
Engineering	..	..	..	..	14
Science	..	..	..	..	92
Veterinary Science	..	..	..	..	9

By December the total had dropped from 271 to 258, mainly owing to the departure of 10 students to universities in Egypt. The figure for the corresponding stage in 1947 was 194.

424. Including passes in supplementary examinations, the number of students who can be regarded as having completed the year successfully was 213, or 82.5 per cent. of the whole. Although the number of outright failures was not alarmingly high the performance as a whole was patchy,

and there were many border-line passes. The number of candidates who passed the preliminary examination with credit and thus gained matriculation was disappointingly low (30 out of 98): the Intermediate results in Arts and Science were definitely bad: and for the first time a number of candidates fell down in the final Diploma examination in Arts. Doubtless much of the trouble was attributable to the political restlessness which prevailed inside and outside the College throughout the year, but this not wholly account for the apathy which seemed to be a feature of some classes, notably in the Intermediate year. The fault there was not so much lack of industry as general listlessness and a failure to take a positive interest in the work, the underlying causes of which are difficult to diagnose. Over all there was too great a tendency to rely on lecture notes rather than independent reading, and many of the students approached their tasks with an inadequate appreciation of the fact that the hurdles to be crossed in a university course are necessarily more exacting than those met with at school.

425. One woman student successfully completed her course in Arts, and so became the second woman student in the history of the College to obtain a Diploma.

426. In all examinations, with one or two relatively minor exceptions, the work of the candidates was assessed by external as well as internal College examiners, and there is little doubt that this principle is essential at the present stage of development, when it is so important to determine and establish standards. The reports submitted by almost all external examiners in 1948 were both comprehensive and suggestive, and the College is fortunate to be able to gain in this way so much helpful advice and criticism.

427. Much was done during the year towards consolidating the College's connection with London University. As usual, negotiation by correspondence was supplemented by a series of formal and informal talks both in London, during the summer, and Khartoum.

428. With most of the spadework done, the main developments in Arts and Science during 1948 were a matter of extending and adjusting, in the light of experience, an already well defined system. The principle steps forward were (i) the completion and approval by the University of detailed syllabuses for the post-Intermediate stages of both courses; (ii) the reduction of the Intermediate subjects in Arts from four to three, of which only one need be a language; (iii) the simplification of the Preliminary course in Science (Biological side) by the elimination of Mathematics; and (iv) the decision of the University Senate to allow participation by College examiners in the Intermediate examination on the same lines as those laid down for the Preliminary examination in 1947. In this last connection things have worked well; on both occasions so far the two sets of examiners, University and College were definitely *en rapport* and administrative arrangements functioned with efficiency. As noted above, however, the performance of candidates in the 1948 examinations left something to be desired, and a heavy crop of London graduates in the immediate future can not be expected.

429. Meanwhile good progress was made in implementing the College Council's decision that steps should be taken to speed up the introduction of degree courses in other schools. Although working details remained to be settled the University gave approval in principle to a draft degree course in Law submitted by the College. What is envisaged is a five-year course, limited to students specialising in Civil Law, falling into four phases—(i) a Preliminary year in Arts; (ii) a two-year Intermediate phase, in which the students are to be given a thorough grounding in Sharia as well as Civil Law subjects; (iii) LL. B. Part I; and (iv) LL.B. Part II. Subject to agreement as to the content of the Sharia subjects to be taken the course should be well in line with local requirements, and it is confidently expected to have taken final shape in time for students entering the Intermediate stage in 1950.

430. A definite move was also made towards the establishment of a special degree course in Agriculture, although matters were complicated here by the fact that during 1948 the University was in the throes of revising its normal external course in this field. It seemed fairly clear at a meeting held in London in June, however, that the existing five-year College Diploma course could readily be modified to meet the University's requirements without prejudice to local circumstances; and in the interim the Board of Studies (Agriculture) and the Academic Board took action accordingly. As a further step the College invited Mr. Dunstan Skilbeck, Principal of Wye College, to visit Khartoum in April, 1949, and it was hoped that this would clear the way for the admission of degree students at Shambat in 1950. By that time the new Agricultural Chemistry department should have been completed, and the school should be amply equipped to carry out its wider programme.

431. Discussions as to the extension of the London relationship to the Engineering School were of an exploratory nature only, since it was clear that the completion of the new laboratories and workshop was an essential preliminary to recognition by the University of the School's suitability for the training of external degree students. Nevertheless, the problems involved were sufficiently clarified to enable the Engineering Board of Studies at its meeting in December to reorganise the Diploma course as a preliminary to the admission of degree students in 1951.

432. Investigations during the summer strengthened the impression that it would be premature for the Khartoum Veterinary School to attempt at this stage to train students either for the London B.V.Sc. or the M.R.C.V.S., and this because: (i) the period of training required would be too long, (ii) the staff and facilities needed would be unduly elaborate, and (iii) without considerable modifications, which the authorities concerned would find it difficult to concede, the training would not be particularly well suited to local conditions. The Veterinary Board of Studies accordingly decided, with the approval of the Academic Board, to aim for the present at improving and consolidating the Diploma course, the principal change being that the period of training was extended

from four to five years to allow more intensive treatment of the main professional subjects and a larger measure of practical work in the field. The subsequent appointment of a special sub-committee to review the implications of this change led, however, to a revival of feeling in favour of giving the students an opportunity to study for an overseas qualification, and the possibility is to be further explored.

433. After discussion on the Academic Board approaches were made to the British Universities with a view to clarifying the status of the various College Diplomas. Thanks to the generous lead of London and the good offices of the Inter-University Council—the path was substantially eased for diplomates sent to the United Kingdom to take graduate courses.

434. The School of Administration and Law effectively assumed its present form at the beginning of 1948 with the transfer of the Department of Legal Studies from the School of Arts. At the same time the Department in question was strengthened by the appointment, on secondment from the Legal Secretary's Branch, of a second lecturer in Sharia and the recruitment of a full-time lecturer in Civil Law.

In the Department of Administration itself a useful revision of the syllabus followed the opening of a special school for police officers in January, which permitted a reduction of the amount of time devoted to police lectures and the giving of more attention by the Administration students to local government and the study of the Sudan's economic problems. Meanwhile it was recognised that in the period of political transition which lay ahead the Department would have an increasingly vital part to play, not only in the training of central and local government officials, but also in research into the changing problems of government. With this in mind the College invited Miss Margery Perham to investigate the Department's existing set-up and to suggest ways and means of improving it. This she did with her customary energy and insight, and her report was full of valuable suggestions for the future, one of which was given immediate effect. As a result, the period of training for Administration cadets has been increased from one year to two. Instead of spending two consecutive terms in College studying exclusively Sudanese administration methods in the classroom, the cadets will pass through three phases of training : (i) a term in College devoted to the study of the Sudan's administrative system ; (ii) a period of 12 to 15 months' practical training in the field ; and (iii) after that, a further term in College devoted to the study and discussion of sociological problems in general.

435. In the Engineering School in 1948, for the first time, full use was made of the Electrical and Materials Testing Laboratories, with the result that the content of the laboratory course for Part II students during the summer vacation in Egypt was considerably reduced.

436. At its tenth meeting in December the College Council resolved that it would raise no objection to the transfer of the School of Design to the Ministry of Education. Negotiations with the Ministry with this end in view were begun.

437. In the School of Agriculture as well as carrying on the collective study of various aspects of clean milk production all members of the staff found time for individual projects. A paper on dairy cattle in the tsetse fly country was published in the East African Journal of Agriculture and the costing of production on the School farm begun in 1947 was completed. With the help of a grant from College research funds work was continued on a new virus disease (Dolicho Lablab) in Sudan beans; as also research into the nutritional value of Sudan fodders. Bibliography, with abstracts, of published work in agricultural science in the Sudan to 1948 was prepared. Further work was done on the dentition of farm animals.

438. Two members of the staff of the School of Arts spent part of the summer in Kordofan studying tribal life and human geography. The first edition of the College Calendar was prepared for the press and a Biographical Dictionary of the Sudan was completed, for publication by the Clarendon Press with the aid of a grant from the Official Publications Board. A most successful dig at Abka, near Wadi Halfa, revealed one of the finest collections of rock drawings yet to have come the archaeologists' way. It is expected that, when the material (which included large quantities of potsherds and implements) has been sorted and dated and the drawings have been reproduced for publication, the result will be to throw much light on early man in Nubia and on African migrations generally. An illustrated article on the dig has already appeared in the London Illustrated News.

439. In the School of Science the text of an illustrated guide to the freshwater fish of the Sudan was nearly finished; also in preparation was a report on the occurrence of various Opalinids (ciliate protozoan of a type normally found only in the alimentary canals of amphibians) in a number of species of Nile fish. Work continued on zoological material collected in the sudd area in 1947 and a note was written on *Cordylophora* in Africa and published.

440. Some 3,000 accessions during the year brought the total number of volumes in the Newbold Library to 19,500, of which about a quarter are works in Arabic. The current issues of 223 periodicals were taken in. The reorganisation of the Arabic section was completed and a full catalogue now exists for the first time. During the summer the remaining works in the main library were nearly all reclassified on the Bliss system, and by the end of the year some 2,000 titles had also been recatalogued.

Early in the first term the Library Committee decided, reluctantly but with conviction, to discontinue the policy of allowing readers (other than members of the teaching staff) to take books on loan from the Library. This practice, it was felt, was not only causing an undue

amount of wear, tear and wastage, but was also leading to a disproportionate expenditure of the funds available for book purchase on multiple copies of textbooks in general demand. It was agreed that students should still be permitted to take away books during the vacation, but that for the rest their reading should be done in the library itself. As a corollary, steps were taken to keep the reading rooms open for longer periods (for twelve hours every working day) and to increase their capacity. Reconstruction due to take place during 1949 will bring the latter to the point at which it will be possible to accommodate 120 readers at one time and will also facilitate more effective administration and supervision.

441. As before the College did all it could to encourage and assist students to make profitable use of the summer vacation. In addition to the 18 students who were required to do practical work in agriculture, veterinary science and geography as part of their courses, 66 from other schools undertook projects of various kinds calculated to give them useful practical experience and to enlarge their knowledge of the country. The tasks undertaken included a social survey in the Gezira, demarcating roads in the Roseires district, a survey of irrigated land near Jebel Marra and an investigation of the incidence of bilharzia in Equatoria. Another 38 students were helped to find temporary employment in government offices and thus to make earnings towards the costs of their education.

442. In common with other educational establishments in the Sudan the College was affected throughout the year by the political troubles which disturbed the life of the community as a whole. Latterly there was a marked improvement in the situation. On the whole normal extra-curricular activities were little affected by the unrest; and apart from the dramatic society, which lapsed into inertia, all the students' clubs and societies carried through a satisfactorily energetic programme. The football XI played 20 matches and the netball club 10; tennis became firmly established as a popular College activity; after much practice the infant hockey boldly took on more experienced opponents and did surprisingly well; the boxing, swimming and athletic clubs held successful competitions; and the table tennis team defeated all comers. In the less physical field the literary and debating society organised ten lectures and discussions, the science club met twice, and the music society's 20 members came together twice weekly throughout the year. Two excursions were made by the touring clubs, and it is pleasing to record that the religious society remained a healthy and vigorous plant.

443. Work began on two new hostels by a Sudanese contractor under supervision from the Public Works Department. When completed as they should be at the end of 1949, they will each house 80 students. It is a matter of profound regret that the architect, Mr. W. G. Newton, did not live to see his work in being. At the time of his death Mr. Newton was engaged in the preparation of working drawings for two further buildings, a Biology block and a general Science lecture theatre, to be put in hand towards the end of 1949. The estimated cost of construction is £E. 40,000, and the effect should be to enable the

School of Science to cope with the greatly increased intake facing it from 1951 onwards. During 1948 there was a steady flow of apparatus, equipment and textbooks into most section of the College.

Technical Education.

444. The technical educational requirements of the country were assessed during the year and plans were framed for the development of this branch of education. It was proposed to set up pre-apprenticeship schools at El Obeid, Wad Medani, Omdurman and Port Sudan, the object of these schools being to recruit boys direct from elementary schools and to provide facilities for their further education in general and technical subjects. The course would be of three years' duration, and designed to give the correct background for those who wish to take up an occupation in industry as a career. Concurrently with the setting up of these schools, a Technical Institute would be established in the Khartoum area. A senior technical school would be accommodated within the Institute with the object of continuing the education of selected boys from the pre-apprenticeship schools for a further three years, the curriculum for this section being designed to give boys the knowledge demanded of those who aim to qualify for the higher posts in industry. In addition, facilities would be provided in the Institute to enable workers to attend continuation classes, and also accommodation for departments of commerce, industrial art and adult education. It was also proposed to establish a senior technical school at Atbara to cater for the needs of railway employees. Two pre-apprenticeship schools were due to open in January, 1949, and the senior school at Atbara was approved in principle by the Public Works Committee.

Omdurman Technical School.

445. Shortage of staff and accommodation made the desired expansion and raising of standards difficult to attain and the school had to confine itself largely to consolidating the results of experiments made during recent years. In addition, the opening of a new technical school in El Obeid in January, 1949, with staff drawn from the Omdurman school, promised to impose a further strain on resources.

The new boarding houses were postponed, but some building work was carried out during the year. Some of the dormitories were refitted as workshops, the store was turned into a teachers' common room and library, two new classrooms were built to house the expanding technical classroom work and a third for use as a science laboratory was started. All these improvements were carried out by the boys themselves with local materials.

Two masters were sent on courses to the United Kingdom and three ex-technical school boys, who had an extra three years' training there, joined the school staff. The arrival of some science equipment for the first time enabled science to begin to take its rightful place as an important subject in the school. In December, a successful Parents'

Day was held, when the work of the school was on show to a large number of visitors; a physical training display, tea and acting in the evening rounded off the day. A repeat performance was given next day at the request of members of the Legislative Assembly who wished to see the school. Scouting, always strong in the Technical School, continued to play a prominent part. The attendance during 1948 was 206, of whom 116 were boarders.

Secretarial Training School.

446. 1948 was a year of progress and improvement in the full time secretarial school at Omdurman, the evening classes in Khartoum, Omdurman and Atbara and the English Certificate (Correspondence) Course. Throughout the year courses lasting three months were conducted in office practice, typing, bookkeeping and shorthand. 89 officials attended these courses, most of them newly appointed, but including a number with considerable service who came for a refresher course. There were also evening classes in English literature and mathematics. A 2½ months' course in typing for unemployed clerks was conducted with satisfactory results. Old students were encouraged to call in and discuss their work with the staff and one or two gave talks on their own work and experiences to present pupils. Reporters for the Legislative Assembly were recruited by examination in the school.

Girls' Education.

447. There were no large new ventures in 1948, but the rate of expansion continued to be satisfactory at the elementary level in regard to both schools and staff. Twelve new elementary schools were opened and two were re-opened. The total number at the end of the year was 89.

The changeover of the school year was working smoothly and was completed at all levels. An examination for entry into the girls training college and intermediate schools was held in March and 546 girls competed at the various centres. The candidates for teaching and intermediate work were equal in number. Ten free places were awarded in each intermediate school as part of a plan to lead on to intermediate education for all schoolmistresses. The intermediate schools at Wad Medani and El Obeid became a recognised and valuable part of the general scheme. The demand for intermediate education was still greatest in Khartoum Province.

The secondary section increased in numbers and took in a new first year of 17, making a total of 37 girls. Work was begun on the permanent secondary school buildings in Omdurman.

In the Girls' Training College the training continued along the same lines as in 1947, the last year in which there was an output in December. All 47 girls finishing their course passed the qualifying examination and were appointed as teachers. This meant that, as new schools and classes were not due to open until September, all schools could be fully staffed and yet allow for a refresher course. The total

number of Sudanese mistresses at the beginning of 1948 was 321. There was a four months' refresher course for 20 mistresses at the beginning of the year and a fortnight's course in August for 24.

The growth of adult education among women was a marked feature of the year. Seven night schools were open in the Khartoum area. A short course was conducted at Um Gerr with a view to starting another centre in 1949.

Non-Government Schools.

448. The following table shows the number of schools and pupils attending :—

	Egyptian Government		Ahlia		Mission Community, etc.	
	Schools	Pupils	Schools	Pupils	Schools	Pupils
Boys :						
Secondary and Junior						
Secondary	1	341	3	250	6	626
Intermediate	—	—	20	3,453	19	2,972
Elementary	3	216	8	1,486	21	1,133
Kindergarten	2	106	4	116	21	1,079
GIRLS :						
Secondary	—	—	—	—	9	324
Intermediate	—	—	—	—	18	1,055
Elementary	3	57	2	65	22	1,265
Kindergarten	2	70	2	81	16	709
	11	790	39	5,451	132	9,163

The number of non-government schools continued to increase, and two new ahlia intermediate schools, one at Nahud and one at Gedaref, were opened in 1948. These ahlia schools, which continue to receive grants in aid from the government, greatly help in meeting the demand for intermediate education. They follow the same syllabus as the government schools and several of them now compare favourably in academic standard with the government schools. In the final examination in December, 1948, Goled Ahlia School equalled the achievement of Khartoum North Government School in gaining 100 per cent passes.

Southern Sudan.

449. In 1948 southern education came of age, and its majority was marked by encouraging signs of progress in all directions. Important additions to the staff both of the Ministry and of the missions were made. The building programme proceeded steadily and by the beginning of 1949 all educational projects should be satisfactorily accommodated. The mission intermediate schools began to produce better results and

a record number of intermediate certificates was gained. The teaching of Arabic was introduced successfully at Atar. A secondary class of 26 boys was opened temporarily at Atar to be transferred to Rumbek in 1949 to the new secondary school. In addition, 17 boys continued their secondary education in Uganda.

450. The number of boys attending primary and village schools increased and all the former were filled to capacity. Two new government primary schools were opened at Aweil and Rumbek. Fees were introduced in Upper Nile Province primary schools. The number of approved teachers turned out by the vernacular training centres was a little lower than in 1947, owing to the poor results in the Dinka centres. 15 new primary teachers passed out of Mundri and Bussere. The Agricultural Training School completed its first year at Yambio: in spite of lack of staff and buildings, a good start was made and a great deal of work done in the clearing of the land and the layout of cultivations.

451. One of the first acts of the new inspectress was to call a conference on girls' education attended by representatives of the missions working in Equatoria and Bahr el Ghazal and of the Ministry. This conference laid down principles for the future development of girls' education in the two provinces. A meeting of the education secretaries of Upper Nile Province was held in Malakal and many problems affecting education in that province were discussed.

452. The language and publications officer was appointed at the end of the year and a new rotaprint machine put into operation. A big programme of publications for 1949 was prepared.

Antiquities Service.

453. The Archaeological and Museums Board met in April, September and November. Two extensive tours were made by antiquities officers in the course of which all the known sites of Northern Province were visited and a number of new ones discovered. The fencing in of the town site at Merowe was completed and repair work was carried out at the pyramids. Repairs were also undertaken at Buhen.

454. The Khartoum Museum was completely reorganised. All the ethnological objects previously on exhibition were placed in a specially constructed store and their place was taken by an exhibit of antiquities so arranged as to show the main periods in the history of the country. The final arrangement and labelling of these exhibits was not finished at the end of the year. The cataloguing and arrangement of the Flinders Petrie Library was completed, and a considerable number of new books was added to the library.

455. The excavation work carried out by the Egypt Exploration Society at the 19th dynasty site at Amara West closed down at the end of February and began again in December, this time as a joint undertaking between the Antiquities Service and the Society, the

Commissioner acting as field director. This was the first time that the Antiquities Service has collaborated with an outside body in an excavation. At the beginning of the year excavations were carried out at a rock drawing site at Abka by the Gordon College Research Fellow in Archaeology, and at the end of the year work was progressing on the publication of the results.

CHAPTER XVI—PUBLIC RELATIONS

456. The work of the office in 1948 was directed mainly to internal publicity. From the beginning of the year the Arabic newsletter which had been issued monthly in 1947, was expanded into a weekly newsletter, composed of a leader on events of the week, news of the week, special economic news and a feature article: each issue also carried one or more photographs taken by the films section. 6,000 copies were printed weekly; of these roughly 1,200 were sent regularly to individual recipients and the remainder were distributed through councils, schools and other bodies. Distribution was free. This publication set a standard of commentary on affairs which the local Arabic press were unable to ignore. The main problem was distribution and since this was better in the rural areas than the towns, the newsletter had more success as an aide-memoire on local affairs for tribal leaders, councillors, schoolmasters etc., than it did among the intelligentsia of the towns. On the whole, however, it served a useful purpose in underlining government policy and supplementing the other publicity services. As a companion to this a monthly newsletter in English was started in the summer of 1948. It was intended especially for educated southern Sudanese who had no newspaper of their own except the missionary magazines, and it concentrated mainly on items of southern news, but with an admixture of important events in the north and a summary of world affairs. Each number carried illustrations. 1,500 copies were printed and these were flown in bulk to Malakal, Wau and Juba for free distribution. It was particularly useful in relaying to the south news of the Legislative Assembly and its southern members. The "Sudan Almanac" was edited and revised and it was brought up to date and expanded with much useful information.

457. There is little to record about the local press during 1948. "*El Rai el Amm*" consolidated its position as the leading daily, closely followed by "*Sawt el Sudan*". Weekly press conferences were held during most of the year. An interesting innovation was the emergence during the year of two Sudanese news agencies, one of them, the Sudanese News Service, setting a high standard of veracity. The Public Relations Office continued its services to the press. 125 communiquees and 674 bulletins were issued. The Local Press Review continued to be produced weekly. The Sudan Weekly Newsletter, intended for the external press, was also continued: 39 newsletters accompanied by 22 feature articles were issued during 1948, 105 being distributed regularly to addresses throughout the world.

458. The major event in broadcasting was the installation of a new Marconi 6.5 kilowatt transmitter which began to work in August. The initial months were necessarily experimental but by the end of the year it was giving a strong signal in the 31 metre band to all places in the Sudan except the Gezira for which a special signal was introduced in the 49 metre band on a low power transmitter. As improvements had also been introduced by new equipment and arrangements in the studio, the quality of the signal at the end of the year was a great improvement on anything that had gone before and the broadcasting service was well equipped to serve listeners throughout the country. No major changes were introduced in the programmes, the time on the air remaining constant at 2½ hours daily. The number of recordings used increased with the arrival of new recording apparatus. From a programme analysis the chief items in order of importance were : recorded Sudanese songs, news, Koran, live Sudanese songs, Egyptian records, poetry. New features, "Listeners' Letter Box" and "Listeners' Request Programme" were introduced and proved popular. The news service was expanded successfully late in the year by making use of bulletins from the new Sudanese news agencies and by providing separate time for the Legislative Assembly daily reports.

Various plans for the future were formed during the year. Drawings were prepared for a new broadcasting studio. 40 new listening sets were ordered to replace and supplement old sets already in the hands of clubs and other bodies. The Posts and Telegraphs Department also planned and ordered equipment for a series of communal listening sets to be operated by their staff in the small towns along the Kosti—El Obeid railway line. Specifications were got for a mobile recording van. An arrangement was made with the Decca Gramophone Company to produce processed copies of Sudanese songs for sale to the general public by the broadcast service.

459. In the films section considerable delay was still experienced in getting the mobile film units into operation. One was finally completed and taken over by the end of 1948, making four mobile cinemas in operation. In consequence the number of shows given did not show much advance on 1947. In the Khartoum area 257 shows were attended by 160,940 people while in the provinces 147 shows were attended by 212,385 people. Films shown were drawn mainly from the Colonial Film Unit or the Central Office of Information. The recorded commentary in Arabic was largely discarded during the year in favour of a colloquial commentary given by the operator-commentator over the microphone while the films were shown silent. The use of film strip projectors increased during the year. Twelve projectors were supplied, mainly to schools, and there was a constant call on the film strip library which had strips dealing with travel, health and hygiene. With these also a colloquial commentary is used. The films section took over the Sudan Railways travelling cinema towards the end of the year.

460. The photographic section was frequently called upon by departments for photographs of their activities for distribution in the Sudan, and applications were also received from abroad.

CHAPTER XVII—GAME PRESERVATION

461. In 1948, 37 head of game were killed by two visiting sportsmen, and 655 game animals were killed by 140 officers, officials and residents. 3,331 kilograms of hippopotamus hide and 4,996 kilograms of ivory were exported in 1948 against 3,475 and 12,680 respectively in 1947. No rhinoceros horns were exported during the year, and no ivory or rhino horns passed in transit through the Sudan.

462. 100,446 persons paid to enter the Khartoum Zoo during 1948 and receipts totalled £E. 1,258 (as against 83,987 persons and £E. 519 in 1947) not including many hundreds of school children admitted free on organised visits.

463. From February to April the Zoo had an outbreak of rinderpest and lost 55 animals, the first casualty being a buffalo which had been a year in the zoo, but the source is unknown. In spite of immediate isolation precautions and prophylactic injections, the disease spread slowly through the zoo. Losses included Melik the Giant Eland and two younger Eland, and almost the entire stock of Situtunga and Mrs. Grey Waterbuck.

464. During 1948, 30 animals, comprising two giraffe, two addax, two oryx, two wild sheep, two lion cubs, two white-eared cob, two hartebeest, 4 rufifrons gazelle, 3 hyenas, two hyrax, 4 crocodiles, one zebra and two pythons, and 33 birds were exported to Cairo zoo. Another consignment including 3 giraffe and two pelicans were exported to Antwerp Zoo; two shoebills were sent by air to Basle Zoo.

465. Reports indicated that, with very few exceptions, game was holding its own everywhere and even increasing in some areas. In former years it was considered that the addax in Northern Darfur were nearing extinction; it now seems, however, that this belief was based on a false interpretation of their habits, and it seems likely that the addax are able to exist in the extreme northern desert areas in Darfur. A serious decline seems to have taken place in the numbers of ariel (Soemering's gazelle) in the Dinder area which is their main habitat.

466. A specimen of *Hylochaerus Meinertzhageni* (giant forest hog) was collected near Bengengai on the Sudan-Congo border. This is the first definite identification from the Sudan but wild pig larger than a warthog and with different habits have been reported from several areas, including the Imatong and Didinga hills, and it is possible that this shy creature, which only inhabits the thickest forest and is hard to see, may be more widespread.

467. 350 elephant were killed by game scouts and police during crop protection and control operations.

468. Four further areas were selected as game reserves, at Ashana in Aweil District and Numatina in Western District of Bahr el Ghazal Province, and at Bengengai in Zande District and on the west bank at Nimule in Equatoria Province.

CHAPTER XVIII—STORES AND ORDNANCE

469. On 31st. March, 1948, the financial agreement with the British Government, which had been in force since 1940, came to an end. Under this agreement the British Government assumed financial responsibility for the Sudan Defence Force and the Stores and Ordnance Department (with the exception of the Main Supply Depot and the Printing Section) subject to a general contribution by the Sudan Government towards the cost of the Force and to special credits in respect of a share in the administrative costs of the department and for issues to the civil administration. On the reversion of financial control to the Sudan Government a stores and materials current account was introduced in replacement of the expenditure item—disbursements—which had been included in the annual budget before the war. The effect of this change in the accounting procedure was that the budget now bore the cost of stores issued (i.e.—consumed) instead of the cost of stores purchased.

470. While there was a general upward trend in prices, notably in those of textiles and leather, difficulties continued to be experienced in obtaining adequate supplies.

471. The value of stores (excluding dura grain and sacks) taken in charge by current account on 1st. April was £E. 538 737. Of this £E. 130,000 represented the value of net surpluses of military stores for which payment was due to the military authorities.

472. Expenditure during the year amounted to £E. 329,195 while the cost of free issues was £E. 288,838. Services on repayment totalled £E. 488,016 ; details with the corresponding figures for 1947, are as follows :—

	1948	1947
	£E.	£E.
Grain and flour	* 271,292	17,518
Grain Sacks, new	54,481	39,837
" " part worn	14,228	38,945
Other stores	87,234	123,835
Printing	54,231	31,630
Departmental expenses	6,550	16,091
	488,016	267,856

* includes proceeds of sale to the public of 15,000 tons of grain.

473. Sales in the sale room fell from £E. 6,039 in 1947 to £E.4,609.

474. While receipts of grain in the main supply depot were negligible, issues, including sales to the public, totalled 27,000 tons. The discovery of a heavy infestation by trogoderma early in the year necessitated the cleaning of large quantities of grain. In due course three mechanical cleaners were installed and by the end of the year some 12,000 tons of grain had been treated.

475. Production figures for the general workshops, compared with those of 1947, are given in the following table :—

YEAR	Articles			Value of output. £E.
	Manufactured	Repaired	Total	
1947	631,376	677,663	1,309,039	170,909
1948	507,850	143,258	651,108	199,981

The decrease in repairs was due partly to the cessation of the forces' commitment and partly to reduced activity in the movement of grain with a corresponding reduction in wear and tear of sacks. The relatively substantial increase in value reflects the rise in labour costs resulting from the revised scales of pay which became effective on 1st. April.

476. Additions the staff of inspecting armourers permitted a regular programme of tours of inspection of province and Sudan Defence Force arms for the first time since before the war. The termination of the financial agreement resulted in some reduction in demands on the arms workshops as is shown by the following figures of output :—

	1947	1948
Rifles	5,186	5,696
Pistols	61	61
Machine guns (all types) ...	120	50
Office machines	2,342	1,456
Bicycles	980	782

477. The steady increase in demand for government printing rose sharply during the year by the end of which a total of £E. 84,841 had been paid for this service. Payments in 1947 amounted to £E. 51,510. Press notices cost £E. 9,487 compared with £E. 9,159 in 1947.

478. One new major magazine licence was issued and three licences were allowed to lapse. Two licences were granted for the storage of explosives and seven for petroleum. Experiments in the use of gelignite for the destruction of weaver bird swarms were carried out by the inspector of explosives, in co-operation with the inspector of bird control, with encouraging results.

CHAPTER XIX—PROVINCES

Northern Province.

479. The first half of 1948 was marked by labour troubles which led to a three day railway strike in January and a longer one in March and April. Northern Province was particularly affected because of its

reliance on railway and steamer communications and the fact that its largest town, Atbara, is the headquarters of the railways administration and the home of a large number of railway workers of all kinds. In general the strikes did not give rise to breaches of the peace; a small demonstration occurred in Atbara but elsewhere there were no disturbances. Local controls over stocks of food and fuel were instituted before the March strike began, with the result that there was no great hardship in out-stations, though there were shortages on the Dongola reach and a grave danger that pump schemes might have to close down owing to lack of oil. Even after the strike was over communications could only gradually be restored to normal and strict priorities in the movement of goods by rail and steamer had to be enforced. As a protest against the legislative assembly some elements conducted an unauthorised demonstration in Atbara in May, when stones were thrown at the police and the demonstrators had to be dispersed.

480. The main events of the second half of the year were the grant of warrants to all the local government bodies in the province not already in possession of them, and the elections for the legislative assembly. The whole province is now covered by units of local government—every district has its council as well as all the chief towns, and the six constituencies all returned members to the legislative assembly. As the province contains a preponderance of those elements who were unsympathetic to the idea of the legislative assembly there was a good deal of boycotting of the primary elections and of the direct election in Atbara—moreover in the more remote areas the difficulties of communication and the fact that many of the people were actively engaged in agriculture all tended to prevent a large poll. Both primary and secondary elections were carried out without incident, though on 14th November, the day before the election in Atbara, an unauthorised demonstration occurred which had to be dispersed by the police, as mentioned above.

481. From July onwards grain was scarce all over the province and prices rose to high levels. The failure of the rains caused hardship amongst the nomads of Shendi District and many of their animals were in straits owing to lack of grazing. Grain from government reserves was put on the market; this relieved the shortage but had little effect in general on the high prices. The Nile flood was also poor and many islands were not watered, so that the autumn dura'crop was below average and shortage of fuel oil handicapped the pump schemes. Distribution of government funds to assist in the rebuilding of houses destroyed by the 1946 flood was completed early in the year, and in Wadi Halfa District a further sum of £E. 44,500 was paid out on account of Assuan Dam compensation, thus bringing the total amount actually paid by the compensation commission since they started work in 1947 to over £E. 111,000. No further claims, except in the case of certain houses of especially high standard, remained to be considered.

482. Precautions against cholera, involving strict quarantine measures for all persons coming by land, river or air from Egypt,

continued until February. No serious smuggling was detected during the year, though control of river craft on the Faras—Wadi Halfa reach still remains a difficult problem.

483. Political tension and labour troubles rendered the work of the police in maintaining order more arduous than usual, but officers and men alike showed exemplary patience and a high sense of duty in carrying out the tasks allotted to them. A beginning was made in the division of the police force in Atbara between the province and the railways, which should remove the anomaly whereby there were no province police whatever, except the commandant, in the Northern Province police headquarters, and a nominally departmental force had to be used in Atbara to carry out public security measures which went far beyond any departmental duties.

A token strike of three days was ordered by the Workers' Affairs Association over the whole railways and steamers system in January and a more serious stoppage took place between 16th March and 18th April. Both were largely effective, but no cases of sabotage or violence occurred other than the small disturbance in Atbara already mentioned. Mention has also been made of the demonstrations in Atbara on 14th May and 14th November, both of which had to be dispersed. Except for a small demonstration in Wadi Halfa, the official opening of the legislative assembly passed off without incident anywhere in the province. At the end of November a party of lawyers and journalists left Cairo by air with the intention of attending the trial of those responsible for the disturbance at Atbara on 14th November. As however they had no permits to enter the Sudan their aircraft was requested to land at Wadi Halfa and the party returned to Shellal by steamer the next morning.

484. Apart from political unrest in the towns the state of public security remained normal throughout the province. Crimes of violence were few and though thefts from houses and shops were prevalent early in the year they decreased later, especially in Atbara. In Shendi District the nomads on the west bank of the river were hard hit by the failure of the rains and increased pilfering of grain, animal theft and trespass on cultivation were the natural results.

485. All local government councils were duly warranted by the end of the year, the new ones being the district councils of Wadi Halfa, Berber and Shendi, and the Wadi Halfa, Ed Damer and Shendi town councils. Merowe-Dongola District was covered by two old type rural district councils, with town committees at Dongola, Argo and Karima, Berber town had had a warranted council since February, 1944, and Atbara municipality received its warrant in June, 1947. The whole province was therefore covered by local government authorities, each with its own budget and reserve funds. The province council met at the end of February for a final discussion of the legislative assembly and executive council ordinance: owing to other preoccupations no further meeting was held during the year. Atbara municipal council had a successful year. Much hard and useful work was done by the

various committees and the budget was closely scrutinised and vigorously discussed. Other subjects dealt with including town planning, liquor licencing, pay and allowances of council employees and the suppression of immorality and of illicit distilling and brewing of intoxicating drinks. Acting on a resolution of the council the police instituted vigorous supervision of undesirable elements, with the result that the town already began to be a considerably safer and better place. The council also took over responsibility for allocating building materials and electrical connections made available to the public by the Sudan Railways.

486. The newly warranted district councils only had time for preliminary meetings during the year, and their budgets for 1949 were drawn up by the District Commissioners, though points referred back by the Finance Department were duly discussed. The old rural district councils of Merowe and Dongola continued to meet every three months and showed a lively interest in local affairs and a real desire for general improvement. In addition to the matters falling strictly within their jurisdiction they also tendered useful advice on many subjects. Improvement of motor roads, control of charcoal burning, provision of modern butchers' shops and slaughtering places and vaccination of cattle were some of the matters discussed. Education as usual aroused keen interest, and steps were taken to provide better furniture and equipment for sub-grade schools. At the urgent request of both rural district councils a district education officer was appointed for their joint use in connection with schools for which they are responsible. Advice was tendered by the councils to the province authorities on the supply of fuel oil, the opening of postal agencies, the improvement of telephone communications, the care of antiquities and many other subjects. Owing to the continued lack of executive officers most of the duties involved in carrying out the decisions of these councils—and indeed those of normal day-to-day administration—continued to fall on the tribal authorities, who, in the northern part of the province at any rate, are likely to continue to be the essential basis on which the life of the people is built, and the real link between the ordinary citizen or cultivator and higher authority. In general, town councils found it very difficult to balance their budgets, mostly because of the high cost of sanitary services—little initiative was yet shown in devising means of raising further revenue to meet such expenditure. In Merowe-Dongola District the three town committees at Dongola, Argo and Karima continued to deal with their own urban affairs, and provision was made for the local election of members.

487. The burden of work on magistrates and district judges showed no sign of decreasing, and the lack of properly qualified judges was acutely felt.

488. The following table shows statistics of civil suits over the last five years :—

	1944	1945	1946	1947	1948
Civil suits	878	610	845	977	1,032
Fees collected	1,176	878	1,369	1,926	1,737
Applications for revision.. .. .	81	38	51	204	167

The circuit system was maintained and the Judge of the High Court visited all stations in the province. Land cases as usual took up far the greater part of the time of all civil courts.

489. Comparative statistics for major and minor courts over a period of five years are as follows :—

	1944	1945	1946	1947	1948
Major courts	16	9	18	13	11
Minor courts	2	2	1	5	7

Four of the major courts were held on charges of murder and one on a charge of culpable homicide.

A total of 166 appeals or applications for revision in criminal matters came to the High Court in 1948 as compared with 115 in 1947 and 66 in 1946.

Non-summary magistrates cases numbered 165, as against 134 in 1947 and 100 in 1946 : summary trials were 363 compared with 340 in 1947 and 395 in 1946. A great deal of criminal work still falls on District Commissioners, as district judges have been too occupied with civil work to be able to devote much time on the criminal side.

490. Two new town benches, in Berber and Shendi, were instituted during the year and worked effectively, together with existing benches in Wadi Halfa and Atbara they dealt with 3,044 cases. The 127 local courts in the province saw 3,522 criminal and 2,291 civil cases during the year. 62 persons were sentenced to imprisonment for over six months, 373 to imprisonment for six months or less, 2,408 to fines, while 559 were acquitted. Appeals to a higher court numbered 122—in 70 cases the sentences were upheld and in 52 they were quashed or modified.

491. The province revenue, including local government receipts, amounted to £E.229,808 and the expenditure to £E.307,495. Money was easy except in Shendi District, where the failure of the rains for the second year in succession hit the nomads hard. As a measure of assistance, taxation among these sections was remitted. Elsewhere taxes were

collected with little difficulty. There were no alterations in tax rates during the year, but the amount of business profits tax actually paid increased from £E. 10,303 in 1947 to £E. 13,014. Other direct taxes realised £E. 93,783 and contributions from local government units amounted to £E. 51,272. Local rates were also collected by the various authorities without difficulty. In Atbara municipality out of a total assessment of £E. 9,263 only £E. 158 arrears were carried forward. Remittances arriving through the post in Wadi Halfa District amounted to £E. 212,321 as compared with £E. 101,948 in 1947 and £E. 141,948 in 1946. This was largely accounted for by big remittances from inside the Sudan. On the Dongola reach payments jumped from £E. 504,442 in 1947 to £E. 627,306—the total of £E. 839,627 far exceeded the previous record of £E. 650,000 in 1945. In Dongola much of the total represented payments for produce exported from the district, as most of the money paid for crops passes through the post offices. It is significant that the wholesale price index (as given by the Department of Economics and Trade) rose sharply from 284 in 1947 to 446 for the first nine months of 1948. The increase in remittances therefore does not represent any real increase in volume of exports.

492. The price of dura steadily rose during the year and even imports from the south failed to bring it down to a reasonable level. In Wadi Halfa it never dropped below £E. 22 per ton and in Merowe-Dongola District it went up to over £E. 30. This compared with an average of £E. 17,500mms. per ton at the end of 1947.

Date prices on the Dongola reach recovered from the low level reached at the end of 1947 and a very good export crop of about 15,000 tons was disposed of at £E. 20 to £E. 22 per ton. In the south of Wadi Halfa District, however, the grower suffered from the high cost of transport by road and the petrol shortage, which coincided with the period when the crop was being exported. A ton of dates was costing anything from £E. 5. to £E. 9 to transport to Wadi Halfa from the Delgo-Abri area, whereas from Kerma the cost by river and rail right through to Shellal is only £E. 3.500mms.

The crop was, however, a very good one, and 8,289 tons of dates were sent to Egypt as compared with 5,477 tons in 1947 and 3,946 tons in 1946. The value was over £E. 200,000 though the average price per ton dropped to £E. 24, compared with £E. 35 in 1947 and £E. 36 in 1946.

493. The export of pulses both from the Dongola reach and from Shendi District suffered badly from the Palestine war. Exports from the reach were only 2,200 tons as compared with 5,000 tons in 1947. In Shendi the prices for haricot beans and chick peas fell to £E. 40 and £E. 20 per ton compared with the previous prices of £E. 60 and £E. 35. Maize, for export mostly to India, realised good prices and about 1,700 tons left Merowe-Dongola District. Wheat remained at a high price everywhere, and in Shendi the ardeb of 30 rubas rose to £E. 10 in November (about £E. 50 per ton). 325 tons of wheat seed went to Blue Nile Province from Merowe-Dongola District.

494. The removal of sugar rationing killed the black market at once, and supplies were ample : of cloth in some parts of the province there was a glut in the shops owing to shortage of cash to buy it. Animal prices were fairly well maintained in Ed Damer market (£E. 2. for sheep and £E. 1 for goats) but in Shendi owing to lack of grazing and the poor condition of animals sheep prices fell to £E. 1. 440ms. and goats to 560ms.

495. Practically all the damage sustained in the 1946 flood had been made good by the middle of the year, but the level of the Nile flood in 1948 was below average. An unexpected late rise in October did more harm than good, and seluka crops were on the whole poor. Shortage of fuel oil handicapped private pump schemes, but towards the end of the year the prospect of bigger allotments in 1949 encouraged owners to plant full winter crops.

496. Applications for private schemes showed little sign of falling off and disappointment was caused by the decision (albeit inevitable) of the Nile Pumps Control Board in June to issue no more approvals in principle until the water debit position was clarified. A great deal of work was done on a revised draft of the Nile Pumps Control Regulations, intended to simplify and decentralise licensing procedure. 43 new schemes and 4 extensions, covering 8,808 feddans, were surveyed in 1948, but 57 new schemes and 3 extensions, some 13,000 feddans, still awaited survey. Much other survey work was still required on existing schemes.

497. The Co-operative Societies Ordinance came into force during the year and the registrar spent much time explaining it to existing societies and arranging for their participation in the new scheme. In most cases agreement was reached though there was some criticism at the low rate of interest (6 per cent) allowed to shareholders by the Ordinance. The number of co-operative societies working on the Dongola reach increased to 14 and some 30 more awaited licences and plant. Figures showed that eight societies with a capital of £E. 16,285 produced net profits of £E. 6,484 and paid £E. 2,344 in dividends.

498. All government pump schemes had a successful year. The water rates charged to tenants was increased to a level which enabled direct government expenditure (salaries, working costs, etc.) to be covered. Even this increased rate (50 P.T. per watering per feddan) works out at far less than what tenants would have to pay, in cash or kind, to a private pump scheme owner. Borgeig scheme completed the change over from wood burning steam engines to diesel with two engines each of 350 B.H.P. driving two 36 inch pumps. This scheme affords a good example of the ordered prosperity which can be secured for local cultivators by a well organised undertaking. Each ten feddan plot has an area set aside for a house and garden, domestic animals (ploughing bulls, milk cattle and some sheep) and a plantation of good quality date trees. Two families live on each farda and, when the date trees mature, the amount of produce available each year from the tenancy

apart from vegetables and forage crops, can be expected to be some two tons of wheat, one ton of dura, three quarters of a ton of beans, and over three tons of good dates. With security of adequate water at all times these conditions are probably unequalled anywhere in the country. A locally appointed farm board consisting of leading cultivators undertakes the day-to-day management of the scheme and has already shown considerable initiative in matters of public health and bulk sale of crops.

499. A draft charter for a Northern Province Pump Schemes Board was prepared and came under discussion. When constituted this board will have the power to appoint management committees with their own budgets for all government schemes, thus carrying the present farm board system a step further towards responsible self-management by the cultivators.

500. The increase in the number of private pump schemes continued. New machinery was in better supply, but in order to make the best use of the available oil supplies it was decided that first priority must be given to the replacement of old and inefficient engines. Nevertheless several large new schemes started operation in Merowe-Dongola District during the year. The total number of private schemes (individual and co-operative) working in the province was 176. A further 232 have been approved and await the necessary machinery, 16 have been held up pending the clarification of the water debit position and it is known that about 150 more schemes (several very large ones) are in some stage of preparation. Good crops of wheat and dura were harvested almost everywhere in the province.

501. Sagia cultivation progressed far towards recovery from the flood damage of 1946. In Merowe-Dongola District the number of wheels before that flood was constant at about 5,500. In 1947 it fell to 3,821 but in 1948 rose again to 4,700. In the whole province the figure for 1948 was 7,528 as against 6,130 in 1947 and 9,000 before the 1946 flood.

502. Owing to the low Nile, basin cultivation was much less than in 1947. Only 21,000 feddans were watered in the southern basins as compared with 45,000 the previous year and 54,100 in 1946. Fair crops of chick peas were harvested. In the Dongola basins 29,000 feddans were watered in 1948, compared with 50,000 in 1947 and over 82,000 in 1946. For the second year the rains failed and away from the river there was no cultivation.

503. The flood of 1946 was a disaster for the pomology section of the Ministry of Agriculture in Northern Province. Losses of some 7,800 date shoots, 5,500 mango seedlings and 33,000 orange, grapefruit and other citrus seedlings were incurred. There were also heavy losses in private gardens. Since then all the resources of the section have been mobilised to repair the damage. During 1948 5,000 mangoes and 9,500 citrus trees were planted, mostly in large private and co-operative societies' pump schemes. All proposed gardens were inspected by

pomology staff, and, if the soil was found suitable after testing, were planned and planted under expert supervision with frequent advisory inspections. Some excellent orchards up to 25 feddans in area were thus established during the autumn. Nuri pomology garden was rewalled and replanted: old citrus blocks were replaced by date shoots, the soft date packing area was rebuilt and suitable containers for the dates came into use. A feddan of bananas of the Hindi variety from Kassala, planted in February, 1947, proved most successful: fruiting commenced in May and by November about a ton of bananas a month were being produced. In Merowe 10,000 mango plants were propagated in 1947 and another 5,000 in 1948. Some of the cultivators at Aliab and Kitiab government schemes were encouraged to build walled enclosures, with the idea of planting half a feddan of fruit on each tenancy. Should these first efforts prove successful it is hoped that large numbers of tenants will follow the example of the pioneers.

504. Shendi garden, severely damaged in 1946, was gradually recovering and citrus and mangoes were propagated as fast as possible. The demonstration garden at Bouga was also developing successfully and 4,700 trees were propagated in 1948. There was a very great demand for fruit from all private gardens. Date shoots from the Sukkot and Mahas areas were again transferred mostly to Bouga and Borgeig government schemes and struck fairly well. The estimated area of fruit in the province was 400 feddans, exclusive of date palms which at the last census totalled 1,776,467 adult trees.

505. Fortunately there was no locust invasion of any importance in 1948. Rats did considerable damage in parts of Shendi District and there were minor losses from rust on wheat, asal fly and virus on beans, stemborer in dura and an unexplained shedding of young mango fruits. Alarm was caused in Merowe gardens by what was thought to be a form of die-back disease at the beginning of December, affecting 80 per cent of the grapefruit trees and causing a heavy drop of fruit. After about a month, however, the trees recovered; it appears that the symptoms were probably caused by the alternation of warm days and very cold nights.

506. The conversion of the Borgeig engines to diesel eased the demands made on the Kerma basin forest. Natural regeneration is going on there and the sun in the newly established forest reserve was growing well. Letti Basin contains in its 15 square miles a great deal of timber—much of it fallen trees very suitable for firewood. The difficulty lies in splitting the big logs into reasonable sizes—a task beyond the tools of the local people. The smaller basins of Affad, Argi and Megauda were not in a very satisfactory state, being easily accessible and therefore heavily cut. A total of nearly 16,000 cubic metres of wood was used in Merowe-Dongola District in 1948 for pump schemes and steamers. This compares with nearly 40,000 cubic metres in the peak year of 1945, when the Borgeig engines alone consumed over 15,000 cubic metres. Negotiations proceeded for the establishment of dom forest reserves at three places on the Atbara river—the possibility was

examined of providing an alternative livelihood for the inhabitants in the form of an 800 feddan co-operative pump scheme.

507. Only nine outbreaks of rinderpest were reported in 1948 involving 1,422 head of cattle and causing 19 deaths, compared with 132 outbreaks involving 9,561 head in 1947. An intensive vaccination campaign was undertaken in Merowe-Dongola District. In Dongola area the results were very successful and 13,700 cattle were vaccinated by the end of the year, but in the Merowe area only 8,260 head were vaccinated—some two thirds of the estimated total. Quarantine measures were enforced at Debba and Tangasi where vaccination crushes were built and all cattle arriving from outside the area will in future be vaccinated and branded. An outbreak of sheep pox causing 170 deaths occurred near Korti, and on Argo Island there was a somewhat severe epidemic of contagious pneumonia of goats.

508. Failure of the rains and consequent shortage of grazing had a very serious effect on the animals of the Shendi District nomads. There were many casualties and others were sold at very low prices in the markets. The Hassaniya from the west bank transported as many animals as they could to the east, where conditions were slightly better: animals strong enough to travel long distances were driven right across to the Butana where grazing was known to be fairly good. Animals exported to Egypt from Shendi and El Damer markets during the year amounted to 6,112 sheep and 2,363 camels—compared with 4,178 and 489 in 1947. 3,561 cattle and 1,949 sheep were imported into the province from elsewhere in the Sudan.

509. Much work was done during the year on the improvement of Atbara, Wadi Halfa and Shendi town plans, and a beginning was made of a deposited plan for Berber, where also the clearance of the old Kara village was completed, and the land laid out for good type houses. Many new plots in all the large towns were disposed of by auction and only shortage of labour and materials prevented their full development. The replacement of government buildings destroyed in the 1946 flood continued throughout the year and in addition several new schools were completed together with government quarters, police lines, two veterinary dispensaries and two new telephone exchanges (Merowe and Karima).

510. Pitching of the river banks between Wadi Halfa and Faras was finally completed. This work was part of the precautionary measures against erosion begun after the raising of the Aswan Dam in 1933. The Egyptian survey party examining the site for a proposed dam at the 4th cataract near Karima failed to find a satisfactory rock foundation at the place originally intended. A possible alternative at the second cataract south of Wadi Halfa was being investigated.

511. The Sudan portland cement works at Akad, two miles south of the Atbara bridge, continued work on their plant, but delay in the delivery of spare parts for the generating station and of steel for the

completion of the kiln made it impossible for them to begin full production in 1948. The light railway line out to the lime stone quarries on the west of the Nile was completed.

512. There were no major developments in communications during the year, though improvements were made to the Wadi Halfa—Kerma and Wadi Halfa—Debeira roads. Lack of rain for two years had accentuated the corrugations on the Atbara—Ed Damer road and improvement was delayed for lack of plant. The manufacturers, after considerable delay, received a licence for the steel required for carriage-ways to be made on either side of the Atbara railway bridge. A new motor road was constructed along the Nile from Berber to Abu Hamad, thus cutting out the difficult desert route between these places. The provision of power ferries across the Nile continued to be a difficult problem, and efforts were made to obtain a firm estimate of cost for a suitable type of ferry to be built in the United Kingdom and shipped in sections to the Sudan.

513. River communications on the Dongola reach were greatly improved by two new tugs and four large barges added to the fleet in 1947, and the steamer "Venture" also was released by the Sudan Railways for province use.

514. Air Traffic through Wadi Halfa continued to be heavy. The airfield at Karima proved unsatisfactory owing to a soft patch of sand, and a new airstrip was constructed at Merowe which appeared to provide a good surface.

515. There were no serious epidemics in the province during the year and the health of the people was on the whole satisfactory. Outbreaks of malaria occurred in the southern part of Wadi Halfa District and Hosh el Dar in Berber District, and bilharzia was still prevalent, especially in Merowe-Dongola District and in the Zeidab and Timerab areas of Shendi District.

To the great satisfaction of the people of Berber town a medical inspector was posted there early in the year and a small temporary hospital was opened with 16 beds. Adequate equipment and drugs were supplied by the Sudan Medical Service and inpatients from May to the end of the year numbered 173 men, 105 women and 64 children. A large number of outpatients were also treated—the total of new cases rose from 10,600 in 1947 to 26,600 in 1948. A new public health officer was appointed to Merowe-Dongola District in September.

516. There continued to be a universal demand throughout the province for more educational facilities at all levels. Progress during the year was steady—sub-grade schools increased from 27 to 36 (excluding four managed by the Sudan Railways in Atbara): three more boys' elementary schools were opened at Borgeig (north of Kerma), at Shereik in Berber District and at Aliab in Shendi District: and a second girls' elementary school was provided for Atbara and the girls' school at Goled on the Dongola reach, which had been temporarily closed, was reopened

in good new buildings. This brought the total numbers of elementary schools in the province to 31 boys', attended by 5,697 pupils (12 having boarding houses with a total of 1,017 boarders), and 18 girls', with 1,817 pupils.

517. Money was readily forthcoming from local sources for the building of sub-grade schools and boarding houses: in Wadi Halfa District, for instance, £E. 760 was subscribed at Akasha for a sub-grade school. The buildings were completed but by the end of the year only two classes were working, the other classrooms being used temporarily to house boarders.

518. The great demand for intermediate education was undiminished. There were four government and five ahlia schools at this level, which were still unable to meet the demand. The total number of boys at all these nine schools was 1,314, with an annual entry of some 370: for these places there were 1,017 candidates at the end of the year.

519. In general the standard of attendances and of work in all schools remained high. Many of the sub-grade schools were almost up to elementary level and a few boys were accepted direct from these schools to the first year intermediate as a result of the high standard reached by them in the intermediate entrance examination. Two refresher courses were again held, one in the northern and the other in the southern part of the province, for sub-grade masters. The courses last for six weeks and did much to raise the standard of teaching.

520. At the intermediate level good results were obtained. Fifteen 4th year boys from Goled ahlia intermediate school passed into secondary schools, and Shendi rural intermediate school obtained a higher number of places than any intermediate school in the country at the secondary schools entrance examination in December. But the rising costs, especially of boarding facilities, forced both Goled and Shendi ahlia intermediate schools to ask for grants-in-aid from government funds in order to avoid having to put up their fees still further.

521. The restlessness which accompanied the elections to and the opening of the legislative assembly did not leave the province schools entirely untouched. At several intermediate schools there were minor demonstrations of one kind or another, but they were dealt with firmly and patiently and conditions soon returned to normal. A few schoolmasters at Berber and Atbara absented themselves from duty for one day on 15th November, but the boys did not follow their example.

Khartoum Province.

522. In a year of important internal developments, which have been described in the first chapter of this report, it was natural that public and political interest should have been focussed on the three towns of Khartoum, Omdurman and Khartoum North to an even greater degree than in former years, since it was here that the greatest single step hitherto taken towards self-government for the Sudan was first

debated and then put into effect. The final meeting of the Advisory Council for the Northern Sudan which discussed the ordinance setting up the Executive Council and Legislative Assembly was followed with intense interest. The promulgation of this ordinance in June began a period of great activity during which the thoughts and energies of most officials and many others were concentrated on preparations for the elections to the Assembly and subsequently on their implementation. The formal opening of the first Assembly on 23rd. December in the impressive new building opposite the Law Courts set the seal on this exceptionally busy and constructive period.

523. At the same time the formation of new and rival political coalitions and formations encouraged a steady rise in political tension, which, ably abetted by irresponsible hooligan elements in the urban areas, led to several outbursts of lawlessness. But sober public opinion was in strong opposition to these manifestations and to the regrettable deterioration in the manners and general behaviour of a large section of the younger members of the community. In Khartoum North decent opinion was so shocked by these sinister developments that it reacted in a most practical and valuable way by the formation of an unofficial committee for the improvement of juvenile character to work in close co-operation with the municipal council.

524. Concurrently with this intensified and introversive political activity came the further awakening of self-organised labour under the spur of increasingly difficult living conditions. The short strike of railwaymen in January had little effect locally but the much longer strike in March and April gave rise to very considerable interest, discussion, sympathy and censure—and no little financial loss to the government and trading community. Minor sympathy strikes or attempted strikes by employees of the public works department, taxi drivers and conservancy men evidenced the stirrings of unrest and the growing realisation of the potency of the strike weapon, but achieved nothing more than the exposure of the confused ideas of the participants. In February the students of the Omdurman Maahad el Ilmi went on strike, mainly in protest against their prospects in government service. In spite of the continued efforts of a number of local notables and the sympathetic attitude of the Director of Education they did not go back to their studies until 1st. July.

525. Arrangements for the elections to the first Legislative Assembly were well conceived and smoothly carried through, though the boycott to which reference has been made robbed both the direct and indirect elections of much of the healthy enthusiasm which should normally characterise such occasions. In the northern constituency the primary elections produced a vote of only thirty three per cent despite the fine effort of Wawissi Omodia which achieved a one hundred per cent vote and thereby won the distinction of a mention in the London "Times." In the southern constituency fifty-seven per cent of the electors recorded their votes. The numbers voting in the three towns was disappointingly low. Khartoum, Omdurman and Khartoum North recorded 12.5,

23.5 and 7 per cent respectively. Apart from the eight elected members, the province can claim as local residents fourteen of the members nominated to the Assembly including all three Ministers and four of the Under-Secretaries. Nearly all of them had received early and valuable training for their new and high responsibilities in the practical school of local government.

526. A regrettable curtailment of the social amenities of Khartoum and Omdurman occurred during December with the closing of the Sudan Schools Clubs in both towns as a result of a series of riotous demonstrations which followed upon political meetings held in their respective premises. The committees were informed that the clubs would be re-opened if they would give an assurance that they would in future be used only for the social purposes for which they had been formed. By the end of the year the assurance had not been given and the clubs remained closed.

527. The war in Palestine received some initial support and a number of volunteers left by train to the encouraging plaudits of their friends; but when reports began to filter back of their subsequent experiences enthusiasm correspondingly waned, to die away altogether when these reports were confirmed by the first batches of returning volunteers. Financial assistance to the Arab cause reached the fairly impressive total of fifteen thousand pounds.

528. A subtle change in the character of the city of Khartoum has become increasingly noticeable. No longer is it a separate and isolated community existing solely for its own needs. The impact of external and modern influences is slowly rousing it to the realisation that it is the capital of a large country which has its place in the world of today. The municipal council have evinced their awareness of this fact but many of their constituents as yet show little appreciation of the attendant responsibilities, and indeed seem to resent the limelight which must accompany the dignity and status of a capital city.

529. On the material side it was not an easy year either for the townsman or for his country cousin. Rising prices, petrol rationing, the standstill order precluding any increase in the water debit, a disappointing flood and very poor rains for the second successive year combined to give cause for a certain amount of vocal but generally good-natured grumbling; but fortunately a number of palliatives served to soften this somewhat gloomy picture. Increased rates in the cost of living allowance were announced by the government in April and local authorities and business firms at once followed suit. Daily paid labour commanded higher wages, farmers got good prices for their crops and animals, and even the somewhat nebulous private transport companies made handsome profits.

530. The three municipal councils put in another year of good, solid work seemingly unruffled by the political winds which blew around them. The scope and nature of their work can best be seen in the

minutes of their committees and of the full council meetings which continued to be recorded with admirable clarity and meticulous care. All three councils were particularly active in the increasingly important sphere of town planning but were hampered in their schemes by lack of money, especially in Khartoum where funds are essential if sound foundations are to be laid for the future expansion of the capital city. The councils took steps to increase their revenue and also to check prevalent widespread evasion of regulations due largely to the insufficiency of the municipal staff to cope with their expanding duties. The appointment of a full-time town clerk in Khartoum went a long way towards ensuring the efficient execution of municipal work, and the inhabitants of the town began to realise that infringements of the regulations were likely to be detected and the culprits brought to book.

531. In the rural district the council was preparing to advance towards the assumption of more positive functions. It continued its routine work of dealing with applications for such things as bakeries, wells and brick kilns, and also recommended the opening of further dispensaries and sub-grade schools. All these projects were very desirable but largely frustrated by shortage of staff and funds. The council's budget was not in a healthy state and local authorities failed by over £E. 7,000 to collect the £E. 16,000 of direct taxation which represents a modest ten piastres per head of population ; though this may be partly excused by poor conditions of grazing. The activities of the councils were not limited to their powers and duties under their warrants. Their views and advice were also sought on many other matters concerning the common weal and their recommendations were almost invariably found to be constructive and helpful.

532. 1948 vied with 1946 as the most difficult year experienced for nearly a quarter of a century, but whereas the troubles of 1946 were concentrated into a few days or at the most weeks, 1948 was a time of almost constant tension culminating in a succession of disorders towards the end of the year. The police were kept constantly on the alert and were required to sacrifice much of their leisure standing to, on precautionary patrols, in readiness at places where crowds menaced the public peace or in dispersing unlawful demonstrations and rioters in the streets. The first serious disturbance occurred early in the year when Suliman Musa, the then railway workers' leader, charged with breaking the peace in Atbara, was tried in Khartoum. At the end of his trial the thousands of onlookers crowding the road in front of the courthouse became a riotous mob, menacing the court, abusing and stoning the police and injuring the Commandant. On the order being given they were promptly and effectively dispersed. The lull which followed continued uneasily throughout the summer months, but the tension finally found vent in an outbreak of disorder shortly before the elections for the legislative assembly were due to be held. On the evening of 13th November political nights were held in Khartoum, Omdurman and Khartoum North, after which a number of demonstrators marched out in noisy formation. A Khartoum mob mainly composed of hooligans was broken up and riotous crowds in Omdurman

and Khartoum North were also dispersed; there were no serious casualties amongst the demonstrators. On the morning of election day, a number of students from the Gordon Memorial College, expecting to join a mass demonstration which never materialised, decided to stage a demonstration on their own. They received no support from the public and finally had to be dispersed after disregarding many warnings by the police. On the evening of 15th December Ismail el Azhari was persuaded to join a small company of Maahad students in an unauthorised demonstration, as a result of which he was arrested and later sent to prison. After a political night in the Sudan Schools Club in Omdurman on 17th December the crowd came out to demonstrate but on encountering the police they turned back into the club premises whence they directed a hail of bricks and other missiles upon the police. They were sprayed with water from fire hoses and eventually gave up.

533. Police precautions against a possible disturbance of the peace on 23rd. December, the day of the formal opening of the assembly, were entirely adequate and the ceremony went through without a hitch; but in the evening disorderly crowds demonstrated in each of the three towns after political meetings in the clubs. In Khartoum and Omdurman they were dispersed without the use of force and without a casualty of any description. The streets were eventually cleared after a good deal of stone throwing and a certain amount of damage by hooligan elements. In Khartoum North the police were in readiness but out of sight and the demonstrators, meeting no opposition, dispersed after much shouting and some display of riotous behaviour.

It is greatly to the credit of the security forces of the province that at no time did they allow these political demonstrations or the resulting outbreaks of riotous hooliganism to get out of hand and that by their admirable discipline and restraint there occurred not a single fatal casualty. It is also noteworthy that their tact and forbearance was such that they maintained and even enhanced the traditional good relations between themselves and the general public.

534. The increasing efforts of the rival Khatmia and Ansar youth movements to outvie each other caused considerable concern for the preservation of law and order and the authorities were constantly exercised in ensuring that clashes should not occur; but despite all precautions one such clash did occur in October and it became necessary to place a ban on all such public meetings and processions.

535. In Omdurman there was a fourteen per cent decrease in crime. Although there were five murders as compared with three in 1947, other offences against the person dropped from 2,275 to 1,801. Mobile night patrols and strict supervision of licensed premises no doubt did much to induce more orderly behaviour. It is probable also that with the preoccupation of the police and a large section of the public with matters concerning the political situation many reports of minor offences against the person were withheld. There was a slight increase in housebreaking, and a substantial decrease in other thefts. Large

numbers of wandering westerners and others seeking employment were mainly responsible for these crimes. Another contributory cause continued to be the astonishing carelessness of many householders.

536. In Khartoum, which continued its mushroom growth throughout 1948, and in Khartoum North, there was an all-over increase in crime of about nine per cent. There were four murders as against five in 1947. A shocking case of rape and another of attempted rape were reported from the south area involving a gang of Sudanese who waylaid a Greek and his girl companion, assaulted the man and committed brutal rape upon the woman. In the second case a Sudanese and his girl companion were the victims. Most of the other cases were of a petty nature resulting from drunken or domestic squabbles, and many were settled out of court. There was a welcome decrease of forty per cent in the number of housebreakings and the percentage of detections was high. Petty thefts, mainly of clothing by westerners and of household property by unregistered servants, rose by thirty five per cent. Although extra police for the recently built up areas of Omdurman and Khartoum were approved late in the year, the men enlisted had still to be trained and police protection in these parts of both districts remained inadequate. Security of valuable premises and residences was maintained at a very satisfactory level.

537. The incidence of juvenile delinquency rose sharply in Khartoum. The number of juveniles tried in 1947 was 922; in 1948 the figure was 1,481. This unfortunate increase may be due partly to increased police action against children hawking in the streets without licences or generally running wild. In Omdurman there was a noticeable decrease in juvenile crime due largely to the fact that most of the habitual delinquents were already in the reformatory. Only two serious cases came before the courts, one was of grievous hurt in Khartoum and the other of a boy of sixteen in Omdurman who knifed and killed a companion. The probation officer did much useful work among the juveniles in the reformatory, and of the ten boys released during the year only two returned. The remainder were all found suitable jobs in the towns. Six cases of female juvenile delinquency occurred during the year. Three of the girls were placed on period of probation which they completed successfully. One was sent to the central prison in Khartoum North, and two were handed over to the care of the probation officer who succeeded in finding husbands for them.

538. Labour was easily obtainable in the province throughout the year but wages were high. In Khartoum casual labour was earning from P.T. 11½ to P.T. 13 a day. Skilled labour for the building trade was in great demand and wages increased in consequence. In Khartoum North wages rose steadily from P.T. 12 a day to as much as P.T. 17 in the building trade but this figure included the cost of food supplied. The cleaning and sacking of large stocks of government-held grain entailed the recruitment of considerable numbers of casual labourers, mostly westerners, who were attracted by a daily wage of P.T. 18 including overtime. Agricultural labour was adequate except during

the cotton picking season in November and December. In Omdurman casual labour was commanding a daily wage of P.T. 13 in January but this figure declined to and remained at between P.T. 10 and P.T. 12. Reference has already been made to the indications of labour unrest during the year.

539. The Khartoum Labourers' Club managed their elections without any actual disturbance in spite of the fact that these were held in an unfortunate atmosphere of party strife. Much was done by the members themselves to put this right and subsequent speeches and plays have emphasised the senselessness of such division in the ranks of labour and the club now forms an important and much appreciated part of the recreational life of labourers in Khartoum. The Omdurman Labourers' Club was allotted an excellent site on which to build premises.

540. The cold weather continued until the end of March, when temperatures began to rise steadily, until May produced the hottest weather experienced for some years. In spite of light showers in July and some heavy falls in August, sandstorms and general discomfort held the field until the end of September. One or two of the heavier rain storms caused considerable damage to property and particularly to the new and partly built houses in the Khartoum new deims where there was extensive flooding. From October onwards the weather grew progressively cooler until in December even the hardiest were tempted to sigh for a return to summer temperatures. In the rural district the rains failed almost completely for the second year in succession and some animals owners lost as much as twenty five per cent of their stock.

541. The exceptionally poor rains spelt ruin for rain-grown crops. There were negligible yields at Gerief East, Kabbashi and on the west bank. The 1948 flood was only moderate and cultivation was no more than average, though very large areas were planted on the White Nile flats with dura, chick peas and beans. Owners of water wheels and small pumps experienced great difficulty in getting seed which in nearly all cases had increased in price by several hundred per cent. Certain wholesalers of seed potatoes refused to sell to cultivators, but drove a ruinous bargain whereby they handed over the seed in return for half the eventual crop. Fair supplies of European and indigenous vegetables were maintained, though at high prices, most of the increase being absorbed by the retailers.

542. Pump scheme owners had a good year and had only themselves to blame for failure to benefit from high prices particularly for cotton and wheat. The main crops irrigated were cotton, wheat, berseem, grain and, on the smaller schemes, potatoes. Much of the cotton was planted late and was heavily infested with boll-worm; but cotton sown in May gave uniformly good yields averaging in some cases as much as six kantars per feddan. Not more than half a kantar was picked off much of the late sown cotton. It was not a good year for berseem, which was attacked by cut-worm. Large areas were sown with wheat which did very well.

543. Fruit gardens made a rapid recovery from the ravages of the 1946 flood. There were probably more feddans under bananas than ever before and the increased yield at last lowered the price. The posting of a qualified horticulturist to Geili brought success and considerable areas of citrus fruit were planted and flourished.

544. All the province pump schemes were visited in the first part of the year. A determined effort was made to regularise the large number of infringements of the regulations controlling pumps which had multiplied during the busy war years. In spite of the delays caused by the complicated, though necessary, procedure involved in obtaining a pump licence, several new schemes were started. A ten-inch pump on Um Arda Island, north of Jebel Aulia, helped to develop a poor and backward area. At long last the Tuti Island Development Company completed the necessary formalities and work began on the preparation of channels after the installation of the pumping set on the north west shore of the island. The total number of licensed pump schemes in the province in 1948 was 84 of which 7 were on flood licences, compared with 69 in 1947. The gross area of the schemes in 1948 was approximately 24,680 feddans compared with 22,700 feddans the year before.

545. There were no major disasters from attacks by pests, though rats and "asal" did some damage to flood crops. Locusts did not appear.

546. The mesquite plantations at Naiya and Tumaniyat did not prove a success. Despite regular waterings and effective fencing they showed only a five per cent survival of seedlings. The western end of the Khartoum North mesquite belt failed completely and is to be abandoned. The Gummoia forest suffered from the perennial ravages of goats and growth continued to be disappointing.

547. The Gereif and Hillat Kuku brick kilns had so prosperous a year that owners began to buy green wood illegally cut from the Betchin hinterland and brought in by lorry. Fortunately the offenders were caught red handed.

548. The Tuti Island sand dune experiment continued and aerial photographs showed that dunes can be effectively cleared by fencing and windbreaks.

549. The gardens section kept well abreast of the continuous expansion in its work and established a large number of new gardens for the many government quarters recently built. Much valuable work was also done on improving and rejuvenating many of the older established and neglected gardens. It is gratifying to record the great enthusiasm shown by officers and men of the Royal Air Force in improving the appearance of their barracks. With the willing help of the gardens section and members of the Khartoum Horticultural Society who gave them seedlings, shrubs and trees, the men of the Royal Air Force have created a most commendable and pleasant series of gardens out of what was sandy desert at the beginning of the year.

550. The arrival of new lawn mowers eased the task of keeping the public lawns in Khartoum in good condition. These lawns are clearly much appreciated by the townsfolk who viewed with concern the sacrifice to the legislative assembly of half of the public garden south of the law courts. The people are proud and jealous of their parks and there is a strong demand for more.

551. There were no serious outbreaks of contagious diseases during the year and the health of the province in general remained good. The incidence of malaria was much lower than usual, probably owing to the fact that two years of poor rains had reduced the number of mosquito breeding grounds. During the year 121 cases of pulmonary and 20 cases of non-pulmonary tuberculosis were admitted to the tuberculosis section of the Hamad el Nil isolation hospital. There were 33 deaths. Arrangements were made to increase the amenities of this hospital and to provide facilities for occupational therapy. At the end of the year materials were obtained and a scheme started for occupying patients who were fit enough to take up various forms of handicraft. Tuberculosis dispensaries were opened in each of the three towns to supervise cases under domiciliary treatment. A poor response was obtained in Khartoum, but in Omdurman and Khartoum North regular attendances were secured in a number of cases.

552. Only three cases of smallpox were notified and admitted to hospital, and all were probably infected in El Obeid. There was one death. The entire province was an infected area for rabies from the middle of the year and became an endemic area. One case of human hydrophobia was reported in Omdurman and there were nine cases of animal rabies in eight dogs and one donkey. 2,473 dogs were destroyed in the course of the year.

553. In July the Khartoum Health Centre was opened and proved very successful. It was built by the municipality and is a type of building which may well serve as a model for future institutions, comprising a dispensary, a registration office and a maternity and child welfare section. The thirty dispensaries in the province handled a total of 757,326 outpatients during the year. The number of outpatients in 1947 was 672,488.

554. The number of trained and licensed midwives practising in the province was 106. A new ante-natal clinic was opened in December at Gereif West. A total of 17,859 cases were dealt with in the thirteen province ante-natal clinics during the year, an increase of 989 on the previous year.

555. Interesting experiments were started in Khartoum and Khartoum North in the composting of refuse and night soil as a method of disposal. Early trials promised well, but the agricultural value of the product has yet to be determined. If the process can be shown to be practically and economically sound the towns will be spared the extension of the unsightly ash heaps which have resulted from years of burning of refuse and the municipalities will have found a new and fruitful source of revenue.

556. Several tests were carried out during the year to combat the chironomid nuisance. These included one spectacular failure: oiled metal plates were arranged round a lamp with the object of trapping the insects, but so many chironomids were caught that they piled up round the lamp and burst into flames. Experiments were undertaken to deal with the insects in the larval stage.

557. The disturbing and disintegrating tendency of undergraduates and schoolboys to meddle in politics and to associate themselves with unlawful demonstrations was again in occasional evidence during the year; and with the same inevitably disastrous effects on academic discipline and sound learning.

558. The urgent need for more facilities for girls' education in the Khartoum deims necessitated the hiring of buildings till proper schools should be built for the two new elementary schools in that area. The same temporary arrangement was necessary in Halfayat el Muluk where the new girls' school proved very popular under its efficient headmistress.

559. Two new elementary schools for boys were opened during the year; one at Khartoum North and one at Kalakla south of Khartoum. New elementary school buildings were erected at Geili and a master's house at Kalakla, both of a high standard for the small sum available. Sub-grade education in the rural area unfortunately suffered from the cumulative effect of shortages of materials which resulted in a sense of frustration amongst staff, and special attention was being given to the problem. Adult education gained in popularity. Very successful evening classes for adults were held at Gereif West by the American Mission and also at Halfayat el Muluk. At Shambat 130 women attended afternoon classes and the keen interest shown was most encouraging.

560. Educational facilities in Omdurman as elsewhere were still below the optimum and the demand for places in schools exceeded the supply. A total of 5,781 boys and 2,176 girls were receiving education in elementary, intermediate and secondary schools in Omdurman in 1948. The figures for 1947 were respectively 6,360 and 1,760. This shows up the interesting and surprising fact that the number of boys has actually decreased by nine per cent while the number of girls has increased by eleven per cent.

561. Owing to increased supervision at weekly inspections the condition of draught animals in the tree towns improved. Eighty per cent of the horses were as a result in good condition, the poorer animals usually being owned by merchants who work them as a sideline to their normal business. Minor improvements were made to the slaughter-house in Khartoum, but these were only palliatives as a satisfactory standard awaits the erection of a modern slaughter-house. In January cattle plague broke out at Abu Sidr, Kabashi and in the Batahin country, and 975 head of cattle were serumised. A bad outbreak of mange occurred in the public health camels in Khartoum, the most important contributory cause being the relaxation of the dipping rule. 18,524

cattle were admitted into the Omdurman quarantine for local slaughter as compared with 19,656 in 1947.

562. The zoo added to its already high popularity as a pleasant rendezvous at all times and particularly on public holidays. The introduction of singers in addition to band concerts was not a success as it introduced an element at variance with the usual friendly and family atmosphere. The zoological gardens advisory committee proved most valuable and many improvements were carried out. The layout of the new extension to the west took shape and gave promise of much needed expansion in an attractive setting: Shortage of petrol gave a further lease of life to the Dorcas gazelle which inhabit the desert round Jebel el Fururi. It is remarkable that these beautiful animals survived at all when hunted down in cars by "sportsmen" armed with shotguns. It was reported that hartebeest regularly visit the Gumoiia pastures in the rains, though where they come from is a mystery.

563. The municipal and rural roads received a modest measure of expansion and improvement but in general the construction of new roads and maintenance of the old was limited by lack of funds. The arrival of the new and larger buses of the Sudan Light and Power Company necessitated the widening of certain main roads in the three towns. This was done expeditiously and efficiently by the new municipally owned travel plant which lays a carpet of macadam in a remarkably short time. The first of these new 54 seater single decker buses arrived in Khartoum on November and by the end of the year there were thirteen on the road. The public is justifiably proud of them and was glad to say goodbye to the old Italian diesels which, valuable as a stop-gap, were unpopular with passengers, pedestrians and other traffic alike. This improvement in the bus services had an adverse effect on the business of taxi owners who discovered that their services were not as essential as they had thought. There were approximately 320 taxis in the three towns which on the admission of the owners themselves was at least sixty more than the number required. Petrol rationing and stricter control further tended to make the business less profitable in spite of the increased scale of charges which was introduced in the course of the year.

564. The Sudan Light and Power Company extended its piped water system in the new development areas south of the railway line in Khartoum but the supply was still far short of the demand. The pernicious practice of filling in borrow pits with refuse has rendered impossible the laying of water mains in many streets in the new deins for four or five years to come.

565. 1947 was described as year of unprecedented building activity, but 1948 surpassed it. In Khartoum a new town sprang up to the south of the old city and the greater part of the population no longer lives within the railway ring. The improved availability of building materials, coupled with strict application of the penalty clauses in the 1947 town lands scheme, brought about the building up of many plots which had remained undeveloped since they were auctioned in 1946. The urge

to build, spurred on by the demand for more and yet more houses and undeterred by high prices, high wages and petrol rationing, unloosed both private and public purse-strings to the extent of many hundreds of thousands of pounds. In Omdurman the results of the year's activities were perhaps less spectacular but steady progress was made in the second and third class areas, particularly in the Mulazimin quarter and in the Hai el Arda extension, until in the latter part of the year a sudden shortage of burnt bricks combined with petrol rationing caused a marked slackening in building activity. The attractive and dignified appearance for the temporary buildings of the legislative assembly and their completion within the short space of a few months were a tribute to the ingenuity, skill and drive of the public works department. The light industrial area in Khartoum, now known as the factory area, continued to grow apace. Many more expensive buildings were completed and industries and workshops installed. Three imposing factories were built during the year in the heavy industrial area in Khartoum North, designed to house plant for soap making and the crushing of vegetable oils. Both in Khartoum and Omdurman steady progress was maintained in the important matter of providing adequate houses for the police. Prison labour was used wherever possible, and an excellent standard design was evolved which is most popular with the occupants.

566. The rapid expansion of the three towns, particularly of Khartoum, and the still unsatisfied land hunger of their inhabitants and of the many who flocked to them during the war years gave a new importance to the business of town planning. Many pressing problems vitally affecting the future of the capital were brought to light, the most important being the preparation of land for development. Several major projects were held up through lack of funds to provide even the most elementary services in areas otherwise ripe for development. Land auctions in first, second and third class residential areas showed that money was available and people anxious to buy.

567. The central town planning board approved a layout for the whole of the area west of Khartoum lying within the railway loop to the Mogren quays. This is designed to be the garden city of the future and the close of the year saw the beginnings of its development in the shape of a number of government houses rising along its northern edge. The layout for an extension to the factory area in Khartoum was also approved. Once again the natural development of Khartoum southwards was halted by the persistent and embarrassing presence of the old deims athwart its path and practical steps towards their removal remain to be taken. In this respect the old deims join hands with Mangara and Burri Abu Hashish in presenting the thorny problem of communities who wish to remain intact in the face of town development. Sababi village was surveyed as a first step towards its eventual registration and inclusion in the Khartoum North municipality. A complete reassessment of the reserve prices of all land in Omdurman was carried out during the year. It revealed a phenomenal increase everywhere on the old official figures, particularly in the market areas.

568. In spite of the serious effects of the railway strike and the restrictive effects of petrol shortage, 1948 was in general a good year for trade. A fair quantity of many things not seen for years made a welcome reappearance in the shops, some direct on to the shelves and others from under the counter. Money became scarce as living conditions became harder but merchants as a class did well. The rising cost of living induced the province authorities to take steps to combat it, and an experiment was made to reduce the price of vegetables by allowing the cultivators to sell their produce in the markets without a trader's licence in the hope that they would sell direct to the consumers and, per contra, that the consumers would shake off their apathy and the habit of years by buying direct from the producers. The success of the experiment was hard to judge since the innovation was closely followed by a seasonal drop in prices.

569. Meat prices also came under review and in June stalls were allotted to selected butchers who undertook to sell at agreed prices. This operation was entirely successful and adequate supplies of good meat at reasonable prices were available for any consumer who was able or willing to break the fetters that bound him to his accustomed purveyor.

570. Grain prices rose to such an extent in the summer, reaching P.T. 20 a rubaa in September, that from June to October an attempt was made to peg them by government sales to the public on a ration basis at a figure up to two piastres lower than the market price. This scheme had the desired effect of restoring confidence and preventing prices from soaring higher. It was also an undoubted boon to the few thousands of the poor and very poor who benefitted either honestly by eating the grain or dishonestly by selling their allotment at a profit in the black market; but as a long term policy and in its effects on the country's economy it was a failure. The interference with the normal structure and operation of the grain trade discouraged the merchants from participation and a considerable period elapsed after the winding up of the scheme before the trade showed signs of again flowing smoothly in its normal channels.

571. Petrol rationing was reimposed in February and the issue of supplementary rations had to be severely restricted towards the end of the year. This threw a heavy and odious burden on the district authorities and was naturally and universally unpopular with the public but it worked smoothly and, as far as could be ensured, fairly.

572. The successful decontrol of sugar in August came as a welcome easement in the lot of the public. As a restorative of confidence and contentment it was invaluable but it played havoc with the domestic economy of the very poor who suddenly found themselves deprived of a not inconsiderable source of income hitherto obtained from selling the surplus or the whole of their ration to black marketeers.

573. The decontrol of Khaki drill, voiles and bleached sheeting in September had the effect of producing bale upon bale of coloured materials in the drapers' shops. In Khartoum North the local board could only with difficulty be persuaded to take up their quota for the first half of the year and not at all for the second half.

574. In Omdurman sheep sold at an average price of £E. 2.100 mms. which was thirty per cent higher than in 1947, when the average price was £E. 1.850mms. Locally sold cattle on the other hand dropped from an average price of £E. 7.200mms in 1947 to £E. 6.500mms, though the number sold rose by five per cent.

575. The financial results of the year in the limited field of the province budget were the highest yet recorded. Revenue totalled £E. 86,485 which was £E. 13,362 in excess of the estimates and some £E. 14,000 above the out-turn for 1947. This large increase to revenue was almost entirely attributable to £E. 10,000 realised in premia from land auctions in the three towns and to an increase of £E. 3,000 in the motor licence fees. Expenditure also reached a record figure at £E. 210,973 which was £E. 22,487 above the budget estimate and over £E. 16,000 more than the expenditure in 1947. Higher rates for the cost of living allowance and increased salaries for the members of the police force were the principal reasons for this increase. The actual excess of expenditure over revenue at the end of the year was £E. 124,488, or £E. 9,125 more than was estimated in the budget.

576. The financial results on the budgets of the four local authorities, however, presented a much brighter figure. The total revenue from the three municipalities reached £E. 175,236, a figure £E. 9,000 in excess of budget estimates and nearly £E. 30,000 above the total revenue for 1947. These increases fell largely to the Khartoum municipality where extensive building in the area south of the railway line was reflected in a general increase in rates. In the other two municipalities the partial relaxation of rent restriction permitted an increase in the annual rental value and so again increased revenue. A general tightening of control throughout the municipal areas also resulted in more revenue from licence fees. On the expenditure side there was an excess of nearly £E. 6,000 over the budget estimates. This was due almost entirely to increases in cost of living allowances since the municipal councils followed the lead of the government and approved identical rates for all municipal staff. Otherwise the increased expenditure of approximately £E. 32,000 on the 1947 figure was mainly the result of increases in staff due to general expansion in all services. High though the expenditure bill might be, the municipalities could still in the aggregate show a favourable balance of £E. 10,131 on the year's working, though this represented a steep decline from the previous year when the comparable figure was £E. 15,229. The combined unallotted reserves stood at £E. 72,565, an increase of £E. 1,743 on the previous year's total, despite the fact that expenditure amounting to £E. 35,350 was approved against the reserve funds during 1948.

577. The innovation adopted in 1947 whereby all three municipalities opened banking accounts continued to operate successfully and to prove its value. In the practical sphere the new system obviated the mass of complicated and tedious accounting which is inevitable when municipal accounts are tied to those of the central government; while psychologically it helped to create that healthy sense of independent responsibility in financial affairs so difficult to acquire when every transaction has to be examined and checked in government offices.

578. The rural district council budgeted for a revenue of £E. 25,412. This was an increase of nearly £E. 3,000 on the previous year; but the bad rains of 1947 and 1948 affected grazing and animals so adversely that collection of herd tax was poor, and, largely for this reason, there were arrears amounting to £E. 9,666 at the end of the year. On the expenditure side there was an economy of £E. 3,699. The council's contribution to government amounted to £E. 10,381 as against £E. 13,749 in 1947. The precarious position of rural district finances, and the corresponding importance of building up substantial reserves, was illustrated by the fact that in one year of hard conditions and poor collection of taxes the reserve fund shrank temporarily from over £E. 5,000 to £E. 265.

579. The arrangements for the reception of pilgrims en route for Suakin worked well. A special transit camp was established at kilo 4 to which the pilgrims were taken immediately on their arrival in Khartoum for inoculation and documentation before being sent on their way. A total of 5,000 pilgrims passed through the camp.

580. The new football stadium in Khartoum North was opened in January. Being grassed and adorned with trees it is by far the most attractive ground in the three towns. But football fans in the three towns were deprived of their full meed of enjoyment when four leading clubs withdrew from the Sudan Football Association in protest against a decision of the council of the Association; after a few months, however, they rejoined the fold, and the Omdurman stadium was once again playing to capacity.

581. The Boy Scouts Association successfully continued the process of rehabilitation and consolidation on sound lines which was begun with the appointment of a whole time organising commissioner. A new and improved constitution was under consideration during the year and the organisation of the movement in the Sudan was generally placed on a firmer basis. A pleasant site on the river bank at Khogalab which has been leased to the Association was the scene of several successful training courses. Similarly the Girl Guides Association made impressive progress during the year. A constitution was agreed and adopted. A suitable site for a headquarters building in Khartoum was allotted and the Association has shown commendable energy in raising funds to meet the capital cost. The rapidly growing popularity of the movement and the remarkable interest and encouragement shown by every section of the community augurs well for the future of this most important organisation.

Blue Nile Province.

582. A courtesy visit was paid by Assistant District Commissioner, Singa, and the Mek of the Fung gism to the Dedjasmach Mohamed Hamdan Abu Shok of Gubba in Ethiopia. They were received with warm hospitality. An attempt by District Commissioner, Roseires, and the Omda of Ora to pay a similar visit to Asosa met with quite a different reception. A junior police officer with a heavily armed force turned them back at the frontier and refused to allow any communication between them and his superiors at Asosa and Afodu. The Ethiopian customs department was active along the border, and an official toured the frontier with the customs officers of Afodu and Asosa to make arrangements for stopping Ethiopians from bringing Sudan produce into the country without duty. In April the dues on imports from the Sudan were raised.

583. Throughout the northern part of the province and specially in the irrigated area of the Gezira, the chief feature of the year was the unprecedented amount of money in the hands of the people. The high price of cotton brought to tenants and to the owners or tenants of pump schemes on the White Nile a flush of money such as they had never approached before. Suggestions that part of this unusual windfall should be set aside against bad times in the future met with uncompromising refusal and in the end between four and five million pounds came into circulation in the province. On the whole the recipients appear to have used it wisely and few instances were reported of the lavish extravagance prevalent during first years after the irrigation scheme started. The effect, however, on the economics of the area was naturally inflationary and the year saw a sharp rise in the price of all commodities; in particular the price of grain remained at a very high level, in spite of a reasonable harvest in the Gezira itself and very good crops in some of the adjacent parts of the province.

584. The removal of the control of cotton piece goods and sugar left grain as the only safe article in which to speculate and merchants and cultivators alike were busy buying it up against the supposedly inevitable rise in the summer of 1949. Contributory factors to the hoarding of grain and its high price were the fact that most of the tenants had sold grain from the 1947 crop at what they thought was the bumper price of P.T. 13 the keila only to find that in the summer of 1948 they had to buy the same grain back at P.T. 30, the railway strike and the acute shortage of petrol towards the end of the year; both of the latter disorganised free movement of grain from one part of the province to another. The 1948 grain crop was on the whole good, but owing to the large amount of money in the area, prices did not drop with the new harvest to the extent that had been hoped.

585. Politically the year passed off more quietly than it might have done. The first six months saw the rise in political temperature which always accompanies a period of uncertainty, but it was only in Wad Medani itself that any active disturbance took place and prompt measures stopped it from spreading. Signs of tension and lawlessness

were noticed in El Dueim and in Rufaa, where a group of so-called terrorists was fortunately dispersed by the arrest of some of the ringleaders for robbery by night.

586. Once the legislative assembly became a certainty, political feeling was stabilised and everyone concentrated on getting the elections going. The time at the disposal of district authorities was insufficient for full explanation of the development to the people in all areas and the period of the year during which the preparations had to be made were not propitious for the assembly of a large percentage of voters. On the whole the enthusiasm shown and the numbers of those who attended the polls were surprisingly large. There was little agitation during the election period except in Wad Medani itself where certain elements made a demonstration on election day. Attempts to boycott the elections in Managil met with partial success, the people being told that the government's object in holding the elections was to increase the cultivation and animal taxes. When this piece of propaganda was exposed the elections were carried out without incident. Some anxiety was caused by the activities of youth leagues of the Mahdist and Khatmia sects in Kosti, Ed Dueim and Fung Districts during the autumn; the organisers appeared to be mainly imposters masquerading as agents. The opening of the legislative assembly in December was warmly welcomed by all those sections of the people who understood what it was about. A considerable proportion of the population in the south of the province will take many years to do this.

587. In local government the year was principally devoted to consolidation and to preparation of warrants for existing councils. In the irrigated area the rural councils, now fairly well established, were acquiring a real knowledge of the procedure of debates and committee work. Financially they are well off and potential revenue is considerable with the decision that a local rate may be taken on cotton. The next step towards full authority for them is the separation of their staffs from those of the districts, which cannot be undertaken at present owing to shortage of personnel.

588. The Wad Medani town council continued to make progress; its rate of advance was conditioned partly by the innate conservatism of the Medanin themselves and partly by the fact that party politics were introduced into its last elections, with the result that a number of members were elected whose object was to obstruct the work of the council. There were, however, district signs that they appreciate their duties, and a number of improvements to the town were carried out.

589. The northern White Nile rural district council acquired its own offices at Ed Dueim and town committees were elected for Geteina and Kawa. Ed Dueim local council also obtained its own offices but staff was still a difficulty for both councils, and the work of committees still left much to be desired. In Kosti and Sennar Districts unofficial councils were working but warrants had not yet been completed. In the Fung the direct administration of the Fung gism by the Mck showed signs of breaking down and preparations were made for splitting the

gism into two minor rural councils which would at first work on an unofficial basis until they proved themselves.

590. The registrar of co-operative societies visited the irrigated area on two occasions but there appeared to be little desire for mutual aid societies and very little comprehension of the meaning of co-operation. A co-operative trading society however started at Wad Sulfab and tenants are waiting to see the result before committing themselves. A transport society was mooted at Laota block and a co-operative pump scheme at Kasamber village in Turabi block. There appeared to be a good deal of confusion in people's minds between co-operative societies and ordinary partnerships.

591. In November the settlement of the area known as the north-western extension to the Gezira Scheme was started. This gave rise to much speculation by the local inhabitants on the question whether the method employed would be expropriation as at Abdel Magid on one side of them, or rental, as at Kab el Gidad on the other. No final decision on this had been reached by the end of the year.

592. The Jebel Aulia compensation committee decided in March that the time had arrived for the second and final payment of compensation for agricultural land flooded by the Jebel Aulia Dam, and that after this payment the inhabitants should remain in possession of the flooded land for what it was worth.

593. During a year when the political temperature was on the whole fairly high and when they had a great deal of extra duty, mainly of a precautionary nature, the police kept an admirable hold on their tempers and their morale remained high. Great credit is due to officers and men alike for their behaviour during a period when their work was far from easy.

594. The chief feature of the criminal statistics for the year was the sharp rise in offences against property. The figures for brigandage and robbery, particularly in the Gezira, housebreaking, which usually means not more than forcing entrance to a grass tukl, and theft all showed a considerable rise. The reasons for this were two; one, that the high price led labourers to steal cotton from tenants and tenants from one another; the other, the very large increase in the foreign population of the irrigated area. The floating labour population in 1948 was nearly 35,000 more than in 1947; 30,000 of these were from the Sudan and 4,000 were Burgu from French Equatorial Africa. The outstanding theft of the year was that of twelve bales of ginned cotton from the premises of the Meringan ginning factory. The job was carefully organised and involved a discharged storekeeper and others who knew their way about the factory, and an elaborate organisation for disposing of the cotton after it had been stolen. The opportunity was afforded by the accumulation of ginned cotton stored in the open owing to the railway strike. Commendable investigation work by the Wad Medani C.I.D. led to the arrest of all the culprits and the recovery of eight of the stolen bales.

595. The basic increases of salary and other ameliorations of their terms of service which were approved for Sudan Police Officers and other ranks were much appreciated. Housing still remained a problem but for officers this too was considerably improved. Plans for large scale improvements in police constables' housing were formulated.

596. In the Fung District several attacks on Government officials took place; a forest overseer was murdered; the Dinder forest ranger was stabbed in the back and the medical officer at Singa was attacked in his office by three lepers. On the whole, however, offences against the person did not increase and grievous hurt cases showed an appreciable decline, partly due to stricter enforcement of the rule against carrying knives or clubs in towns and [in the Gezira and White Nile areas.

597. The number of Major courts declined from 87 in 1944 to 64 in 1948, but minor courts increased. Civil suits held in the province courts increased by 226. The following are the figures of cases seen by magistrates town bench and native courts during the past three years. They show clearly the great value of Town Benches and Native Courts in the judicial system of the area :—

	1946	1947	1948
Non-Summary Courts	321	283	264
Summary Courts	435	353	533
Town Benches	1,586	3,275	4,339
Native Courts	9,343	14,469	16,605

598. There was never any difficulty in the labour supply in spite of the fact that the Gezira scheme, owing to high profits, employed some 35,000 more labourers than in 1947 for the cotton picking in the first half of the year. By the end of the picking season the price of labour had risen considerably and the irrigation department experienced some difficulty during the summer months in retaining their labour at places where it was needed, and in fact only did so by the issue of grain at controlled prices from government stores. Even towards the latter part of the year when a big grain crop was being harvested outside the irrigated area, labour was always obtainable in the scheme partly because of the complete failure of the rain in the northern part of Rufaa District for the second year running.

599. In general the weather was equable and the summer mild; rains were on the whole good except on the west bank of the White Nile in Ed Dueim District, in certain areas of the north-east part of the Fung District, and, as already mentioned, in the northern part of the Northern Gezira and Rufaa Districts. In the irrigated area what promised to be a bumper crop was damaged by late and very heavy rains. The Blue Nile flood was again above average and maintained a high level for a considerable period.

600. The final yield of cotton in the Gezira scheme was 700,467 kantars, an average of 3.43 kantars per feddan, which was slightly below the original forecast, Thrips, leaf curl and jassid did a good deal of damage. In spite of the low yield average profits amounted to about £E. 180 per tenancy. The average yield of cotton on the alternative livelihood schemes in Ed Dueim District varied between 2.00 kantars per feddan at Ed Dueim and 4.01 at Hashaba, the latter being a record for that scheme and presumed to be due to the application of ammonium nitrate and spraying by D.D.T. Private pump schemes in Kosti District had a total of just under 11,000 feddans of cotton with an average crop of 3.34 kantars per feddan.

601. Grain in the irrigated area, which promised to be a bumper crop, suffered from late rains and their concomitant diseases, particularly in the south: the final crop harvested was disappointing. In the southern Gezira and Managil rainlands early and heavy rains promised an excellent crop, but there again damage was done by late rains in October: the Managil crop was however a heavy one. On the White Nile the northern part of Ed Dueim District had practically no crop, the Maatouk-Kawa area had good grain and the Kosti area was fair. The Fung dura harvest, except in the north-east corner of the Dinder, was satisfactory and especially in the southern Fung and Rufaa el Hoi. Heavy sowings of maize were made along the banks of the Blue Nile upstream of the Sennar dam because of the high price obtainable in Palestine. The size of the crop has grown from 2,000 tons in 1944 to 6,000 tons.

602. The stand-still order on pump schemes, issued by the Nile Pumps Control Board, gave the district and agricultural authorities a breathing space in which to catch up on current pump schemes work. The licensing position became satisfactory, except in the Kosti area, where there are a number of large schemes, some of which have never had proper licences and few of which have been surveyed, or, if surveyed, have conformed to the plans approved for them.

603. From a forestry point of view the Blue Nile flood was disappointing and not many of the Fung forests were adequately flooded; this has led to some desiccation in the acacia arabica forests. Areas were chosen on the fringes of Jebel Aulia reservoir for further central forestry reserves and the forestry reservation programme at Jebel Moya was carried forward and fire lines cut. Supplies of firewood were adequate during the year at controlled price. Charcoal burning was transferred from Jebel Moya to the Hawata area. Extensions were made to the forest reserve on the edge of the Fawar block in the irrigated area. Gezira residents now prefer neem wood to that of sunt; the inhabitants of the Fung, however, still stick to sunt.

604. The province medical staff worked at high pressure throughout the year owing to shortage of personnel. In the irrigated area, malaria was kept in check. An experiment started during the year to test the effectiveness of guesarol as a control of the incidence of malaria through

destruction of the adult mosquito in three of the White Nile villages Dineigila, Riad and Kawa. All these villages had complained of the effect of the Jebel Aulia dam on malarial incidence and asked to be moved inland; if the guesarol treatment is effective this will be unnecessary. There was a decrease in the number of cases of malaria reported at Kosti, but in the White Nile area the presence of liver fluke in the grass at the edge of the dam stopped much of the grazing of this grass with the result that the public health staff found it extremely difficult to deal with mosquito breeding there.

605. Bilharzia continued to be a serious problem and a senior member of the medical service was appointed to carry out investigations. Only 5 per cent of villages surveyed between 1946 and 1948 were found free from infection, and only 10 per cent had an incidence of below 5 per cent. Most of these villages were either on the edge of the scheme or outside it. More than half of the villages surveyed inside the scheme had an incidence of more than 20 per cent. Villages with wells appeared to be no better than those without and the incidence among children was found to be about double that among adults and among immigrants double that among the local population. The examination covered 127 villages and 28,993 people in 1948. The villages in the scheme number about 950 and the population 300,000 and there are 2,600 kilometres of canals.

606. Steel shortage led to suspension of proposed conservancy schemes in several parts of the province. In Wad Medani the town council took various steps to ensure the purity of the food supply. Plans were approved during the year for two dairies to supply Wad Medani town with pure milk, and the Kosti water supply reached an advanced stage of construction. The Wad Medani Light and Power Company water supply was extended from Derdig to Gezirat el Fil.

607. The demand for trained midwives continued high throughout the province and anti-natal and child welfare work increased in popularity wherever facilities were provided.

608. The most noticeable feature in education was the enthusiasm of the people of the irrigated area to start schools of their own. In Southern Gezira District public subscriptions amounted to £E. 11,000, which was used for new sub-grade schools, rebuilding of old ones, boarding houses, masters' and mistresses' houses and for the rural area boarding house at the intermediate school in Wad Medani which takes 60 boys. The number of new boys' schools started in the province was 14, of which two were elementary and 12 sub-grade.

609. The standard of girls' schools remained high, but the attendance was not always uniform. The number of new girls' schools started was six, bringing the total of the province to 34. At Roseires £E. 520 was collected by local subscription towards the cost of the girls' school boarding house. Thirteen girls were accepted for a teachers' course at Omdurman, 15 for Girls' Intermediate School, Wad Medani, and one for Girls' Intermediate School, El Obeid.

610. The second expansion programme at Bakht er Ruda was finished at the cost of £E. 90,000 and another costing £E. 50,000 was started. Mabrouka school, which is part of it, opened after the rains. The adult education experiment at Um Gerr was continued and women's welfare work made progress there. An adult education officer was posted to the Wad Naaman-Rimeitab area of the scheme and started work there in June. The experiment started successfully, and there was a good response among the local people. Five Sudanese women teachers were given a special course at Bakht er Ruda to train them for similar work in the same area during 1949. A literacy campaign in Ed Dueim conducted on the "each one teach one" system taught 600 people to read and write in the space of about a month.

611. Flocks and herds in the northern Gezira suffered severely from the second successive year of bad grazing. There were many casualties among the animals and many were sold to buy grain. In Kosti District the good rains produced excellent grazing after the scarcity during the summer following the previous year's bad rains. Cattle plague was again prevalent both in Kosti and Fung Districts. An unfortunate consignment of vaccine led to the death of over 1,000 cattle in these two districts from tetanus. The vaccine, however, is by now so well known in Kosti that this mishap caused no abatement of the requests for treatment. In the southern Fung confidence was for a time impaired. In the northern White Nile liver fluke in the grass bordering the reservoir caused some losses. Hexachlorethane, the remedy for it, became available during the latter half of the year, but was not used to any great extent, partly because the disease was not as prevalent as animal owners suggested: reports of a test at Kosti slaughter house showed that 21 per cent of animals slaughtered were affected.

612. In the Dinder national park game was plentiful, and so were poachers. The police took successful action against the latter. Elephants appeared on Khor Uffat and near Ora and buffalo were seen in the Bunzuga forest, both well off their beaten tracks.

613. A graded road was built in connection with a hafir programme by the Ministry of Agriculture from Jebel Moya to Gule, whence it turns west to Renk. This trade road proved very successful, though its trace could be improved in places. A causeway was constructed at Kerikera across a 600 yard depression behind the market which brought it more or less into communication with the main land. In the Fung there was considerable pressure for the construction of a railway from Sennar to Roseires West, and estimates of the possible traffic were worked out. The demand for ferries on both the Blue and White Nile remained strong, but estimates for car ferries rose to almost prohibitive figures.

614. In the Fung District the soil conservation officer completed the Dali and Mazmum hafirs and a large hafir was dug at Fangugu south of the railway near Jebel Moya. Dali and Fungugu hafirs have been dug with the intention of settling people from the river bank where the land is exhausted or health conditions are poor. Mazmum is a market

centre for gum and grain and is connected to Renk and Jelelein by road. These hafirs are impressive works and all three places had large lakes at the end of the rains. Only one, however, of the two Jebel Dali hafirs filled. In December two hafirs were dug in the neighbourhood of Jebel Megeinis in Dar el Ahamda. The filtered water supply for Kosti town was very nearly completed at the end of the year and the electricity supply was laid on. Three wells were dug against Jebel Aulia Compensation Committee funds and ten under the auspices of the rural water supply and soil conservation board in Ed Dueim District. In other districts small programmes of new wells and repairs were carried out.

615. The number of aircraft landing at Kosti was 50, the 1947 figure being 47. Search was made for a new site for the aerodrome on the west bank but without success. A piece of land, however, was found close to the present aerodrome which is less affected by rain. The landing ground of Sennar was closed down as unsafe for modern aircraft and a site for an aerodrome near the racecourse at Wad Medani was similarly rejected.

616. Approvals for buildings were confined to educational and medical projects. In Wad Medani some officials' quarters were built as part of the Sudan irrigation department development programme. The same department finished the new offices for their headquarters staff, and most of the houses required for staff and artisans of the Kilo 114 workshop which is due to move into Wad Medani in 1949, occupying the old ginning factory there. Twenty-nine houses for classified officials were built in Wad Medani, all but two being for the irrigation department. The Singa and Kosti mosques were finished, and Ed Dueim mosque was well under way. At Ed Dueim, new offices for the surveys and legal departments, and rural district council offices were finished; plans were prepared for the new merkaz and Sudan irrigation department offices, and 28 houses for new police lines were finished and 28 more started. In Wad Medani there was a fair amount of private building, a total of 134 permits being issued compared with 56 in 1947.

617. Sales of land inside the Gezira scheme amounted to 8,122 feddans, of which 6,647 feddans were to government. Sales outside the scheme amounted to 7,865 feddans. In Wad Medani 95 residential plots were auctioned, arrangements were made for the expropriation of about 285 feddans for second and third class residential sites and plans for the Medanin quarter, and the new light and heavy industries quarters were submitted to the central town planning board. The town lands scheme was applied to Rufaa and the village lands scheme to a number of villages throughout the province. Agreement was reached with departments concerned for the deposited plan of Singa town. In Ed Dueim an auction for a cinema site had to be declared nul and void because some of the citizens used it to blackmail the proprietor of the proposed cinema into giving them a share of the business. Plans for the western extension of Ed Dueim town were prepared.

618. In both of the Gezira districts the traders appeared to have had a poorer year than in 1947, in spite of the profits made by the tenants. This was probably because the freer flow of goods into the country; decontrol of sugar and cotton piece goods killed the black market, and the rapid turnover of rationing days could no longer be relied on. There were indications at the end of the year that money was getting scarce in the towns. Some merchants, deprived of their black market profits, set about cornering grain, but they found that the tenant was also in the market. The decontrol of sugar, as was expected, created a drop in its consumption.

619. Profits on cattle, meat, lubia seed and vegetables of all kinds continued to be good. The only exception was maize in the Fung, which during the early part of the year commanded a completely artificial price owing to demand from Palestine. This demand ceased during the last quarter and merchants who had bought maize when the Port Sudan price was £E. 31 found that they could get not more than £E. 19 in December. Sesame prices were disappointing throughout the province, although the crop was good. The gum crop was again heavy and prices were weak in consequence. New auction markets were set up at seven places in the Fung. Animal prices were good owing to the demand from the Gezira.

620. The severe petrol restrictions which had to be imposed during the year undoubtedly had some effect on trade and prices. Extra petrol was issued for the carriage of grain from cultivation areas, but the mere fact that there was a possibility of moving the grain from any area put up its price in that area at once and special issues were discontinued in December in the Gezira districts.

621. Taxes in the province were collected without any great difficulty except in the northern part of Rufaa sub-district where crops and grazing were bad for the second year in succession. Business profits tax assessment for 1948 was £E. 22,032 compared with £E. 18,664 for 1947. Herd tax relisting was carried out in all districts of the province. The effect of the relisting and the revised rates approved for 1949 should be a rise in herd tax of approximately £E. 19,000. Assessment on the 1948 crop for ushur collected in 1948 amounted to £E. 60,000 only, compared with £E. 91,000 in 1947.

622. Undoubtedly the most startling episode during the year was the hunt for quintuplets reported to have been born in Rufaa District. After engaging the province administrative and medical staff for some weeks and culminating in a paragraph in the London "Times," they proved to be a phantom production of the imagination of a local fiki.

Kassala Province.

623. The Eritean frontier remained undisturbed and movement of tribes grazing across the frontier was less restrained until August when the notorious Eritrean brigand Hamid Idris Awati moved out of his hiding place in northern Ethiopia and making northwards seized

some Hadendowa herds grazing in Eritrea. He remained opposite the Sudan police post at Girgir for a month, while the Eritrean authorities collected their forces, and was joined by many of the Eritrean Lebet. One Hadendowa man was killed and more cattle were seized before Sudan Defence Force and mule police patrols arrived to prevent any infringement of the frontier, but Hamid Idris had departed by the time a joint sweep of the country was carried out by the combined Eritrean and Sudan forces. Shortly after he was rumoured to be on the frontier near the Khor Baraka in Tokar District but this was probably a false alarm and Hamid Idris is believed to have returned to Ethiopia and remained there since.

624. The final payments of compensation arising out of the Hadendowa—Beni Amer fighting of 1943-1945 were completed in February. The completion of these negotiations was well timed as the old feudal organisation of the Eritrean Beni Amer has now broken down, as it has in Tokar District, and been replaced by a more orthodox tribal system in which serfdom no longer plays a part. A tribal meeting of Hadendowa and Beni Amer for settlement of the affair reported above was fixed for early 1949, but the conduct of negotiations will certainly be more difficult now that the feudal Nabtab chiefs no longer wield any power in the Beni Amer.

625. On the Ethiopian frontier in Gedaref District conditions remained peaceful throughout the year except for the ambushing of some Sudanese poachers inside Ethiopia by robbers who killed one of the Sudanese. The police took over from the Sudan Defence Force the responsibility of frontier patrolling in the Basunda area of Gedaref; two regular mule patrols were maintained from January to May and were occupied mainly with the prevention of poaching. Smuggling of grain and sesame from Gedaref District into Eritrea via the Ethiopian frontier post of Homera again occurred on a large scale. The smugglers were mostly Lahwin and Beni Amer camelmen, and many seizures were made by the police, but many others must have got through undetected and none of the principals in this trade, who are believed to be Sudan merchants, has yet been caught. In March, three Sudan police on smuggling patrol, who had inadvertently crossed the frontier were arrested by Ethiopian police and kept in prison for 25 days before representations to the Ethiopian authorities succeeded in obtaining their release.

626. The general condition of the people in the province remained normal during the first half of the year. A reasonable supply of grain at fair average prices, good grazing for nomad animals, a near record cotton crop in the Tokar delta and a very good cotton crop in the Gash combined to ensure the maintenance of the normal economic conditions. At the same time goods became available in greater quantities, controls were eased and signs that inflation was on the decrease were present. But with the general failure of the 1948 rains over the whole province, with the exception of the southern half of Gedaref District, the conditions deteriorated very rapidly and by the end of the year nomad animals

were in straits, the price of grain was soaring and famine conditions began to appear in several parts of the north of the province. The grain and sesame crops in the production areas of Gedaref were excellent and it was hoped that as soon as the harvest came on the market the famine prices of the summer months in the rest of the province would fall. But, unfortunately, and for reasons not yet fully explained, grain prices remained high and showed little sign of falling by the end of the year.

627. In Tokar a very small Baraka flood resulted in a small grain crop and a cotton crop about half of that of the previous year, but with price appreciations on the 1948 cotton crop still to be paid out and good winter rains the position through the coming season should be satisfactory. Similarly the Gash with a well spread flood appeared likely to produce good cotton and grain crops in 1949.

628. Some famine relief works on a small scale were started in the Abu Deleig area, and among the Amara of Beja District, but preference was given to encouraging people from poorer parts by propaganda and by cheap railway fares to seek work and food in the more prosperous areas of Gedaref and the Gash. This provided some alleviation in the general situation, but it was expected that in the first six months of 1949 hardship would increase and advance arrangements were made to deal with real distress.

629. Political interest throughout the province turned on the question of the legislative assembly. Some elements tended to identify themselves with opposition to the assembly, and though there were notable exceptions to this in the case of tribal leaders the rank and file of their tribes were apathetic and even hostile and took little part in the election of members in spite of long continued explanation and advice. At the actual elections five out of the seven seats were uncontested, one, the Gedaref north seat, was fought on a basis of local politics and the seventh, the Amara—Bisharin seat, was not filled owing to the failure of the electoral machinery to work according to plan in this very scattered and distant constituency. Mild demonstrations occurred in the towns, and strikes of government employees and of shop-keepers, but in no case was there any disorder except in Port Sudan where unscrupulous agitators stirred up sectarian feeling among the Beja townsmen and an attack on the district prison in November resulted in the police having to open fire on the attacking mob, entailing six fatal casualties. The railway strike, by disrupting communications throughout the province, disorganised all aspects of the trade and of the province administration. The general attitude of the public was one of apathy and only when the water supply to Gedaref hospital failed did hostility to the strikers appear.

630. Progress in the growth of local government, with the one exception referred to below, was general and satisfactory. In Gedaref an independent warranted urban council for the town was set up; a new set of electoral rules providing for indirect elections for the Gedaref district council was approved and elections were held in June; a warrant

and independent budget for Tokar district council were approved and elections were successfully held in May ; in Port Sudan the number of elected members to the municipal council was increased from six to twelve, and a second storey was built on to the municipal building, thereby providing them with accommodation suitable to their status and functions ; in Tokar and Kassala Districts unwarranted advisory councils were set up for the nomad Beni Amer : and in Beja district shadow warrants for a district council to cover the whole district and a rural council for the Gash and neighbouring areas were completed. Kassala town council, on the other hand, received a serious setback when seven of the members, for reasons concerned with local and sectarian politics and in no way connected with local government, refused to attend the council's meetings, and, as it was clear that the holding of bye-elections to replace them could not solve the difficulty, the council's warrant was revoked, and the district commissioner was appointed local government authority with an advisory body to assist him consisting of the remaining members with some additional appointed members. The procedure and functions of this advisory body have, in fact, been the same as those of the old town council.

631. The Gedaref district council showed continued enterprise and initiative in the development of roads, fire lines, rural water supplies and agriculture, and their favourable financial system allowed them to spend much more than other comparable district councils. This discrepancy was so marked that negotiations were, by agreement, opened with the finance department whereby their contribution to the central government should be increased by five thousand pounds a year. Tokar district council made a promising start and should progress on orthodox lines. It was laid down on the traditional foundations of the old Tokar *meglis ahli* and showed sense and stability. Port Sudan municipal council, with a new executive officer trained in England, showed increasing enterprise especially in the question of public health. But with two thirds of the council's expenditure allotted to public health other services lagged behind and the council asked the central government for a grant-in-aid on the grounds that the health of the port is a matter of importance to the country as a whole and not purely local. Kassala town council still had a large reserve fund earmarked for town roads but were not able to spend it owing their failure to hire or buy the necessary machinery and equipment ; meanwhile the townsmen continued to suffer from the severe dust nuisance.

632. Tribal politics showed no more than normal activity. The Tokar Beni Amer, following their emancipation in 1947 from their feudal overlords were successfully reorganised on an orthodox tribal basis ; the sectarian intrigues by a small number of Hadendowa Omdas against their Nazir continued on a reduced scale and resulted finally in the dismissal of seven of them ; agitation by the Batahin of Abu Delcig against the Nazir of the Shukria necessitated the demarcation of a territorial boundary and relations between these two tribes deteriorated ; the Lahwin of Gedaref District resuscitated their twenty-year-old intrigue against the Shukria Nazir and pressed for the promotion

of their sheikh to the status of nazir and for local autonomy for the tribe : and on the north-eastern borders of the vast Shukria domain the Bisharin are pressing their claims for territorial boundaries and the transfer to them of tribal sections living within their country.

633. Public security along the Eritrean and Ethiopian frontiers, with the exception of two isolated cases of brigandage in Tokar district and the activities of the Eritrean brigand Hamid Idris Awati, remained good, but smuggling of grain, sesame, oil, rice and hides into Eritrea and across the Red Sea to Arabia again occurred on a fairly large scale. Preventive action produced a large number of arrests and seizures of goods, but the trade was so lucrative that the confiscation of goods, camels, etc., was no deterrent. In Port Sudan a thorough overhaul of the system of police beats and patrols, accompanied by increased welfare arrangements for the men, and the introduction of a crime branch, improved the standard of public security and reduced the already very low incidence of theft and pilferage from the quays. In Gedaref District there was an increase in crime over 1947 which was more than proportionate to the increase in population. Kassala District showed a large increase in informations and reduction in arrests, but the actual incidence of preventable crime was reduced. In Tokar District the state of crime was satisfactory, and in Beja District the continued and commendable efforts of the district staff resulted in a further reduction of fights, affrays and camel thefts. Matters worthy of particular note additional to the november disturbances in Port Sudan referred to above which resulted in six deaths, were an outbreak of thefts by Beja tribesmen from trains in the Sinkat area, a raid by Bisharin tribesmen on a caravan of Rashaida camels on their way to Egypt, and the sabotaging of a number of *sagias* at Kassala by a large mob of fellata who were aggrieved by their failure to obtain a share of sagia land ; in each of these cases special measures were concerted to prevent the recurrence of such incidents. The number of illicit firearms was believed to be no bigger than in previous years, and it is probable that a number of them are gradually becoming unserviceable and that ammunition is deteriorating and becoming scarce. In general, with the exception of Gedaref District and the Aroma sub-district of Beja District, the state of public security and the efficiency of the police showed a steady improvement.

634. The newly appointed Judge of the High Court was kept fully occupied throughout the year. In addition to civil work, the bulk of which arises in Port Sudan, he presided over most of the major courts. The welcome appointment of a district judge to the Kassala—Gedaref circuit relieved the district administrative staffs of much of this work.

635. The province police strength at the end of the year was 78 short of its establishment of 1,077 other ranks. The police training school at Port Sudan, which was adequately accommodated in ex-army buildings, turned out sufficient men to keep the district establishments almost up to strength but it was clear that the terms of service offered

to recruits were still not good enough to attract as good a type of man as is needed in modern conditions. Standards of literacy showed marked improvement and a total of 191 were reckoned fully literate and a further 292 semi-literate. The reserve company at Port Sudan was maintained at strength and in full training for emergencies, but was only called into action on the one occasion of the November disturbances, when the company acquitted themselves well and acquired valuable practical experience.

636. In the Kassala province prison and Gedaref prison (both Class I) a number of reforms and improvements were put into effect. In both, the system of guarantees was widely used and prison industries were established with flourishing workshops for carpentry, spinning and weaving, the manufacture of mats and ropes, laundries and other minor crafts. At Kassala a first offenders' agricultural camp for the irrigated cultivation of fruits and vegetables was firmly established, but the project for a hard-labour quarry camp was delayed owing to difficulty in acquiring a suitable site with water available. In Beja District the organised use of guaranteed prisoners on the production of building materials allowed the district authorities to take over a large building programme which was executed at an unusually high technical standard. Work was started by the public works department on the new Kassala province prison buildings and part of the first instalment was completed, but the whole building seemed unlikely to be ready for occupation before 1950.

637. The constant flow of labour from the west and south into Gedaref District continued and it was impossible to know how much of this remained permanently in the district. It is certain that some go on the pilgrimage and others go to Kassala and the Gash but the latter places only have a limited absorptive capacity and it is probable that the majority of immigrants after a year or two of working as hired labourers settle down as independent cultivators. The census for westerners held in 1947 showed that there were about 27,000 Sudan westerners and 65,000 westerners from outside the Sudan settled in Gedaref District, but this number has probably increased since the census, and the number of Sudanese from the southern Sudan has also increased markedly.

638. In general the supply of casual labour was equal to the demand, but there were local and temporary shortages in Gedaref during the cultivating season and in the Gash during the cotton picking season. On the other hand the supply of Habab labour from Eritrea into Tokar exceeded the demand, and there was a heavy movement of casual labour and other immigrants from the north of the province to Gedaref and the Gash towards the end of the year in search of grain to feed their dependents in the north. In Port Sudan the labour supply was satisfactory and the introduction of the double shift system resulted in a shorter working day and regular rest days and holidays. Contract labour enrolled for the railway strike during March and April did its work well and fifty general cargo ships were successfully worked during

this period with a total of 54,548 tons of cargo handled. The recent setting up of a statutory committee under the chairmanship of the commissioner of labour to deal with dock labour was most welcome.

639. The pilgrimage was rather smaller than that of 1947. There were 10,880 pilgrims of whom about 10,000 returned by the end of the year. As the arrangements at Suakin had been based on the expectation of a greater number there was little congestion of pilgrims or overworking of the staff and the whole pilgrimage passed off smoothly.

640. The climate during the first half of the year was normal, but the summer rains failed badly over the whole province with the exception of the southern half of Gedaref District where conditions were about normal. The autumn and winter rains had started to fall in the coastal plains only in the extreme north near the Egyptian border and the extreme south from Tokar to the Eritrean border. The rest of the coast and the foothills which depend on the winter rains for grazing were completely dry up to the end of the year.

641. The 1947-48 grain harvest was patchy and a total of only 22,000 tons of grain passed through Gedaref market compared with 35,000 tons and 40,000 tons in the two preceding years. The market arrivals of sesame for the same season were 110,000 kantars. The 1948 rains in the southern half of Gedaref were good, and although village grain crops were only fair the *harig* crops were excellent and a surplus of 40,000 tons for export from the district was expected, together with a sesame crop which promised to reach 100,000 kantars. The whole of the rest of the province had poor summer rains and crop production was negligible.

642. The mechanical crop production scheme was again kept on an experimental basis with the object of finding out the best types of crop and the most suitable machinery for use in local conditions. Two hundred and fifty plots of 28 feddans each were also offered to selected cultivators on a partnership basis, the scheme supplying machinery for ploughing and threshing and receiving a share of the crop in payment. The experiment was successful and plans were agreed for the permanent settlement of several villages on a similar partnership basis in 1949.

643. In the Tokar delta the 1947-48 cotton crop yielded 330,470 small kantars, which, when the late price appreciations were added, resulted in a total of about £E. 123,000 being paid over to the cultivators. The appreciations were paid out in instalments with the intention of preventing inflation and this proved a boon to cultivators whose land was not watered in 1948. The 1948 flood was one of the poorest on record, but it was assisted by good autumn rains and 17,565 feddans of cotton land and 3,850 feddans of grain land were effectively watered, but the expected cotton yield was likely to be less than half that of the previous year and many cultivators had no watered land at all. The Tokar agricultural policy committee had not yet met but the local

advisory committees representing tenants' interests were most useful in advising the agricultural staff and assisting in the day to day administration of the delta. A tenants' welfare fund was established with an initial grant of £E. 10,000 from the government and drawing revenue from a levy on the cotton crop and interest on the cultivators' financing account.

644. The 1947-48 cotton crop in the Gash produced 73,127 large kantars from 33,240 feddans which gave a return to the cultivators of £E. 460,700. The 1948 flood was slightly smaller than the previous one but ran so steadily and was so well managed that 46,537 feddans of cotton land and 16,493 feddans of grain land were effectively watered. The cotton crop was estimated at 90,000 large kantars and the excellent grain crop promised to be a boon to the Beja tribes. The canal committees, which represent the Gash tenants, did much useful service, and it is intended that they shall in due course elect members to a central body of cultivators' advisory to the Gash Board, as soon as they have gained sufficient experience.

645. The Kassala sagia scheme grew steadily and the only factor preventing more rapid expansion was the large amount of capital (about £E. 200 to £E. 300) needed to establish a sagia or small pump. Returns from fruit and vegetables were good during the first half of the year but prices fell during the depression of the last few months. Experiments by the Ministry of Agriculture on growing bananas on a reduced water supply were carried out, but the results were unsatisfactory and it seems clear that bananas will not do well in Kassala conditions on a low water duty.

646. Efforts were made by the local government authorities in Kassala district and the Gash area to organise wood cutting on a planned basis and thereby prevent further denudation of the town perimeter. Not much progress seemed likely to be made before the appointment of a qualified forestry staff. A reconnaissance of the Kassala dom forests showed that there was much dead wood available for exploitation and it was decided to allow its removal for export again. The Gedaref district council agreed on the allotment of a further 250 square miles of rain-grown forest for settlement as central forest reserves.

647. There were no large scale epidemics in the province but small outbreaks of smallpox carried over from the 1947 epidemic occurred and spread by the movement of casual labourers and travellers in the Gedaref, Kassala and Gash areas, and were successfully isolated by quarantining. The incidence of malaria was light over all the province except in the Gedaref area where the rainfall was heaviest. Guinea-worm infections on the river Rahad were only about one tenth of the previous year's number and reported bilharzia cases showed a reduction, though it is doubtful whether this disease is decreasing, as little has yet been done by the local authorities to prevent infection of rural water supplies. Nearly 300 cases of Kala-azar were treated in Gedaref of which only 42 died. It is still not known whether this represents a real increase in incidence or whether successful treatment is encouraging

more cases to come to hospital. Port Sudan municipal council showed continuing activity and interest in public health matters but, with two thirds of the council's expenditure being allotted to public health, the council had to review its policy. It is clear that either standards of public health will have to be reduced or extra funds must be found; and in view of the interest of all parts of the country in Port Sudan the council decided to ask for a grant-in-aid. In Kassala, the town council maintained a satisfactory standard of public health, but Gedaref urban council and the district councils had not yet shown a serious interest in such matters.

648. In the educational field the year was marked by the opening of a government intermediate school in Kassala, and of an ahlia intermediate school at Gedaref. An excellent group of buildings for the former, built of cement blocks, together with housing for staff, was erected to the north of the town, but in Gedaref the school committee was already in difficulties over funds and the new school was housed in temporary accommodation. The ambitious new buildings for the Port Sudan Ahlia intermediate school went slowly ahead according to the funds available. The expansion in elementary education allowed by the ten-year plan was carried out, but there was continual difficulty in erecting buildings in time and the supply of teaching staff was often short. The district authorities assumed responsibility for the erection of most of the school buildings in the programme, but with the exception of those in Beja District the standard of construction was low and unlikely to give good service. Girls' education among the Beja tribes made only slow headway, but a very marked improvement was noted in the Tokar and Sinkat elementary schools. Sub-grade education was improving slowly and called for more inspectorate staff and individual attention to schools.

649. There were 69 outbreaks of cattle plague involving 17,484 cattle and the incidence was therefore very similar to that of 1947. Vaccine was available in sufficient quantities and 31,240 cattle were vaccinated prophylactically, but there were some difficulties owing to lack of cold storage. No contagious bovine pleuro-pneumonia was reported but there was some anthrax in the Abu Deleig area and two outbreaks of foot-and-mouth disease near the Eritrean frontier. The demand for antrypol for treatment of trypanosomiasis in camels remained about the same although it is becoming decreasingly effective owing to the acquired tolerance of the trypanosomes. Grazing conditions during the first half of the year were good and animals remained in normally good condition, but with the failure of the 1948 rains over most of the nomad grazing areas the condition of animals fell off rapidly. Many casualties from exhaustion had already occurred before the end of the year, and more were expected. At the close of the year there was average grazing only in the river Setit area and parts of the southern Butana, and a limited quantity of very good grazing between Tokar and the Eritrean boundary, all other grazing areas were nearly devoid of grass.

650. The responsibility for preservation of game in the south of Gedaref District was transferred to the mounted police, who patrolled the game reserve and the neighbouring areas throughout the dry weather. Only one large poaching party was arrested and a good deal of game was observed on the Upper Rahad in April. It is believed that supplies of ammunition for unlicensed rifles are running short and this is probably a contributory cause of this improved state of affairs.

651. For yet another year owing to the lack of equipment and materials practically no progress was made in the programmes of construction and maintenance of town roads. The standard of rural roads remained much the same except in Gedaref where the use of machinery and the allotment of ample funds by the district council allowed large lengths of road to be scraped and graded. The inevitable result was corrugation of the surface due to the increased speed of traffic and no remedy has yet been found for this. A good deal of maintenance work by the district authorities was done on the Beja and Tokar roads but in the latter case most of it was washed out by heavy winter rains. The re-alignment and construction of the Suakin-Tokar road by the public works department is scheduled in the development plan for 1949, and is eagerly awaited by the local inhabitants. The piers and abutments of the road bridge over the Gash at Kassala were finished and tested for settlement during the Gash flood season. Work on the carriage way started in November and the bridge was expected to be completed by May, 1949. A temporary suspension bridge of local construction provided passage for foot passengers during the 1948 flood.

652. The drilling of deep bore wells in Gedaref as compensation for expropriation on the mechanical crop production scheme continued. Out of a programme of ten bores five were successfully completed, two failed to produce water and three were still under consideration. Work on open wells progressed slowly; in Gedaref four new wells reached water and other wells were improved and in Beja District new well-digging teams were trained and started work. The 1947-48 programme of 13 new haffirs in Gedaref was completed, but the 1948-49 programme was cancelled so that sufficient funds might be accumulated in 1949-50 to allow the excavating team of the soil conservation board to be hired for the season.

653. The Port Sudan water supply, which for the past few years had given no cause for anxiety, began to show signs of depletion following twelve months of drought. The water table levels in Khor Arbaat fell steadily throughout 1948 and with the added failure of the 1948-49 winter rains in the catchment area a severe shortage seemed likely in 1949, which would almost certainly necessitate the rationing of water.

654. Port Sudan aerodrome was closed for a total of ten days, and was partially unserviceable for a further 26 days during the year. A new site at Asoteriba, about ten kilometres from Port Sudan, was proposed and came under technical examination. The surface is

naturally drained and experiments on surfacing continued. At Kassala a portion of the aerodrome was completely resurfaced and repairs were done to the rest which enables it to be kept open without interruption throughout the season.

655. The more important buildings undertaken by the public works department during the season were the Kassala intermediate school, an addition to Port Sudan post office to house the automatic telephone equipment, and the first instalment of the Kassala province prison. Much of the minor building, such as elementary schools, which is usually carried out by the department, was taken over by the province and by dint of much improvisation, use of prison labour, and free district transport a large measure of success was attained.

656. Since the application of the standard town-lands scheme to Port Sudan a good deal of new private building has been going on there. In Gedaref more shops were built, but there was little development in the residential area. In Kassala the scheme for realignment of the town was delayed by the uncertainty of the financial policy for town planning; new town council buildings and a new mosque were under construction and a few shops and houses were built, but the main task of rebuilding the Mirghaniya quarter of the town still remained to be tackled. The town lands scheme was applied to Sinkat and Gebeit and preliminary work on the deposited plan began.

657. Grain for local consumption was short in all markets during the second half of the year. Prices rose steadily to famine heights in the more inaccessible markets, and the merchants showed little interest in the relief of the situation. The arrival of the 1948 crop on Gedaref market was expected to produce a big drop in price, but by the end of the year grain was still being sold retail at P.T. 28 a keila in Kassala, P.T. 33 in Tokar and P.T. 26 in Gedaref. These high retail prices coupled with the drought, petrol rationing and poor condition of animals resulted in a general stagnation of trade, and the decontrol of sugar and coloured cloth went through without any difficulties. Dom nut production was on a reduced scale, and the value of the crop less than one third of that of the previous year. The registered exports of camels to Egypt totalled over 24,000 animals of which the value cannot have been less than £E. 500,000. Gum arrivals in the Gedaref markets were much the same as in the previous year, but prices showed a reduction to about two thirds of their former level. The prosperity of the Kassala vegetable trade fell off badly towards the end of the year and prices of onions and bananas, which are the staple crops, reached a very low level. There was comparative prosperity in the cotton producing areas, but the overall picture in the province was one of steadily decreasing prosperity throughout the year, stagnation of trade and the disappearance of inflation.

658. With the exception of some arrears due from the Hadendowa tribe, the 1948 taxes in the rural areas were collected fairly easily, the bulk being paid up before the period of depression set in. By the end

of the year it was clear that the tribes would not be able to pay 1949 taxes on the same scale as in 1948, and arrangements for reduction were put in hand. Collection of other revenue proceeded normally and there were few arrears at the end of the year. Discussions were held with the local government representative of the finance department on many matters concerning local government finance; these were particularly welcome as making clear the way for the financial side of local government to go ahead equally with the administrative and judicial sides.

Kordofan Province.

659. The year 1948 was one of contrasts in Kordofan. Grain was never plentiful, but few cultivators could have failed to benefit at one time or another from the record water-melon, gum or sesame yields or from the expansion of cotton cultivation. First El Obeid town, and then Nahud, suffered from shortage of water, while elsewhere the work of the excavating team brought promise of better supplies to come. Just when the rationing of commodities seemed to be almost over, petrol had to be tightly re-controlled.

660. A noteworthy event of the year was the elections, not only for new legislative assembly but, in three districts, for their local councils. Preparations for all these engaged administrative officials and local authorities in many weeks' work. In the El Obeid constituency election for the legislative assembly was by direct secret ballot. The "Internal Struggle Front" carried on a vigorous campaign to boycott it but 23 per cent of the electorate went to the poll. In the Nuba and nomad constituencies, three members were elected by special councils of tribal leaders. In the remaining six rural areas groups of villages sent their chosen representatives to form electoral colleges which then elected their members by secret ballot. Despite the inconvenience so caused during the cultivation season, public interest was sufficiently aroused for quite half of the qualified villagers to play their part in the primary stage.

661. The province council met twice, to discuss the draft legislative assembly ordinance, political activity by government officials, the part to be played by local government authorities in police and veterinary matters and the possibility of establishing one council for El Obeid town and the surrounding rural area.

662. Three new district councils were constituted for Dar Hamar, Dar Hamid and Dar Messeiria, and the unofficial Nahud body developed into a warranted urban area council. In all of these areas and in Eastern Kordofan, where the original council members were all due to retire, a proportion of the members were elected through a system of electoral colleges similar to that used for the legislative assembly. Interest was keen though it naturally showed signs of waning in Nahud town by the time voters had been called upon to elect their own urban council, their representatives on the district council and their legislative assembly

member. The small town of Bara still refused to participate in the Dar Hamid district council and the district commissioner administered it in association with an unofficial council which, it was hoped, would develop with greater understanding of local government. El Obeid town council had another busy year chiefly notable for the reduction of its arrears of rates from £E. 5,023 to £E. 1,507. Tegale district council showed a lively interest in a variety of activities. Eastern Kordofan, and indeed the whole country, suffered sad loss through the deaths of its council's chairman and his brother, the vice-chairman Sheikh Haroun and Sheikh Yahia Ahmed Omar—within a few months of each other. The district commissioner had to assume the chairmanship of the council which these two brothers had done so much to establish on a sound basis. Except for the northern nomads, the Nuba and the Bedeiria, these representative local councils now cover the whole province. Their financial position requires greater clarification and in achieving a sound executive suitable to each area they still need much guidance and supervision. The number of local clerks or book-keepers who defaulted during the year points a warning.

663. The nomad Kababish enjoyed an undisturbed year with grazing generally good. Their relations with Darfur remained excellent and animal theft near the boundary was much less at the end of the year than in the previous winter. For the Hawawir life was not so happy; their nazir died and the rains in the north were practically non-existent, so that herds were forced to move a good hundred miles south of their usual habitat.

664. The newly enlarged southern Nuba confederation and that of the Ajang had successful years under capable leadership. In the Nyimang and to a less extent the central Nuba and the Kowalib progress was not so smooth. Except when there is an outstanding personality at the head there is yet no real binding force in any of the Nuba confederations. A second annual meeting of all the leading meks in the district was held. It was hoped that such meetings would gradually break down parochialism.

665. Criminal work increased in both government and local courts. Comparative figures are :—

	1947	1948
Major courts	79	89
Minor courts	18	25
Non-summary cases	230	272
Magistrates' summary cases	308	254
Town bench cases	2,271	2,683

Persons convicted and sentenced to imprisonment or fined in native courts in 1948 numbered 10,740 compared with 10,142 in 1947. Persons released on probation numbered 192 compared with 37 in the previous year.

The major court figure does not disclose that at the end of the year there were fifteen more cases awaiting trial than there had been on 1st. January, and the large total was due to a big increase of such cases in Jebels District, whereas in Central District the number was nearly halved. Minor courts increased in order that recidivists should receive heavier sentences. There was a disturbing increase in the use of illicit firearms in Northern Kordofan whereby eight persons were killed.

666. Central District police were outstanding in a force that gave loyal service throughout the province. Their efforts reduced preventable crime by more than a third. The highest monthly figure of theft in El Obeid was 75 compared with 145 in 1947. It is also largely due to them that increasing inspired political feeling resulted in no serious disturbance of the peace. Seditious leaflets were distributed on various occasions by night but were quickly collected up. The only large unauthorised demonstration was on 23rd. December for which 19 supporters of the "National Front" were convicted, of whom 11 were fined and bound over.

667. Labour was adequate to meet demands. Daily rates in the towns and on the railway line were generally between P.T. 8 and P.T. 10, rising to P.T. 14 at the peak of the cultivating seasons, per day. In the southern part of Tegale District and Jebels District they were as usual lower and many young Nuba continued to seek their fortunes on the railway or the river.

668. After a mild and short summer the rains started with great promise which was dispelled by a long dry spell in July. August was wet enough in most places but was followed by a dry September and even drier October. This bad spacing inevitably reduced the yield of all crops except sesame. Any grain and groundnuts which survived the July drought or were re-sown late, dried off early and harvests were well below average. Cultivators concentrated on sesame at the end of July and it thrived to such an extent that even before the end of the year the quantity was double that of the entire previous season. The revival of cotton cultivation in the Nuba mountains continued with the issue of nearly four times as much seed as in 1947. The final yield, however, was expected to average little over three kantars of 100 rotls per feddan instead of four as in 1947. The anticipated value of the crop to cultivators was £E. 220,000 compared with £E. 56,500 in the previous year.

669. The 1947/48 water-melon crop was easily a record, but conditions were in every way unfavourable for the next crop. Insect pests survived on the old plants and the early finish of the rains gave little chance to such new plants as escaped their attentions. Arrivals of seed in the markets were 484,468 kantars (value £E. 221,365) compared with 253,581 kantars (value £E. 203,116) in 1947. The supply of water-melons certainly helped the tappers to bring in a weight of gum which

also broke all previous records, as the following figures show :—

	<u>Season</u>				<u>Weight</u>	<u>Value</u>
	(1st. Nov. to 31st Oct.)				<u>Kantars</u>	<u>£E.</u>
1943/44	255,282	
1944/45	204,220	
1945/46	342,741	
1946/47	373,821	507,534
1947/48	546,974	546,853

Prospects for the 1948/49 season were favourable.

670. As a result of the disastrous dura midge attack in 1947 cultivation on the Abu Hahl scheme was confined to experimental work mainly in cotton. Field trials of the mechanised cultivation of groundnuts were carried out at Sungikai and despite adverse rain conditions the results warranted further experiment.

671. Public health was marred by a serious outbreak of smallpox in the summer. Introduced by immigrants from the west, it appeared in the Fellata quarter of El Obeid when it was in its most crowded state and water was short. Concealment of the disease gave it a good start. There were 286 cases in the town, over half of them in the original quarter, and it spread into all the neighbouring districts to bring the total to 1,052 with 201 deaths. 231,236 people were vaccinated. Apart from this epidemic, health was normal. Out-patients in the hospital and dispensaries increased from 1,500,000 to 1,700,000. There were 670 attendances at the new child welfare clinic in El Obeid, and the health visitor paid 1,443 visits to children in their homes. With two nursing sisters to help, attendances at the ante-natal clinic rose from 2,812 to 3,729.

672. A good start was made in the building of the new secondary school at Khor Taggat. In Nahud, a non-government intermediate school opened in hired premises, its own building being begun in October. A new elementary school for boys was opened at Abu Haraz and buildings were put up in Khoi for the Hamar portion of the double elementary school in Nahud. An elementary school for girls was started at Heiban, the first one for Nuba girls away from district headquarters. Local authorities opened a total of 20 new sub-grade schools. The number of pupils in schools of all categories rose from 10,791 to 12,189.

673. The 1947 outbreak of trypanosomiasis in cattle was not repeated. Cases occurred in Tegale District, but dimidium bromide proved its worth. Cattle plague appeared sporadically but no tribes suffered heavy losses from it. 25,879 cattle were serumised and 151,420 vaccinated. Contagious bovine pleuro-pneumonia is known to have caused 181 deaths, a considerable increase on those of 1947. Zaghawa cattle from the west were responsible for several outbreaks. Plans were made for a cattle plague vaccination campaign in Dar Messeiria in 1949, paid for indirectly by the tribes. Refrigerators were supplied for the storage of the vaccine and the tribal veterinary retainers were

re-organised. The incidence of trypanosomiasis in camels was relatively low and the number of doses of antrypol sold was less than half that of 1947. Adverse though they were for crops, the 1948 rains supplied good grazing everywhere except in the extreme north of the province. Local water supplies, however, gave out early, forcing premature movement of herds.

674. Before the rains attention was focussed on El Obeid town water supply. Its reservoir water had all been consumed before the end of 1947, and day and night pumping from the deep bores soon began to affect their output adversely so that rationing had to be imposed in April by cutting off the piped supply except at certain hours. Some rain in May gave relief and by the end of June all restrictions were removed. The reservoirs filled fairly satisfactorily during the 1948 rains but, to avoid a repetition of the summer shortage, a meeting of engineers in December put forward plans first for guaranteeing a reasonable supply by 1950 and secondly for increasing it later to meet the inevitably rising demand.

Meanwhile Nahud, the second largest town in the province, was getting into difficulties. Not only had the rains failed to renew its supply but abnormally bad conditions in the rural areas around had placed increasing pressure on its failing wells. Geophysical traverses were made in the neighbourhood and a rig was sent to bore at the more favourable sites, while a new well shaft was started in the town, intended to have subterranean galleries for the better extraction of whatever water there was. The position at the end of the year gave cause for anxiety.

In the autumn sweet water was found by boring south of Tayara in Eastern Kordofan and the erection of a water-yard there was planned for 1949.

675. A mechanical hafir digging team started in October on the season's programme of excavating 50 hafirs in the cotton soil plains around the Nuba mountains to open up this virgin land to the cultivation of cotton, grain and sesame. By the end of the year 18 hafirs had been dug, representing the excavation of 160,000 cubic metres of earth. A road grading team working ahead of the hafir digging team opened up many stretches of new road and improved those already existing. A road engineer cleared a new trace from El Obeid as far as Dilling in preparation for making a better all-season road to Talodi.

676. The railway strike in March and April delayed the export of produce, while strict petrol rationing which had to be imposed towards the end of the year hampered the transport of the new crops to market or to railhead.

677. In December, telephonic communication was opened between Khartoum and El Obeid where a new exchange allowed a number of new extensions.

678. The following table shows the main exports by rail during the past three years. Produce and animals originating from Darfur are of course included.

	1946	1947	1948
	Tons	Tons	Tons
Grain	19,500	21,900	12,637
Sesame	2,580	1,541	5,218
Sesame oil	2,807	2,487	3,265
Groundnuts	1,967	2,015	2,512
Melonseed	6,021	12,619	20,412
Gum	21,442	18,045	24,642
Semn	1,198	1,384	1,091
Hides and Skins	273	190	220
	Head	Head	Head
Cattle	31,701	24,618	21,170
Sheep	45,100	48,186	28,181

The value of produce given earlier in this report show that prices paid for melonseed and gum were largely adjusted to the heavy crops, the producers receiving less than 10 per cent more money for selling about 90 per cent more melonseed and nearly 50 per cent more gum. Sesame prices, however, did not drop as much as was expected after the bumper harvest, although the ban on export from the Sudan continued. The price paid for Grade I cotton was P.T. 85 in 1947/48 and P.T. 110 in 1948/49. Grain prices rose steadily during the year, without the normal drop in November. The prices paid for animals remained steady with a slight downward trend in the case of cattle.

679. The producers, therefore, were receiving large sums of money in one way or another throughout the year; yet cash seemed curiously short. Shops were better stocked than they had been for years; rationing of ordinary needs was nearly a thing of the past (though shortages still impeded development), but there was no rush of buyers.

Darfur Province.

680. Darfur remained undisturbed by the political developments of the Sudan in 1948, and it was only when the elections to the Legislative Assembly approached that there was some realisation of the significance of events.

681. The main problem of the year was a poor rainfall which after starting well tailed off disastrously in September. This affected both pastoral and cultivating peoples, and caused heavy migration of semi-nomadic tribes to parts where grain and grazing were more plentiful, and large scale purchase and carriage of grain to the bad areas, as a result of which the resources of the province were considered adequate until the next harvest.

682. In the early part of the year there was a general recession of trade which was relieved by a boom in cattle prices in December, but money was tighter than for some years past.

683. There was however great activity in local government works owing to the release of funds, and, in the case of Fasher, to better water supplies for brick-making. The programme of water development also went steadily forward.

684. The people remained contented, and displayed considerably more interest in their new responsibilities in local government than previously. The population, now more accurately assessed, rose to over 900,000.

685. During 1948 the province suffered heavy losses among its tribal chiefs. Shartai Daw el Beit Abdel Dayem, president of the Eastern Darfur Court and Vice-Chairman of their council died in September, and Shartai Mahdi Sabil of Jebel el Hilla in the same district died in March: thus Eastern Darfur lost two of its outstanding personalities. Nazir Mohammed Ibrahim Debaka of the Beni Helba, who had been sick for over a year, died in December. He had united a divided tribe in the course of his rule and was universally beloved and respected in southern Darfur.

686. Relations with French Equatorial Africa were not disturbed by any major trouble, but the north-western section of the province was the scene of certain minor incidents which had to be settled by the intervention of administrators from both sides. The aged Sultan Dosa Abdel Rahman of Dar Kobi again took unwise action to settle trans-frontier cases by direct methods. A little further south, the Gimr, after arresting some Tama thieves from French Equatorial Africa, were invaded by further parties who tried to recover their compatriots. A French patrol quickly restrained the turbulent Tama tribesmen. Later in the year when the Gimr took their cattle as usual to water in Dar Tama the local chief seized 170 of them, and again the French authorities had to intervene by establishing a temporary post near the boundary. The situation improved in the latter half of the year and the post was withdrawn. The most important section of the frontier, immediately north and south of Geneina, was still the scene of smuggling, but on a more limited scale owing to intensive police action and to the dwindling of trans-frontier trade in general. At the main point of contact between Geneina and Adre cordial relations were maintained with the French authorities. Monsieur Merot, Chef de Region in Wadai, who had been most helpful during the last few years, was replaced by Monsieur Lamois, and there were many other changes in staff, but friendly relations were quickly established and most problems settled by direct meetings on the frontiers. In September a welcome visit was paid by the High Commissioner for Chad Territory, Monsieur Roget, and General Delange, Commander of the Forces in French Equatorial Africa.

687. In 1948 the rains were excellent and well spaced during July and August but abruptly ceased in September, and what promised to be a fine crop deteriorated into a poor one. Only parts of Dar Masalit the Western District, and the extreme south had a good harvest. Fortunately a reserve had been laid in during previous years on which the government drew instead of buying all its demands in the open market. The cultivating tribes also retained a considerable amount of private grain.

688. Grazing was more satisfactory than grain and a serious shortage was unlikely except in the extreme north. The nomadic tribes in the north-west, as always after a bad year, started a big migration, first to obtain grain from the south and then to graze their larger herds there. Emergency proposals for improving the water and thereby extending the grazing resources at Jebel Meidob were approved before the end of the year. For the second year in succession there was no prospect of *gizzu* in the northern desert, which relieved the province of any anxiety about clashes between herdsmen from French Equatorial Africa, Darfur and Kordofan, but greatly increased the congestion around the northern wells. Fortunately both the Mellit dam and the Fasher lake were well filled during the early rains which eased the position in these two crowded areas.

689. There were few inter-tribal troubles during 1948 but unrest continued in Dar Zaghawa where one section was in passive opposition to their chief. External politics only lightly touch Darfur but on the opening of the Legislative Assembly there was a small political demonstration in Fasher, the first of its kind in the province.

690. Money was tighter than before and this was due to a poor yield and market for tobacco and gum, to difficulties over export during the railway strike and the petrol shortage, and to increased supplies of consumer goods; cloth and sugar were by the end of the year arriving in sufficient quantities for all Darfur's demands. There was, however, only a slight indication of a falling price level, and this was arrested by the boom in animal sales at the end of the year.

691. With the approval of three new local government budgets all divisions of the province except Northern District were provided with their own reserve funds and grants, and great activity on this level was evident both in general administration and in public works. The sense of responsibility quickly gave birth to a new interest in local government.

692. Elections for the Legislative Assembly in Darfur were based on colleges consisting of the local government councillors. This limited electorate ensured the return of really representative men rather than sectional candidates, and with two tribal chiefs, the Vice-Chairman of the Central District Council, a son of the late Sultan Ali Dinar, a son of the Sultan of Dar Masalit, and a young educated Fur Omda, Darfur had in the Legislative Assembly a group of members typical of its strength and weakness.

693. In Fasher town local government elections immediately preceded those for the Assembly, and therefore this constituency had in effect a full indirect election. The withdrawal from local government to the Assembly of several eminent men created a difficulty which cannot for the present be avoided.

694. The province council met twice during the year, in February and December, and continued debates on province development, education, medical services, the position of tribal chiefs who were to stand for the Legislative Assembly, the administration of the province council funds, the future of the Fasher Maahad, and other work. At their last meeting the province council appointed a board to consist of local government and departmental representatives who could act between sessions in discussing and advising on matters of provincial interest.

695. There was a general advance in local government during the year. The boundaries of the units and the constitution of their councils were settled except in Northern District and Dar Masalit; the Southern, Central and Eastern Districts all received warrants and budgets to operate from the first day of January. Western District, which had had a somewhat centralised local government hitherto, was reorganised into regional authorities subject to a district council, and a modernised budget and a new warrant were submitted to take effect from the first of January, 1949. Northern District continued with its informal council which met twice and should be ready for its own budget and warrant on the first of January 1950. In Dar Masalit the autocratic rule of the Sultan was tempered by the first meeting of councillors and the immediate result was seen in proposals for developing health and education services and for extending the judicial system outside Geneina town. Fasher district council met four times and much work was carried on by committees. The town committee met ten times, finance thirteen, education twelve, and the general purposes committee five times. The finance committee was particularly thorough and scrutinised the 1949 budget with great care, insisting on certain recommendations being carried through even against some opposition.

696. Eastern Darfur, which is a small unit with a budget balancing at £v. 5,000, suffered heavy losses in the death of four eminent councillors during the previous two years, but they appointed a good assistant executive officer. The Southern Darfur Council again did much of its work through committees, of which the general purposes committee had members resident in Nyala town during their period of office. Their main efforts were concentrated on development of trade and markets, and they invested heavily in the latter in order to increase revenue. Western District modernised their system and appointed an educated executive officer to each regional administration leaving the hereditary Shartais free to carry out their tribal and judicial functions while more intricate business and modern development projects remained to be dealt with by the council's executive officers.

697. Now that local government in Darfur has taken shape and has come to life three basic needs are clear. There must be adequate

financial powers and resources which give spirit and interest to all the proceedings; the local government unit must be large enough to command good brains, ample revenue and a comprehensive administrative and economic area: it can then devolve the simpler functions on the regional authorities; there must be a trained local government service not only in the headquarters but in the rural and tribal regions to assist the hereditary chiefs in the new complexities of modern local government.

698. There was no serious disturbance in 1948, and the only incidents of this sort were the distribution of seditious pamphlets in Fasher during September, for which two young men were convicted, and a small illegal demonstration in December which was quickly dealt with by the police. There were no big tribal fights during the year, apart from an incursion of Tama from French Equatorial Africa into Dar Gimr early in the year. They were bent on releasing some of their tribe arrested for thieving and were firmly repressed by a French patrol in their return. Relations on other borders, between Rizeigat and Dinka and between Meidob and Kababish, were undisturbed. Town security in Fasher improved owing to the replacement of local government watchmen by police night patrols, and thefts reported fell from 836 in 1947 to 564 in 1948.

699. In the province 90 homicide cases were reported compared with 87 in 1947. The largest number by far in both years came from Dar Masalit where deaths in drunken brawls are unpleasantly common. There was a slight increase in cases of robbery but a welcome fall in other forms of theft. In only six cases were firearms employed.

700. Native courts were encouraged to give heavier sentences for animal theft, which was increasing. The Sultan of Dar Masalit agreed to state police patrols in Geneina town and to their use in rural areas to investigate crime, with good results in public security and in bringing offenders to justice.

701. The repatriation of bad characters from the eastern Sudan threw an increasing burden on Darfur police. Forty criminals were returned in 1948 and 59 in 1947, and they were not slow to apply their experience in town crime to this less sophisticated area.

702. The Western Arab Corps remained at the same strength of two lorry-borne infantry companies in Fasher, and one mounted infantry company in Nyala. Exercises were held in Northern Darfur towards the end of the year where the Zaghawa in the north west remain disturbed. The police establishment remained at 393, but were still sorely strained to carry out all duties. In Fasher, night classes had to be suspended to provide men for patrols, and Northern Darfur found that with an establishment of 57 it was not possible to provide sufficient rest for men and animals between tours and give adequate leave. Nevertheless standards improved in every way. Literacy increased from 33 per cent to 36 per cent and good recruits were accepted. The police club in Fasher flourished and another was started in Nyala. An

intensive course for police drivers was instituted, and selected non-commissioned officers and men were trained in methods of criminal investigation at province police headquarters. Figures of police work in 1947 and 1948 were as follows :—

	1947	1948
Informations	3,687	3,588
Offences tried	858	1,590
Cases in which convictions were obtained	737	1,187

703. In the absence of a province judge, major courts continued to be tried under the presidency of district commissioners. Major courts numbered 57, compared with 56 in 1947. Sixty-three persons were tried and 54 convicted. There were also 3 minor courts and 235 magistrates' cases. Native courts saw about the same number of cases as in 1947. The figures were :—

	1947	1948
Criminal	7,326	7,280
Civil	1,819	2,301
Sharia	1,845	1,529

The standard of proceedings and recording was good, and a visit by the inspector of native courts proved helpful.

Building of suitable court houses and offices by local government authorities continued and a concrete plan to decentralise the judicial system in Dar Masalit and to provide accommodation and staff for rural courts was accepted by the Sultan. The Kadis of the Mohammedan Law Courts again visited areas where personal law is unorthodox and even subversive of public security and justice, and by their instruction did much to eradicate undesirable customs.

704. 1948 was a year of great activity in town and village planning limited only by the shortage of water in Fasher, which stopped building in the summer, and the capacity of a single surveyor for the whole province. Fasher and Nyala were visited by the Commissioner of Lands and the former by the Town Planner. Both towns have now a good layout, and market developments were started, as well as reorganisation of the residential areas. In Fasher 69 shop sites were auctioned for the sum of £E. 7,228, and by the end of the year the new market was rising. In Nyala progress was made in issuing leases for both market and residential sites, and much building was completed or undertaken in extending market facilities for this growing town. A block of 33 shops and stores, which enclose the new produce market, was completed. Craftsmen's, women's animal and grain markets were provided with offices enclosures or shelters, and the market was completely transformed in appearance.

705. The village lands scheme for the province was approved in April, and by the end of the year brick shops had been built at Mellit and Daein, while plans and work were advanced in Buram, Kebkebia and Kas, Um Keddada, Shingil, Tebai and Taweisha. This scheme promises to be of vital importance in improving rural life, for apart from the stimulation of trade which a well built market immediately gives, the scheme is linked to the provision of good buildings for schools, dispensaries and court houses, improved housing, sanitation and health services and local water supplies.

706. The daily wage rate in towns stood at P.T. 6—7 as compared with P.T. 6 in the previous year. Increasing tightness of money in the latter part of the year caused no appreciable fall, though in southern Darfur skilled workers rates, which had been inordinately high, were somewhat lower.

707. Pilgrims who took out papers number 1,058 against 860 in the previous year. The passport office at Geneina dealt with the following travellers :—

	1947		1948	
	Entering	Leaving	Entering	Leaving
By Air	310	310	206	215
By land	623	{ 3,784	974	1,011
On temporary visas	1,489		3,327	3,332

708. The movement of young men cut of Darfur to seek work in the east continued. It has proved impracticable to record their numbers, but the movement was of considerable dimensions, many coming from French Equatorial Africa. The annual migration of northern Arabs and Zaghawa to the well-watered regions round Jebel Marra assumed very large proportions towards the end of the year owing to the failure of rains and harvest in their lands.

709. The first half of 1948 was milder in the winter and warmer in the summer than usual; the rains were late in starting, heavy in July and August, and then faded out most disappointingly in September. The winter started early thereafter, and November and December were very cold in Fasher. The highest temperature recorded in Fasher was 107.1° on 19th May, and the lowest 39.6° on 27th December. Even where the rainfall was not small in volume the sudden cessation over most of the province in September did much damage to the crops. Fortunately heavy spates filled both the Mellit reservoir and the Fasher lake, thus averting a serious crisis in an area where the rains stopped very early.

710. The main taxes of the province again increased and the final assessment of combined tax and tribute rose from £E. 73,479 in 1947 to £E. 77,204. These taxes in 1938 amounted to £E. 31,550. Traders' licences and business profits tax rose from £E. 9,920 to £E. 11,300. Tobacco royalties on a small crop fell from £E. 32,666 to £E. 12,758. Revenue collected through the province has risen from £E. 60,747 in 1942 to £E. 117,000 in 1948. Towards the end of the year some difficulty was found in collection of taxes from certain areas in northern Darfur where conditions were hard.

711. Local government budgets for 1948 balanced at approximately the following figures :—

	£E.
Fasher Central District ..	24,800
Eastern District	5,700
Southern District	26,000

A first grant of £E. 8,000 from the local government development budget was received, divided among the councils and put to immediate use. The system of a fixed two-thirds grant-in-aid now given to three local government budgets was most valuable in prompting councils to pay close attention to their revenue and estimates.

712. The lack of balance between imports and exports began to right itself during 1948 owing to the increased supply of consumer goods, to the smaller tobacco crop and to the reduction in car transport to carry out export crops, which resulted in a backlog of some 350 loads at Fasher by the end of the year. The result was a gradual disappearance of the black market, and a tendency towards a fall in the price level.

713. Total exports which in 1947 were estimated at £E. 450,000 probably reached only £E. 400,000 in 1948. The tobacco crop was only one third in amount at 14,415 kantars against 41,507 ; and though the gum passing through Fasher and Nyala markets was 41,267 kantars against 44,127 in the previous year, the price fell from 802 millimes to 441 millimes per kantar. Much gum goes east direct and does not pass through Darfur markets.

714. Trade in animals and their products showed buoyancy, and the number of cattle exported from southern Darfur and the average price per head were both higher. Some falling off in the middle of the year was more than offset by the record prices paid for export bulls later on. A careful estimation of sales in southern Darfur put bulls exported at 30,000 while perhaps 5,000 more left Darfur from the Geneina and Fasher markets. The average price paid in Nyala market was £E. 4.850mms. against £E. 4.270mms in 1947. Hide exports again rose from 64,900 okes to 78,703 and the price paid locally was slightly higher ; clarified butter sales were 7,822 kantars in Nyala against 6,351 in the previous year ; much butter goes out direct from eastern cattle owners and is not included in this figure. Sheep are mainly exported from northern Darfur and sales figures were only 15,387 against 20,000

in the previous year, but the average price in their main market in Omdurman was £E. 2.100mms. per head against £E. 1.660mms.

715. The Darfur melon seed crop sold in Nahud reached 97,198 kantars which was 25 per cent greater than in the previous year, but the price fell from P.T. 82 to P.T. 42 a kantar.

716. Imports from French Equatorial Africa dropped from £E. 78,582 to £E. 26,359, mainly owing to the absence of snake and lizard skins which in 1947 were valued at £E. 35,000 and in 1948 at only £E. 1,000.

717. The main features of Darfur trade in 1948 were a recession in tobacco exports and gum prices, the strength of the cattle and sheep trade, the great popularity of the new cattle auction at Nyala, the improvements in communications dealt with below, and the surprising stimulus supplied by the building of new markets under the rural markets scheme. Daain and Mellit, now fully built, have in particular attracted increased trade.

718. The adequate grain harvest of 1947 was followed by a poor crop in 1948 owing to the failure of late rains. Only Dar Masalit, Western District and some areas in the extreme south had good harvests. Grain prices, however, rose only slightly up to the end of the year, and there was every hope that the established custom of northern inhabitants to fetch their own grain from distant markets, and the reserves stored by the cultivating tribes, would avert any grave shortage. Province reserves sufficient to meet any local shortages were held in district headquarters. There was no locust invasion, but birds took some toll of grain in the south.

719. As reported above the tobacco crop was smaller but more *simsim* was grown as a result of the high price in 1947, and also as a cheap substitute for butter in cooking. Western District had a poor potato crop but there was a large winter sowing in anticipation of a heavy demand in 1949. Rice was again sown near Zalingei, and the wheat crop which supplies flour for the whole province was good. Cotton was extensively grown for home spinning and weaving.

720. Gardens again flourished round Jebel Marra and in Nyala, and some 50,000 pieces of fruit were sold. The planting of citrus fruit and mangoes by private owners increased, as there was a growing demand from the general populations. Mellit gardens, benefitting from the reservoir, again increased in number from 164 to 207, but Fasher had no gardens in the first half of the year owing to the failure of the lake to fill, and the deepening of wells is gradually reducing the cultivated area.

721. Forestry activity concentrated on propagation of timber trees, especially gambil, which is grown and protected on a considerable scale in Western District, there over 10,000 trees have been planted in the last four years. Protective measures for trees near towns and small markets began to show results. An unusual problem in southern

Darfur is the choking of good grazing areas by thick scrub which has grown up in the last twenty years. The cause seems to be the suppression of grass fires, but unless the cattle grazing is to be seriously diminished some counter measures, such as controlled burning, are indicated.

722. The Chief plant physiologist and the chief chemist visited Darfur in November, and saw Central, Northern, Southern and Western Districts. Their report will deal with date culture in the north, the possibility of using Wadi Golo near Fasher for providing fresh food and fodder to the town, development of tobacco as a main cash crop, expansion of sesame, and improvement of grain crops and gardens. Transport costs limit exports of agricultural produce to a few crops, but there is scope for providing the inhabitants of Darfur with new and improved varieties for their own use.

723. There was no serious outbreak of animal disease except rinderpest which attacked Beni Hussein and Zaghawa cattle north of Kebkebia in April, but was brought under control by the end of August. Both rinderpest and bovine pleuro-pneumonia appeared sporadically in all districts and 14,903 animals were serumised against the former and 13,850 vaccinated against the latter. Mass immunisation against rinderpest was almost at a standstill until the rains as the cattle had moved to their remote summer grazing, but in August the demand revived and 15,000 cattle were vaccinated in that month followed by 68,000 in September. The early break in the rains, however, drove the cattle south in October and this scattering and petrol shortage hampered the work. 219,112 cattle had been vaccinated during the first year's work ending in August, and 152,660 more up to the end of the year. A great deal has been accomplished but there is no doubt that annual immunisations is not considered worth the money by all owners. Permanent immunisation by a single injection, if it can be effected, would of course appeal far more strongly. Trypanosomiasis in cattle disappeared with a drier year. Among camels the disease was also less prevalent; 4,323 were treated with antrypol.

724. The cattle and sheep trade remained strong. The former was stimulated by the opening of three new water-yards on the cattle export route which enabled merchants to send down animals throughout the summer. At the end of the year the new cattle auction in Nyala proved immediately successful both in raising prices and in clearing sales quickly. The other animal products, butter and hides, were sold in greater volume and at an enhanced price as noted above. It appeared however, the Darfur hides were not getting a price commensurate with their value and that district graders were required. The packing of single folded hides on lorries has proved uneconomic and some preliminary local processing to allow closer packing is under discussion.

725. Permits were issued to export 1,827 camels to Egypt. Only 80 horses were brought at the 1948/49 winter shows against 99 in the previous year, as the Beni Helba, owing to the death of their Nazir, did not attend in any number. 14 tribal stallions were purchased, but

this total was not sufficient to meet the demand, and only 73 stallions were standing. As a consequence much use was still made of casual sires, and until the stock improves it is important to keep remount purchases as low as possible.

726. The main trunk roads from Kordofan through Fasher to Geneina and from Fasher to Nyala were handed over to the Public Works Department and provincial work on them ceased except for some maintenance of the existing routes. Some new local roads were opened during the year; that passing through the new water yards at Daain, Abu Karinka and Mazrub rapidly became a vast cattle route, and the finding of water on the road east from Nyala to Kordofan promised to establish an equally important main line of communications out of the province. A road linking all the big native markets between Fasher and Zalingei round the east and south sides of Jebel Marra was completed.

727. A great step forward in motor transport service was made in November when local government bus services were started, linking up important administrative and commercial centres. Four routes were in operation by the end of the year, and one had immediately to be doubled to take the crowds who besieged the ticket office. After running at a loss for two months the first service in the south showed a profit, and no doubt all will prove a source of revenue to local government in time. Regular services at fixed rates for passengers and freight are obviously supplying a big need throughout the province. The number of commercial cars arriving in Fasher from El Obeid fell from 1,981 in 1947 to 1,535 in 1948. This was not due to any decline in trade but owing to non-arrival of goods at rail head during the railway strike and to petrol shortage in the latter half of the year. Darfur was left with 350 accumulated loads of export produce at the end of the year. A regular weekly service was maintained by Sudan Airways to Fasher throughout 1948, and to Geneina, though this was reduced to a fortnightly service after the rains. 170 planes landed at Fasher against 59 in 1947. Comparable figures for Geneina were 71 and 46.

728. Government building was light during 1948 owing in part to the failure of the Fasher lake which restricted all building until after the rains, and owing to reduced programmes approved. Most work was concentrated in Nyala where three officials' houses were built. The province was thus well supplied with such houses except in Fasher. The Um Kedada boys' and girls' schools were built during the year and the third Fasher and second Nyala boys' schools started after the rains. Apart from this there was great activity in districts on the provincial and local government programmes. In northern Darfur two officials' houses and 20 police houses were built, as well as some government shops. The local government in Western District completed three more sub-grade schools and started two others, and also built wards for four dispensaries. The local government headquarters offices in Zalingei were completed. The Dar Masalit

administration built three sub-grade schools and one dispensary. Southern Darfur district built a complete dispensary, court and offices at Id el Ghanam, an in-patients' ward at Buram, two dormitories for Nyala girls' school and a police club, while the local government, employing a full-time foreman of works, built grain, animal, petty traders,' women's and craftsmen's markets at Nyala and a new butcher's shop. They also completed a new sub-grade school at Nyala and administration offices and court in Dar Rizeigat. There was also building activity by merchants at Mellit and Daain and by the end of the year the large new market at Fasher was rising.

729. The Mellit dam, completed in 1947, again proved its immense value and at the peak of the dry season watered 40,000 camels, 95,000 cattle and 72,000 sheep in a month. With Fasher lake dry until the rains a serious crisis would have arisen without a new supply. The reservoir at Mellit filled satisfactorily again in July, but not to capacity. Water yards were installed on two successful bores in eastern Darfur and on three others in Dar Rizeigat. The former supplied water to a big sedentary population, and the latter, while serving the same purpose, opened just in time to allow large numbers of cattle to move out to the east during the summer. That at Daain provided the Rizeigat with a permanent headquarters for the first time in their history. Administration headquarters were built and a new market of 60 shops followed. Before the end of the year water had been found at one site on what will be the main trade route east from Nyala, and a second bore gave promise of success. The final stage of the first development programme covers six more sites in southern Darfur, three in Northern Darfur and four in the central area. Fasher water supply was temporarily secured by the sinking of five new bores which raised the potential output to 700 tons a day. As this might ultimately further deplete the underground reservoir, a new scheme for bringing water from Wadi Golo, 8 miles away, into the town by pipeline was approved and work was started after the rains. The first stage, to bring unpurified water into the town for watering animals and industrial purposes was scheduled to be completed in time for the 1949 flood. With the failure, so far, to find deep bore supplies in the waterless environs of Fasher the new supply would have to cater not only for the 20,000 inhabitants of the town but also for an equal number of those living in villages within a radius of 20 miles. The only prospect of bringing water to this arid area now appears to be through excavating large water ponds.

730. There were no major epidemics in Darfur during 1948 though relapsing fever was present in small pockets in Dar Zaghawa and southern Darfur and towards the end of the year appeared more extensively in the Melum region south of Fasher: strict quarantine and improved preventive measures checked any serious spread of the disease. The incidence of malaria was slight owing in part to light rains in 1947 and 1948, but largely to improved methods of control. There were nine cases of persons bitten by rabid dogs in Kebkebia and one child died in Fasher hospital. Extensive destruction of stray dogs in both towns followed. At the three hospitals at Fasher,

Geneina and Nyala, outpatients slightly decreased in number and inpatients rose from 5,900 in 1947 to 6,600 in 1948. The total number of inpatients treated at the 25 dispensaries and the 5 dressing stations in the province was 8,402 against 7,437 in 1947, and of outpatients 292,269 against 244,071. Fasher was unable to build its new town dispensary before the rains owing to shortage of water. An ante-natal clinic was opened and proved a great success. A new rural dressing station, which will eventually become a dispensary, was opened on the Kordofan road at Jebel el Hilla. The midwifery organisation, based on locally licenced midwives attached to dispensaries and their gradual replacement by trained women, continued to make progress in rural areas, and the population still preferred the aged relative for child delivery.

731. In education the scattered population has been reached by a wide dispersal of sub-grade schools which have risen from 14 with 441 pupils in 1944 to 62 with 3,765 pupils in 1948. Further expansion at this level is now largely concentrated on making these into 3-class schools, to providing them with boarding houses which has been done in 39 cases; and to improving the standard of teaching: this most important objective is being achieved by better terms for masters, by regular inspection, and by a vacation course which in 1948 was attended by 90 of the masters. The growth of sub-grade education has greatly stimulated the demand at the elementary level. These schools were increased during the year by two boys' schools, making nine in all, and by one girls' school, making five. Both boys' and girls' schools have to be supplied with boarding facilities except in Fasher, and in 1948 seven boys' boarding houses took one-third of the pupils, while girls' boarding houses flourished in both Nyala and Zalingei. Excellent new schools were built at Um Kedada for boys and girls, but the second boys' school at Nyala, the third at Fasher and the Buram school could not be started until after the rains. The Ahlia Intermediate School in Fasher passed out a fourth year class for the first time. 23 out of the 30 who sat for the final examination passed, of whom 9 went on to higher to higher education. The Fasher Maahad, with 192 pupils, began to supply maazuns and clerks for local courts and administrations. The committee applied for leave to extend the course to 8 years and this request was endorsed by the province council.

732. In the absence of keen hunters lion appeared to be on the increase. Their survival is no doubt encouraged by the thick bush growing up in southern Darfur, mentioned above. The herd of elephant in Western District again caused trouble to Fur cultivators in Wadi Azum. Addax surprisingly were reported further south than the oryx after the rains, and far nearer inhabited areas than previously. Poor grazing in the northern desert was the reason for this unusual penetration.

Upper Nile Province.

733. The situation in the Baro salient remained in its usual state

of unrest until April when a large party of Ethiopians, some 300 strong, descended on Jokaa. As the Nuer and Anuak were uncertain of their intentions their unexpected arrival led to a decrease of transfrontier stock theft and murder. A little later two other units arrived to set up permanent posts at Tirgel (practically opposite Akobo at the site of the old Italian post) and at Uchwiny (16 miles south-east of Pochalla on the Akobo River). While showing every sign of cordiality the officer in charge at Jokau immediately raised the question of charging grazing and cultivation dues from Sudan Nuer grazing and cultivating across the border. This question had lain dormant over the past few years and has now been referred back to higher authority. With the onset of the rains most of the Ethiopians returned to the highlands, but a party spent the rains at Larre (south-east of Jokau) while the parties at Tirgel and Uchwiny spent the summer where they were. The post at Tirgel occasionally molested canoe traffic on the Pibor river, but otherwise behaved well, and the post at Uchwiny appear to have raided and carried off some Sudan Anuak chiefs. This question was taken up but the situation remained obscure. At Boma the administrator reported a movement by the Suri living in Ethiopia to migrate across to join other members of the tribe on the Sudan side of the boundary. Relations between the Murle of Upper Nile Province and the Jiye of Equatoria Province remained bad, the Murle complaining of a number of small raids by the Giye, to one of which they were preparing to retaliate in force but were fortunately prevented from doing so by the timely arrival of the district commissioner.

734. Conditions were generally good. Apart from Bor District and part of Lau and Pibor Districts there were adequate supplies of grain, while in the Northern District grain was plentiful and the Shilluk had their best harvest for years. There was little sickness apart from a certain amount of relapsing fever in Northern District. Cattle sickness included rinderpest, contagious pleuro-pneumonia and haemorrhagic septicaemia in most areas. The campaign against trypanosomiasis was continued and the worst herds were inoculated. Floods occurred once again in Lau communications opened late. The river at Bor was the highest minimum for many years.

735. Apart from the Shilluk local administration, when the conduct of Reth Duk Fadiat gave cause for dissatisfaction, local government and the administration of justice progressed slowly but steadily in all districts. In Bor District, where court centres have become well established, an embryo district council came into being. In Central Nuer District the amalgamation of six courts into three facilitated the development of court centres without which real strides in local government can hardly take place. The total number of criminal cases before the native courts was 1,618 compared with 2,153 in 1947, while the total number of all cases disposed of by these courts, which include civil and personal cases involving marriage, divorce, etc., was 15,824. The corresponding total for 1947 was 17,723. For various reasons it proved impossible to set the Malakal town council working in 1948. Plans were completed for an early opening in 1949. Funds for building

the council building were approved and work should shortly commence. Electoral rolls have been completed and the warrant approved. The first meeting of the province council, postponed from April on account of the railway strike, was held in November when elections for the legislative assembly were carried out.

736. Owing to better grain supplies, crimes of violence showed an increase in most districts. The worst offenders were the Shilluk, partly owing to their very much better food supplies and partly to the ineffectiveness of the local administration and to the unsatisfactory lead given by the Reth. Public security in Malakal was satisfactory. Summary trials by magistrates and town bench were much the same in number as in the two previous years, while non-summary trials by magistrates, though only a little fewer than in 1947, were considerably less than in 1946. Major courts numbered four compared with seven in 1947. No death sentences were carried out.

737. Police establishment was reduced by 25 men early in the year owing to approval only being obtained to take on permanent establishment 75 per cent. of the war-time emergency police. During the year the police Lewis guns were replaced by Brens and later the headquarters foot reserve police was divided into Bren gun sections. The police sent a team to compete in the inter-province weapon competition at Khartoum where it succeeded in winning the police shields, beating Kordofan by five points. In December the mounted police were called upon to provide a mounted escort at the opening of the Legislative Assembly.

738. Labour, generally speaking, was just adequate in Malakal except at the early rains, when most building work came to a standstill. Labour rates were increased and an attempt was made to recruit labour from Tegale District.

739. The rural water supplies and soil conservation board excavated 12 hafirs with a total capacity of 124,000 cubic metres by mechanical means between the Blue Nile Province border and the latitude of Melut. Most of the hafirs filled very well during the rains permitting increased cultivation in their vicinity with most satisfactory results. With the possible exception of Bor District all parts of the province promised to be self-supporting in grain in 1949. Crops in Eastern Nuer District provided about 1,000 tons of exportable dura while in the Dungal, Paloic and Mabaan areas of Northern District there was a large exportable surplus. Various experiments were carried out in the growing of sunflower in Bentiu, Kodok and Atar. Results were promising, and give substance to the hope that sunflower oil might one day take the place in Upper Nile Province which simsim oil occupies in the diet of most of the Sudan.

740. The chief forestry activity of the year was the marking out of 20 new small forest reserves and the extension of three old ones. Steamer wooding stations remained unchanged from 1947 except that Malwal Chat took the place of Bor. The total quantity of fuel cut

amounted to 151,802 metres while issues were only 105,631 metres, compared with 140,000 metres in 1947. The steamer demand had been put at 123,300 metres so that a considerable surplus amounting to 71,500 metres remained at the turn of the year, which included a balance of 25,351 metres from 1947.

741. Public health continued to show improvement. Sporadic outbreaks of relapsing fever were dealt with by the province medical staff. 87 cases were reported and 31,372 people deloused. Medical work outside Malakal was hampered by the absence of the hospital ship, *Lady Baker*, which sank in 1947 and was still under repair. Structural improvements were carried out in the Malakal civil hospital, making a fine female ward in the old administration block. A new administration block and a new out-patients' block were opened during the year. A new dispensary was opened at Wath Kec, one of the new central Nuer court centres, and the old dispensary at Fashoda was taken over by the Shilluk local administration. Ante-natal and midwifery work showed considerable improvement. There were 30 dispensaries and the number of attendances compared with 1947 rose by 22,719 to 287,581, while admissions rose by 751 to 4,451. Hospital statistics showed an increase, particularly in the number of operations, which rose to 1,226 compared with 700 in 1947 and 244 in 1944; of these 815 were ophthalmic cases.

742. The province inspector of education had unfortunately to be seconded to assist the staff at Atar in March; he returned to his province work at the end of the year. In spite of overcrowding and shortage of teaching staff Atar school had a successful year. Roofs of the buildings gave a great deal of dissatisfaction and the whole establishment was due to be re-roofed early in 1949. There appeared to be a genuine increase in the desire for education and this was particularly apparent among the Nuer of Central District. A Nuer Educational council and a Shilluk educational council were both set up during the year with the object of providing local advice to the Ministry of Education on educational problems in the two tribal areas. A subgrade school was opened at Bor. The American Mission opened a teachers' training centre at Obel and increased the staff at Akobo to include a doctor among others. A girls' school was opened at Malakal where it proved a great success. The demand for greater educational facilities for boys in Malakal was very keen and a subgrade school later to be developed into a full elementary school was due to be erected early in 1949.

743. The anti-trypanosomiasis campaign, started in 1947, was carried on. All cattle, numbering 322,506 head in Bor District, Lau Nuer, the Aliab Dinka (Bahr el Ghazal Province), northern Dinka and Shilluk areas, were inoculated with dimidium bromide, while, at the same time a detailed count of the cattle, stud bulls, adult cows and bullocks and calves of both sexes was made, the results of which were extremely interesting in indicating the small numbers of stud bulls in comparison to the number of cows and the paucity of bullocks as

compared with the total of cattle. The count has disposed for ever of the view that the Nilotic merely keeps his bullocks for show; in fact they are obviously a major item in his diet. The effects of the drug in causing photosensitisation, which had been marked at the end of 1947, happily only occurred in a few cases in 1948. In May experiments were made with the new drug antrycide which should replace dimidium bromide in the attack on Trypanosomiasis. The demand for cattle plague serum and vaccine fell off, but vaccine for bovine pleuropneumonia was much below the demand, which came from all parts of the province. Haemorrhagic septicaemia was reported from all areas throughout the year though it appeared to have become quiescent by the end of the period. Difficulty was experienced in finding the necessary cattle for Malakal serum laboratory, since the contractors failed to fulfil their undertakings. Cattle were brought from Kadugli but among those brought in during the rains there was a very high mortality, due, it is thought, to the inability of the Kordofan cattle to resist the seasonal conditions in Upper Nile Province at that period of the year.

744. The railway strike brought to a standstill all river movements from 16th March to 26th April. After the service of February and the lack of a service in March it proved impossible for steamers to reach Meshra er Req, and as a result it was decided to cut out the service up the Bahr el Ghazal altogether until the opening of the Jur river in August. Communications by land between Renk and Malakal were restored in March when a ferry was installed over the Khor Adar. This was the first opening of this road since the rains of 1946. It proved impossible before the end of the year to remake the bridge across the Adar, but that over Khor Wel on the same road was re-erected in May. A high Pibor and Sobat caused another very late opening of the roads to Nasir and Akobo. The Bor road was again cut by heavy floods in the Kongor-Duk Fawiel stretch. The province's mechanical road making equipment reached a very low level of serviceability but the arrival of a new auto-patrol grader and spare parts for some of the old material gave promise of greater utility in 1949.

745. There was reduced activity in Malakal airport, the number of landings being 567 compared with 1,038 in 1947, a consequence of the withdrawal of the British Overseas Airways Corporation. Sudan Airways provided most of the landings and the same service made some landings at Bor and Gambela. Ethiopian Airlines operated intermittently, flying from Gore to Malakal via Gambela.

746. The public works department were able to complete a bridge over the Khor Waard between Adok and Ler in Western Nuer District, and to remake the bridge over the Khors Wel and Attar on the Malakal-Melut and the Malakal—Fangak roads respectively. Buildings erected included a new administrative and new outpatients' blocks in Malakal civil hospital. Two new officials' houses were completed and a further stretch of the foreshore road was relaid in tar macadam.

747. Apart from trade in grain from the Sobat and Northern District, commercial activities were slight. Owing to a grave risk that high grain prices in the north would draw off essential grain from Malakal it proved necessary in May to place an embargo on the export of grain from the province. Many commodities were released from control during the year, but prices remained very high and frequently beyond the means of the people in outstations. Gambela exported 2,052 tons of coffee in 1948 compared with 2,037 in 1947.

748. The Jonglei investigation team continued their work and produced their third interim report at the end of the season. This report marks the end of the first stage of these investigations. The extent to which the proposed changes in the river levels and season of flow will effect the livelihood of people is now apparent. There remains the collection of a vast amount of data to enable the team to formulate schemes for the remedial measures that will be necessary. As the means of livelihood of some 700,000 persons possessing up to a million head of cattle and living on or near some 800 miles of the White Nile are affected, the immensity of the problem is apparent.

749. Three trial bores were sunk on the Zeraf Island by the geological survey, but with rather disappointing results, and a beginning was made in setting up two pilot pump schemes.

Equatoria Province.

750. Old Equatoria Province, which had been constituted in 1936 by the amalgamation of the Mongalla and Bahr el Ghazal Provinces, came to an end in 1948 when the three Dinka districts of Lakes, Jur River and Aweil, together with the Western District were split off to form the reconstituted Bahr el Ghazal Province with headquarters at Wau. The name Equatoria Province was retained for the remaining six districts, Eastern, Latuka, Central, Yei River, Moru and Zande. It is with this new Equatoria that the following paragraphs are concerned.

751. The peace of the last ten years between the Toposa and the Turkana was broken in July by a night raid on a Toposa cattle camp near the Kenya border. No stock was taken, but six Toposa herd boys were killed, and it was clear that the purpose of the raid was spear-blooding. A platoon of the Equatorial Crops and district police were at once sent to patrol the frontier to prevent reprisals, but unfortunately some Toposa, excited by false reports of further raids, took the law into their own hands and killed five Turkana who had been resident in Toposa country for a number of years. Six Toposa were tried and convicted of murder or attempted murder. A meeting was subsequently held at Kapoeta between the two tribes attended by the District Commissioner Eastern District and Turkana. There was no evidence of bad feeling and it was agreed that no compensation should be paid for the killings.

752. Early in the year a party of Tirma from Ethiopia crossed into the Sudan and sold some obsolete rifles to the Giye. They were intercepted on their way back by an Equatorial Corps patrol from Boma as a result of which the smuggled rifles and bartered stock were confiscated and eight Giye were convicted under the arms ordinance.

753. Nyangatom (Donyiro) continued to visit their friends in Toposa and it was reported that towards the end of the year most of the tribe had crossed the Ethiopian border and were living in the unadministered area east of the Tapesi hills.

754. Relations with Uganda, the Belgian Congo and French Equatorial Africa remained good. Several meetings took place between District Commissioners of border districts and administrative officers from these territories which were of value in establishing personal contact and in encouraging mutual co-operation over frontier transgressions and the settlement of cases between tribesmen.

755. Two unauthorised parties entered Zande District from French Equatorial Africa. The first was a party of trekkers on their way from the United Kingdom to South Africa who had been refused admission to the Congo, and the second a party of 39 West African pilgrims on their way to Mecca.

756. The first meeting of the Equatoria province council was held in Juba in August. This brought together leading personalities from all districts of the province, and for this reason alone was an event of major importance. Despite the fact that few of the members had met each other before and between them represented more than ten different languages, they quickly settled down to work together, and the discussion which was carried on in English and Arabic disclosed a keen and intelligent interest in local affairs, and a somewhat unexpected readiness to take part in debate. The most important subject dealt with was the method to be adopted for the election by the council of the province's representatives for the legislative assembly. Other subjects discussed included the organisation of health services and the importance of increasing the production of grain. The council met for a second time in November when the province members of the legislative assembly were elected. These comprised two chiefs from Central and Moru Districts, a court clerk from Zande, a schoolmaster from Yei River, and an administrative assistant from Latuka District, making a well balanced and representative team. The council enthusiastically welcomed the creation of the assembly which they felt would give new opportunities for the advancement of the south and enable it to play its due part in the administration of the Sudan. In addition to the five elected members, one further member, head clerk of Zande District, was nominated.

757. Further progress was made with the unification of the establishments and terms of service for north and south which had been recommended by the Sudan Administration Conference in 1946. The committee which was set up to investigate ways and means of doing

this reported early in the year. Their report was then considered by a special committee which sat in Juba in March and submitted its recommendations to the establishments committee. As a result of these recommendations, all employees previously in Southern article 2 category whose qualifications were adjudged to come up to the required standard were assimilated into scale Kas employees on the establishment, or into second division posts. For the first time, too, southern employees were allowed to sit for the civil service examination. Those who passed from all the three provinces, including 9 schoolboy candidates from Uganda schools, were 17, and with one or two exceptions all these were promoted to second division posts. The total number of those assimilated into K posts was 75, and, in the second division, 65 into J posts and two into H posts. Thus was resolved what had become a growing source of dissatisfaction among southern government servants, and it is for those who reap the benefit of this change to prove that they can carry their additional responsibilities as full members of the civil service, and to serve cheerfully in any part of the Sudan. In addition to the above, nine local officials from those recently assimilated into second division posts sat for the examination for entry to the school of administration. Of these one was placed in class A, two in class B+ and two in class B. Two of these who were considered to have suitable qualifications were selected to attend the school.

758. As a result of poor harvests in 1947 there was a general shortage of food grains in all districts, and conditions were hard in Juba, Yei and Torit. Dura from government stocks was on sale to the town population of Juba throughout the year, and at one stage small quantities also had to be made available for issue in Torit and parts of Moru and Yei River Districts. In Juba the price rose still further to P.T. 27 the keila. Fortunately conditions improved in July as a result of good rains, which brought on early crops of maize and groundnuts.

759. The railway strike of March and April caused remarkably little dislocation in the life of the province except in so far as it held up the supply of petrol and gas oil which had to be strictly rationed. Fortunately three months' supply of dura was held by the district authorities in Juba.

760. Resettlement work in Zande District made considerable further progress, and an additional 13,320 families were resettled in 231 villages during 1948. This made a total to date of 27,250 families resettled in 511 villages and left a total of some 22,811 families for resettlement in some 450 villages in 1949 and 1950. Chiefs, headmen and the people in general had co-operated willingly in the work of resettlement with the result that operations proceeded according to plan. The secret of success can be ascribed to the fullest possible utilisation of available water supplies, careful consultation with the headmen and people on their choice of locality, and above all to the sympathy, perseverance and exceptional local knowledge of the settlement officer whose work constitutes a truly remarkable achievement in promoting the social and agricultural advancement of the Zande people.

761. Grazing disputes and stock thefts caused less trouble than usual. In Eastern District several grazing boundaries had to be set out or redefined, and this task was much simplified by the good sense and reasonable attitude of the chiefs. Even among the distant Toposa pastoralists increasing contact with other tribesmen and the steady opening up of the district led to a noteworthy change in the previous attitude of independent isolation.

762. On 28th February the death occurred at Iboni in Torit District of Queen Ikuma of the Latuka in her 83rd. year. She was chief and rainmaker and one of the most colourful and arresting personalities in the province. The retirement of chief Lotinyen Tuliabong of the Mosinga Toposa removed the last of the big three who controlled the tribes of the Eastern District at the time of the occupation.

763. An unofficial council for Juba town was formed during the year to replace the previous one which had fallen into abeyance. The township was divided into wards and all but one of the members were elected. The council took a keen interest in its work and made recommendations on various matters of town administration. In the rural areas where the population is composed of scattered small farmers and cattle owners who in most parts have not yet reached the stage of living in villages, the development of effective local administrations is likely to be a slow process. Local courts, however, continued to do much valuable work and on various occasions the Torit C Court and B Courts in other districts discussed measures of economic and social administration such as ways and means of stimulating greater food production, suppression of witchcraft and responsibility for the upkeep of dispensaries. These courts also provided an excellent forum for explaining the purpose of the legislative assembly and useful representative bodies for the election of members of the province council. An interesting innovation was the co-option of a middle-aged Kakwa woman as a permanent member of the Yei B Court, a practice in accordance with local custom.

764. The general standard of public security remained high. Only three fights were reported and in none of these were there any fatal casualties. On the other hand there was an increase in theft and house-breaking not only in Juba town but also in Nagichot and Yei. In Juba, where the widely dispersed layout of the town makes it difficult to maintain an effective watch and ward system, the peak was reached when three officials' houses were broken into on the same night. Increased vigilance by the town police under the direct control of the commandant of police brought about an improvement by the end of the year. This increase in theft which was also reflected in the native court statistics was probably due partly to the shortage of grain and partly to a greater movement of persons from other districts seeking work. Further evidence of a decline in honesty was to be found in the number of cases of embezzlement which came before the courts during the year.

There was an increase in the number of cases tried in government courts from 505 to 576 and of the number of persons convicted from 770 to 848. There were 22 major courts compared with 26 in 1947. All these were homicide cases ; in four cases the death sentence was confirmed.

The number of native courts increased from 132 to 134. One of these new courts was created to deal with the large number of cases arising in Juba town, and the other was established for the Avokaya of Meridi sub-district. A proposal was also submitted for a separate court at Nzara, the industrial centre of the Equatorial Projects Board. These courts heard in all 14,730 cases compared with 14,844 in 1947. Of this total 7,093 were criminal, and 7,637 civil and personal cases, as against 7,170 and 7,678 in the previous year. Notable features were a decrease from 1,166 to 849 in offences against the body and an increase from 659 to 916 in the number of cases of theft. Drunkenness also showed a decline from 2,202 to 1,507. The number of appeals was 822 ; in 587 of these the sentences of the courts were upheld and in the other 239 they were quashed or modified.

In general the supply of labour remained adequate throughout the year though Yei River and Moru Districts reported temporary shortages in March when local demands reached their peak, and Zande District in December when cotton picking was in full swing. In Juba where the availability of imported grain proved a strong attraction in a lean year, there was a constant stream of people from most parts of the province and from Bor District of Upper Nile Province looking for work, with the result that ample labour could be obtained throughout the year. Wages in Juba rose from P.T. 3 to P.T. 4 in May as the result of a rise in local grain prices. Outside districts also reported slight increases.

765. Practically all the labour required is employed by government departments, including the Equatoria Projects Board. It is mainly needed for such essential works as road maintenance, roof thatching and new building. In Zande District, where as many as 1,300 labourers were required monthly for work at Yambio and Nzara, steps were taken towards the end of the year to encourage employers to build up their own permanent labour forces instead of depending on constantly changing workmen.

766. There was the usual limited drift of labour from Yei River District to work in Uganda where the conditions of work on the main sugar estates are said to exercise a strong attraction. Yei River District also provided most of the force of about 300 permanent labourers who worked throughout the year at the gold washing industry near Kapoeta.

767. After a hot, dry spell in February and March climatic conditions were unusually good throughout the rest of the year. In most districts the rains were above average ; they were also well spaced and continued until towards the end of the year.

768. The early onset of the rains combined with the general shortage of grain which affected most districts at the beginning of the year stimulated greater activity than usual in the cultivation of food crops. The utmost encouragement was given to get quick maturing crops sown as soon as possible and thanks to favourable rainfall fair crops of maize, early dura and groundnuts were harvested in most areas in June and July. This enabled the people to take advantage of the good rains which continued throughout the main cultivating season, and except in Didinga good grain crops were obtained in all districts. In places however the areas cultivated were limited by a shortage of seed and the absence of a considerable number of potential cultivators who had gone away to look for work. Nevertheless the general food position was much better than at the end of 1947.

769. An excellent groundnut crop was obtained in Zande District where over 5,000 acres of the previous year's cotton land were ready cleared for cultivation. In other areas much of the seed had been eaten so that less was available for sowing than usual and considerable damage was done to crops in Central District by rosette disease. There was some good sesame in the Acholi area and a welcome extension of the cultivation of pigeon-pea (*cajanus Indica*) at Kajo Kaji. Rice and local beans did well in Zande District. As a result of grain crops failures in 1947 cassava increased in popularity especially in Torit District where efforts were made to introduce village plots as a standby in famine years, as has been the habit in other parts of the province for some time.

770. Further progress was made in the agricultural development of Zande District under the auspices of the production division of the Equatoria Projects Board. The total quantities of cotton purchased by the board amounted to 36,390 small kantars compared with 13,202 kantars in the previous season. This crop was picked from some 7,724 acres and brought a return to the cultivators of over £22,000. Nearly 67 per cent of this cotton was classed as Grade I. As resettlement proceeds the intention is to extend cotton growing but this cannot be done until adequate agricultural supervision is available. The increased area under cotton in 1948 was about 700 acres. Apart from some damage to late sown cotton by *Lygus*, *Heliopeltis* and jassids, and a most unfortunate loss through the mistaken issue of bad seed in some areas, the crop did well and should yield about 40,000 to 45,000 small kantars. Experimental work also continued in the planting and processing of sugar at Sakure and in the germination of oil palm seedlings at Yambio, and considerable success was achieved in the cultivation of dura on one of the recently resettled chiefships with a view to providing food for the board's northern staff who dislike the local eleusine.

Private plantations at Iwatoka and Kapengere carried a heavy crop of robusta coffee, and there were also established some six acres of tea seedlings with good germination from local seed stock.

771. The forests section carried out an increased planting programme. The main types of trees planted on the plains were mahogany, teak, cassia siamea, neem and eucalyptus, and on the Imatong mountains near Gilo, cupressus lindleyi and macrocarpa. The settlement of Azza forest reserve was completed, further progress was made with the creation of other reserves, including an area at Kadule for firewood for Sudan Railways steamers, and two small provincial reserves beside Yei township, and one near Torit. A preliminary reconnaissance was also made for nine new proposed reserves in Zande District. Extraction was well maintained and yielded a total production of 217,899 cubic feet of hardwood and 10,000 of soft. Experiments in charcoal production were started at Nazara towards the end of the year to test the possibility of providing an adequate supply to operate the producer gas plants of the Equatoria Project Board's power station.

772. The general health of the province remained good and the year was noteworthy for the absence of any serious epidemics. The usual outbreak of cerebro-spinal meningitis at Kajo Kaji was on a much reduced scale. Only 59 cases were reported in contrast to 221 in 1947, while the Torit figure fell from 58 to 9. Of the endemic diseases malaria was still the most prevalent. Among officials a great deal was achieved in reducing malarial infection by the use of prophylactic paludrine and by spraying houses with D.D.T. though Yei River District reported an apparent failure of paludrine against local strains.

773. There was a slight increase in the number of cases of sleeping sickness during 1948 totalling 75. These came mainly from Zande District, but a number were also found at sites near the Yei-Meridi road where infections had previously been reported. No cases at all were found east of the Nile.

774. The leper survey in Amadi sub-district continued. Six chiefships were completed with varying results which improved greatly as the local African field workers gained experience. Out of 12,799 persons examined 128 men were found to have leprosy.

775. Public health work in Juba town was maintained at a high standard. Successful efforts were made to drain the swamp lying along the bank of the Nile east of the town and this, combined with extensive cleaning of the long grass and scrub within the town boundaries, did much to reduce the incidence of anopheles mosquitoes and flies. In the rural area vigorous action was taken to clean up Lafon, a notoriously dirty town of some 8,000 inhabitants in Latuka District where the government ophthalmic surgeon found very high infection of fly-borne diseases of trachoma and ophthalmia. Further progress was made with the village sanitation experiment in Moru District under the supervision of a newly appointed sanitary overseer. The success of this work can be judged from the reduction of ankylostoma and bilharzia infections from 33.3 per cent to 8.14 per cent and from 5.1 per cent to 1.12 per cent respectively over the past two seasons.

776 Mrs. G. M. Culwick, special nutrition investigator, left the province after completing a full year's work among the Zande. Her preliminary report indicated that the worst features of the present day Zande diet was the widespread substitution of cassave, a poor root staple, for eleusine, a good grain staple.

777. An ante-natal clinic and child welfare centre was started in Juba by a Sudan Medical Service nursing sister. About 150 mothers and infants were on the list by the end of the year and there had been 931 attendances. A similar centre was started at Yei in October by the wife of a Medical Officer. This too proved very popular.

778. In 1948 southern education came of age and its majority year was marked by encouraging signs of progress in all directions. There was a keen demand for education at all levels, and candidates for entry to schools continued to exceed the number of places available. Girls' education was also becoming more popular and there was an increase in the number of girls completing four or even six years in primary schools. The first ten teachers completed their training in 1948 and qualified for the new salary scale for southern women teachers. Co-education at Lui mission progressed well.

779. At the beginning of the year the agricultural training school was transferred from Kagelu to a new site near Yambio; 71 students were enrolled representing 16 different tribal groups. Entry is at two levels, from those who have an intermediate school certificate and those who have an elementary school certificate. They must have a preference for agriculture, and practical farming including the cultivation of their own plots constitutes an important part of their school work. Also at the beginning of the year the primary teachers' training college, which opened in temporary quarters at Yambio in 1947, was transferred to a new site at Mundri in Moru District. This college now provides a three year course. It started the year with 16 students and turned out its first batch of eight certificated teachers.

780. Meetings of the local educational councils were held in several districts and again proved their value in bringing together representatives of the government and the missions and the local authorities. The Moru council found itself up against the old problem of finding a type of education likely to provide an adequate standard of literacy without giving the pupil a distaste for country life and pursuits.

781. In August a party of schoolboys from Wadi Seidna paid a holiday visit to Yei River District. They were entertained by the Loka school boys with whom they took part in football matches and other activities. The visit was a great success, and much appreciated by both visitors and hosts who discovered many common interests.

A new chapter of significance for the peoples of the south was opened when two pupils, one from Equatoria Province and the other from Upper Nile Province, who obtained their school certificates from Nabumali school in Uganda, were accepted for admission to the Gordon College.

782. Towards the end of the year a veterinary inspector was appointed to Equatoria province for the first time, and posted to Torit. His first task will be to deal with rinderpest and contagious bovine pleuro-pneumonia, which cause considerable losses among local stock and especially among the large Toposa herds in Eastern District which have hitherto remained virtually outside the ambit of the veterinary organisation. But he will also be concerned with investigations into the control of trypanosomiasis more especially by means of the new drug antrycide which it is hoped will enable cattle to be introduced into parts of the province where it has hitherto been impossible to keep them on account of tsetse fly, and will be able to advise on improved methods of animal husbandry.

783. Rinderpest and bovine pleuro-pneumonia were prevalent in Eastern and Latuka Districts throughout most of the year. There were also sporadic outbreaks in Central and Moru Districts.

784. In May a herd of 98 cattle from the Dinka country were driven to Amadi in the centre of a tsetse fly area. Of these 83 had been inoculated with antrycide, while the other 15, which had not been treated, were for use as a control in an experiment to test the effectiveness of the drug as a prophylactic against trypanosomiasis. Inspection after three months showed that out of the 83 only two had developed trypanosomiasis, whereas out of the eight which still remained alive out of the 15, only two were clear.

785. At the end of May a conference on trypanosomiasis was held in Juba which was attended by the director of the veterinary service and other representatives of the veterinary, medical, agricultural and game preservation departments. The purpose of the conference was largely exploratory but various recommendations were made for dealing with the problem.

786. Though reports were received from all districts of elephants causing damage to growing crops, it was clear that the control measures introduced by the game preservation department were proving effective, and should become more so as the organisation is extended. Steps were taken to tighten up checks on ivory brought in on chiefs' licences, and on the difficult problem of found ivory. Two baby Bongos were captured in Bengengai forest, but unfortunately neither survived.

787. The public works department completed the reconstruction of the road from Amadi to Nzara, which had been taken over from the province, and made good progress on the remaining section from Nzara to Lingasi by the end of the year, completing the bridge over the Lingasi river. A permanent bridge was also made over the Au river on the Meridi-Yei road, but funds were not available for the more important Tore bridge on that section, where the district wooden bridge was badly damaged for the second year in succession and required considerable repairs to enable the road to be used. The road from Kapoeta to Boma was cut for three months by heavy floods necessitating extensive repairs to make it serviceable again.

788. The comparatively high levels maintained by the river reduced navigational difficulties to a minimum, and all craft were able to reach Juba except deep-draught tugs. The provision of a pilot on the Mongalla reach during low river periods made it possible to avoid delay through grounding of craft on sandbanks.

789. The runways at Juba airport were maintained in satisfactory condition. A start was made at the end of the year on the construction of new hard-standings and parking area, and plans were submitted for new aerodrome buildings worthy of the Sudan's entrance gateway for air travellers from the south. The number of aircraft landing at Juba during 1948 was 1,119. The Sudan Airways twice-a-week Dove service operated with praiseworthy regularity and was a great boon to the province especially during the railways strike.

790. Two successful bores were sunk at Yambio which should improve the local water supply considerably, and a hydram was installed at Nagichot. Local efforts to make wells in order to provide an improved water supply in rural areas met with little success.

791. The public works department had another busy season. Among works completed during the year were a 30-bed third class ward at Yei hospital, a store and office block at Meridi hospital, and a new block at the Juba hospital comprising outpatients accommodation, X-ray dark room and a lecture room. Other works of major importance on which the department was engaged were the primary teachers training college at Mundri and the agricultural training school at Yambio. Of the former the main school building, three class rooms of the practice school, dining hall, five dormitories and auxiliary buildings were completed by the end of the year.

792. There was still considerable demand for building plots in Juba town both for shops and houses. Steps were taken to make more second class residential plots available, but practically all the land suitable for shop sites was taken up and it will be a problem to find new ones. A new third class area in Juba was approved by the central town planning committee and made available for development. New rules for the allotment of market sites in small towns and of bush shops were made applicable to Equatoria Province. Auctions of plots in accordance with these rules were held at Yei and Mundri.

793. The trade revival which was noted in 1947 continued into the first part of 1948 and there were not only constant applications to open new bush shops in spite of the doubling of the traders' licence fees, but there was also spirited bidding for six new shop sites which were auctioned at Yei in July, when the highest premium paid reached the unexpectedly large figure of £E. 325. Later, however, there was a definite recession in most areas and though shops were better stocked with popular lines of consumer goods, traders reported a definite falling off in sales. An exception to this general trend was provided by Zande District where trading activity was well maintained throughout the year. This could almost certainly be attributed to the recent develop-

ments in that district and above all to the fact that a further £E. 16,000 was paid out to the Zande cultivators for their cotton in excess of the sums paid in 1947, bringing the total amount paid to the people in 1948 for all their produce including cotton to nearly £E. 44,000. Other districts were not so fortunate. Apart from the comparative failure of their food crops the very limited cash crops which they grew also did badly, and there was widespread shortage of ready money to spend.

794. The trading division of the Equatoria Projects Board made further progress and as procurement became easier its turnover increased rapidly. The opening of the division's base shops at Juba had a considerable effect on local retailers. This was well patronised both on account of its lower prices and its attractive range of goods. The division also had several mobile trading vans in operation which visited various centres and were particularly popular at the cotton markets in Zande District.

795. Local produce markets were started in Yei, Kajo-Kaji and Lujulu in Yei River District. These proved very popular, and though so far they were only used to enable people to sell small quantities of mainly local produce to their neighbours they provided a valuable opportunity for the acquisition of a market sense. Two auction sales of stock were held at Kapoeta. Bulls averaged £E. 4. and sheep and goats P.T. 30. Not many animals were sold but it was hoped that such auctions would gain in popularity in 1949.

796. There was a slight rise in the total tonnage handled by the Sudan Railways at Juba from 32,709 tons to 35,578 tons. This was fairly evenly spread between cargoes received and cargoes forwarded, the former increasing from 17,126 to 18,544 tons and the latter from 15,583 tons to 17,034 tons. The increase in the cargo forwarded was accounted for by large imports of sugar; that of the cargo received partly by larger purchases of dura and partly by the arrival of greater quantities of stores and materials for the Equatoria Projects Board.

797. The increase approved in the rates of the principal direct taxes took effect from the beginning of the year. The rate per head from tribal inhabitants in all districts except Zande was raised from P.T. 25. (P.T. 20 in Moru) to P.T. 40 except in Eastern District where the increase was from P.T. 10 to P.T. 20. In Zande District the rate was raised from P.T. 15 and P.T. 20 to P.T. 30, in Juba town from P.T. 25 to P.T. 50, and elsewhere from P.T. 25 to P.T. 40. In spite of these increases no difficulty was experienced in collection. Out of total assessments of £E. 46,533 arrears carried forward at the end of the year amounted to no more than £E. 404. In Zande District remission of some £E. 400 was approved, representing sums due from taxpayers who had migrated to the Belgian Congo.

Bahr el Ghazal Province.

798. Bahr el Ghazal Province was reconstituted on 1st. July, 1948. A province under the old Turkish regime before 1884, it was

created as a separate unit under the present government in 1900, and was subsequently amalgamated with Mongalla to form Equatoria Province in 1936. The new Bahr el Ghazal Province has the four districts of Lakes, Jur River, Aweil and Western, but without the Zande, and despite the inevitable teething troubles of housing and staff is firmly on its feet.

799. The condition of the population was not good at the opening of the year but was much improved towards the end of it. Uneven flooding and October drought in 1947 resulted in a poor crop everywhere except in Aweil. Nearly all government grain requirements had to be imported. These grow heavier and heavier annually as schools and dispensaries multiply; employees on building and forestry schemes have to be fed, too, while these same schemes draw off into the labour market potential cultivators. Jur River Dinka were living under difficult conditions and also the Western District population, who cultivate too little and live a largely non-productive forest life. But the worst areas were in Lakes District where 770 tons of dura had to be imported to meet the situation. Fortunately it was a good fishing year, and famine conditions were avoided. The 1948 rains produced a fair to good grain crop almost everywhere and immediate prospects were therefore satisfactory.

800. As from 1st. May the majority of the old "Southern staff" were absorbed into Scales K and J and the cursus honorum was opened to men of sufficient ability in many branches of government service. Five candidates took the examination for the school of administration and police; two places were reserved for the province in this school so that a cadre of future mamurs might be recruited from outstanding local men.

801. In the sphere of local government the year was notable. The province council held its first meeting in November, consisting (apart from the president and vice-president) of 9 Dinka chiefs, 4 chiefs of other tribes, a representative of Wau town council, a retired Dinka ex-officer, a northern official, two southern officials, the principal of the Bussere teachers training college, a merchant and a mission member. The council showed spirit and sense. It elected the province's four members to the legislative assembly, and discussed and gave a line upon veterinary policy throughout the Dinka area. The four members elected were a retired Dinka ex-Sagh from Rumbek, an educated Dinka chief from the Twij section, an administrative assistant from Wau and a public works department storekeeper; these all took their places on the assembly.

802. The Gogrial district council received its warrant and is to run an independent budget in 1949. This is the pioneer local government among Nilotics and the main feature is that the executive power, under the council, is vested in a committee of three instead of in a single man; this caters for the democratic Dinka tendency and their distaste for autocratic power, and so far it is working well and is being imitated elsewhere. Dinka local government practice is therefore able to skip

the period of autocracy through which other parts of the country had to travel. Two other rural area councils, one centred on Thiet, 30 miles north-east of Tonj, for the Rek Dinka, and the other at Marial, some 16 miles north of Wau, for the Jur and certain Dinka elements, were formed in Jur River District which was thus completely covered with these three local governments. A similar rural area council was established at Beselia, 25 miles west of Wau, for the mixed non-Dinka tribes of Wau sub-district, where the problem was complicated by lack of cohesion and tradition and common tongue among the various tribelets. This council began well and showed sense and activity in various matters of social betterment: the 22 members were elected by the group-leaders and sub-chiefs who are themselves elected by the tax-payers. Out of a group-leader electorate of 200 only 17 failed to vote. Two rural area councils were prepared in Lakes District, one at Yirol to take in all Dinka in the sub-district, the other at Cwei-Beth north-west of Rumbek for the Gok section.

803. The Wau town council continued its activities but was less effective than the rural area council. Its duties were mainly conciliar but a finance committee was appointed and prepared a memorandum budget for 1949.

804. At Nyinakok a workmen's committee was formed to deal with disputes and internal administration among the labourers.

805. Tribal relations with other provinces remained good, apart from a fight with the Ngok Dinka of Kordofan. The usual meetings were held at Safaha on the Bahr el Arab with Darfur neighbours, near Abyei with the Humr, the Ngok and the Nuer, and in Lakes District with the Bor Dinka.

806. While the Western District population remains static, the Dinka are nearly everywhere increasing. On the western borders of Aweil, Dinka expansion threatens to burst the artificial bar of tribal boundaries and to spread into Gooly-gooly country, undeveloped by its exiguous and feckless inhabitants.

807. At Boro, 70 miles west of Raga, a settlement was made of the Kpale Naka, whose chief is one of the few men of mettle in Raga, in an endeavour to encourage them to live a settled community life with properly ordered cultivation. Some 620 taxpayers were gathered in a well laid out model village, and apart from the fact that about 200 able-bodied men went off to the forest and did not cultivate, the enterprise was successful and is a most hopeful development among Western District tribes.

808. In the tribal sphere, Wol Athiang the Pakam chief and doyen of Dinka chiefs, who was over 100, died in March. Chief Mawier Rihan, a powerful figure among the Twij, was replaced in March, his autocratic tendencies having made him most unpopular. A scale J agriculturalist resigned from the department in December in order to assist local government and become chief of his own Amenhom section of the Agar north of Rumbek. He was the first classified official to prefer to enter the field of local government.

809. Labour was tolerably easy to obtain until the latter part of the year, when a good harvest killed the incentive to work for hire. There was an influx to Wau of Dinka labourers from Aweil and elsewhere, and far more Dinka labour was employed everywhere than in previous years. The Western District, with its mere 60,000 inhabitants, provides most of the skilled and semi-skilled workers throughout the province and the bulk of the 1,250 men permanently in the books of the Wau group of sawmills, but cannot produce the unskilled labour needed for programmes of development. Over 1,200 men were regularly employed by the public works department on buildings in Wau, 300 in Rumbek and 150 at Bussere. To cater for the invasion of Dinka employees a labour camp was constructed at Wau. Labour rates rose and were mostly P.T. 2½ plus two rotls of grain a day in districts, while the public works department paid P.T. 3 and commercial rates at times reached P.T. 4. This increase in daily rates made labour more popular, including road work in some areas. In the Western District increased road grants, enabling higher pay, tended to have the good effect of providing labour at the front door and inclining people to remain near their homes instead of wandering far afield. Much district work was done by contract and the policy was followed of paying by piecework so far as possible. There was a one-day strike of labourers at Aweil and a similar spasm among forestry labour at Shambe, for unjustifiable reasons. There was also, in January, a two days' strike for more pay by merchants' lorry drivers in Wau. This also had no justification and work was resumed.

810. There was no migration to speak of. A number of Hausa, with children and chattels, arrived at Aweil, ostensibly going on the pilgrimage and possibly aiming at settlement there or in Wau, but returned to Darfur and there were no noticeable accretions of West Africans.

811. Public security was good throughout the year. Trials by state courts were as follows :—

	1945	1946	1947	1948
Major courts	22	18	17	7
Minor courts	3	3	3	6
Magistrates' cases	36	44	39	48
Summary cases	137	131	92	96

Cases tried by chiefs' courts were as follows :—

	1945	1946	1947	1948
Criminal	4,924	4,507	5,980	4,629 (without Raga)
Personal and civil	8,254	6,771	6,478	6,322

This shows a big decrease in Major Courts but no very remarkable feature in other courts. Types of crimes followed the expected course, Aweil (which was prosperous) having more fights and crimes of exuberance while Jur River and Lakes Districts (where conditions were difficult until November) showed less fighting and adultery, and more theft.

812. There were again no major tribal fights, the last really big scale one was between the Cic and Afak of Lakes District in 1943. Disturbances worthy of mention include a fight among the Malwal and another among the Paliet of Aweil, involving one and two deaths respectively; a fight between Twij and Kordofan Ngok in June, luckily not involving deaths; thefts and counter-thefts among the Cic and Afak which might have set light to this perennial patch of tinder, but severe sentences by a strong mixed court restored security. Relations between Dinka and Rizeigat on the Bahr el Arab remained good, though the Rizeigat as usual trespassed across their line of the Khor Dabbura in Raga sub-district.

813. In Western District, courts awarded heavy sentences for witchcraft. There was no evidence that witchcraft itself was increasing, but it was more widely regarded as an anti-social practice. There was a crop of housebreakings in Wau early in the year, but deterrent sentences and orders involving the carrying of lights at night reduced the nuisance. Grain shortage seemed to have no depressing effect upon the araki trade, and hashish offences remained about level. There was a regrettable number of prosecutions for peculation. No fewer than five clerks from Lakes District were convicted and imprisoned. Two forestry officials were convicted for dishonesty and also a storekeeper for misappropriation of province grain.

814. Changes in penal custom include decisions by the Raga group court to increase the standard fine in lieu of a month's imprisonment from P.T. 30 to P.T. 50, and by the Lakes District chiefs to disallow claims for compensation in cases the relatives of the damaged man wilfully refused to bring him for medical treatment.

815. Police strength remained unchanged apart from an increase in drivers to cater for an increase in province vehicles. The general morale and discipline of the force remained fair and some recruits of an adequate standard of literacy were obtained. A new police post was established at Thiet in Jur River District, the headquarters of a new rural area council.

816. Meteorologically there was nothing remarkable in the year, except a tempest at Wau in April which almost touched full gale force and destroyed some of the finest timber. The rains started early, then held off in May and early June, continued less than average, and finished well in October. The amount of rain matters less than the spacing. This was good, and the result was a fair to excellent crop over nearly the whole province. Aweil did particularly well with their early dura and served as a granary for government requirements and the needs of other areas.

817. In Western District, despite every encouragement, the number of cultivators or extent of their efforts have not increased satisfactorily. Too many able-bodied men live in the forest or wander off for casual labour and add nothing to the public food stocks. At the Boro settlement, west of Raga, cultivations were marked out and rotation of crops arranged with the help of agricultural staff. The first year's results were good, except that 200 of the 620 taxpayers failed to cultivate. Prison cultivations were everywhere increased.

818. In December, with the arrival of machinery, the experiments in mechanical cultivation of toiches, which began in 1947 but lapsed in 1948, began again under proper supervision and on a more thorough scale. Areas of different types were selected at Tonj and Yar. The intention being, by deep ploughing, to remove the grass (which is beyond the power of hand cultivation or bull ploughing) and by early sowing to raise a crop before the land floods in August and September. Simsim and ful both failed in Lakes District, usually the best area. In Jur River District simsim was very fair, and in Aweil the ful crop was good: otherwise these varieties were only average. A new garden was started in Wau and did well. The forestry section installed a sawmill at Tonj. For cutting sleepers, 33,000 of which went out by Jur steamer service, hand sawing on the spot was found cheaper and more effective than the sawmill.

819. Demarcation of a central forest reserve at Nyinakok and No. 1. Tonj road was carried out in March, and the preliminaries were completed for a reserve in the triangle of the Sue and Busseri rivers. The area of new plantations was 152 acres as against 47 in 1947, and a change was made from mahogany to teak as the main species. Experiments in direct sowing gave excellent results for cassia and good for mahogany, but poor for teak. Two bamboo forests, near the Busseri river, were exploited and 139,293 poles extracted. Plans were prepared for firewood reserves near Wau and all district headquarters. Early burning in 1948 was not impressive, and much of it too late to be beneficial.

820. In the field of public health cerebro-spinal meningitis produced only sporadic cases and gave little anxiety. There was a serious outbreak of smallpox in Yiroi during the 1947/48 winter. Extensive quarantine organisation successfully prevented its spread to Equatoria or to Upper Nile Province.

821. Further investigations were carried out at Raffili, Pongo and elsewhere in Western District, into the incidence of simulium damnosum and the causes of Jur blindness, though no method of eradication or cure is known so far, apart from the excellent repellent Dimethyl Phthalate which is now to be had in small quantities. Malaria was prevalent among officials, particularly newcomers to Wau. Neither paludrine nor mepacrine, though successful in many individual cases, seemed to provide a complete prophylactic. Measles occurred in several districts in the spring, and, as an aftermath, an epidemic of enteritis among the Belanda in February.

822. Educationally there was much activity. The buildings for the secondary school at Rumbek, though belated, were well under way for the school to open in April, 1949. The Dinka primary school at Tonj had a good year and new Dinka primary schools opened in April at Aweil and Rumbek. The main obstacle to rapid educational progress was the lack of Dinka masters, of whom there were only two of primary grade. Help was extended to the Ngok Dinka of Kordofan, for whom places were reserved at Tonj and at Kwajok teachers' training centre. Feroqi education, in Western District, provided difficulties as usual, but provision was made for their boys to enter the 3rd. or 4th. year of Raga primary school. It is a paradox that, while so few Dinka masters are forthcoming, the Dinka demand for education increases fast. There was big field for 32 places at Rumbek and 32 at Aweil schools, and the Gogrial council proposed an education rate for 1949 to cover the cost of out-schools.

823. For the veterinary service the year was active and important. The province has always encouraged a policy of immunisation, to increase its one really large potential source of wealth. Experience has shown that vaccination for rinderpest against payment for each dose is impracticable with the Dinka. While pressing for immunisation as a national investment, irrespective of cash payment, the province council agreed that in view of the added wealth thus offered to the Dinka an increase in taxes of about £E. 7,000 in 1949 was justified, and 150,000 doses have accordingly been released for the coming season. The actual year's work began rather disappointingly but ended successfully. Prejudices among cattle owners, always ultra conservative, were broken down, and in all 143,911 cattle injections were given.

824. The year was not a serious one for rinderpest, but the disease was sporadic throughout the province. The new free vaccinations began late in the year, and the following figures show results :—

Vaccination on repayment, January to November	..	..	20,684
Free vaccination (beginning November)	..	..	20,154
			40,838

825. Bovine pleuro-pneumonia, the mortality of which is about 50 per cent, was present throughout the year, though it was thought that vaccination in 1947 and 1948 had lowered the incidence. Dinka will not adopt a slaughter policy. Demand for vaccine exceeded the supply, but 24,559 beasts were vaccinated. Trypanosomiasis, carried by fly other than tsetse, spread from the south, thanks to a foolish move into infected country by Rokac herds, and from the east to the Tonj-Meshra road and beyond it. Supplies of dimidium bromide arrived late in the year. One very encouraging feature was the mass treatment, against trypanosomiasis, of 45,000 Aliab cattle in January. The Dinka response was excellent. Field trials were made of new anti-trypanosome drugs, and though results are not yet publishable the omens were good. An outbreak of Anthrax occurred in Yirol in August.

826. Among Western District tribes there was practically no response to efforts to introduce animals, except at Boro where some cattle procured for the enterprising chief there did well.

827. Collection of wild animals for Khartoum Zoo slackened off, owing to the difficulty of export and currency, but a giant eland, many shoebills and other storks, and some carnivores were procured, while eland, giraffe, buffalo and other valuable animals procured in 1947 were sent off. A young white rhino was brought to Rumbek, but survived only 19 days. Game reserves were gazetted on the Numatina river and around Ashana, west of Aweil. Damage by game to crops was not on a big scale, and no organised control was necessary. Occasional raids by waterbuck on forestry plantations and other cultivations were dealt with as they occurred. For the most part game, none too plentiful, is an asset to the province. Fellata crocodile hunters operated nocturnally at Wau and elsewhere, attracting some publicity and getting rid of a number of dangerous saurians.

828. Work on new roads was limited. The direct road from Wau to the important educational centre of Bussere was re-made, reducing the distance from 20 to 10 miles, and the branch from the Rumbek-Yirol road to Lake Nyubor reached its destination. Otherwise realigning, ramping and repairs were done on a large scale, notably on the Tonj part of the Tonj-Rumbek road, on the Tonj-Thiet road, the Aweil-Nyamlel road, and particularly the Raga road. Thinness of population militated against good work on the latter, one stretch of 22 kilos having only 27 nearby families, most of whom gravitate to the outskirts of Wau; in the circumstances the road is in a very creditable state.

829. Well work was most brisk in Jur River and Lakes Districts where 14 wells were dug around the Rumbek schools, 5 were dug in the Gok area and 6 in the Yirol area, and some of these lined and capped. In Jur River District good results were achieved, 26 wells being wholly or partially completed. In Western District wells were dug around the new Boro settlement and at Ayu and Yabulu. Great difficulty was experienced in supplying water to houses in Wau, and a pumping plant has been urgently requested.

830. The Jur River steamer service had one of the best seasons on record. Three services arrived and there were no navigational difficulties. Meshra had four services from December, 1947, to March, 1948. Six aircraft landed at Wau, but none elsewhere in the province. A fortnightly service to Wau was arranged. Telegraphic and telephonic communications remained precarious. Rumbek and Tonj were frequently out of touch with Wau and little reliance could be placed on this line in emergency. The same applied to the Meshra line. A new line from Rumbek to Shambe, already proposed, could not be commenced during the year. A postal agency was opened at Tonj, but the agent found the telephone work too difficult and resigned the agency, leaving the province again with two postal installations, Wau and Rumbek. Ferries for the Jur River at Gogrial and the Lol River at Wunrog were approved and constucted, but had not reached their sites by the end of the year.

831. For building activity the year was unprecedented. The public works department embarked in September, 1947, on a £E. 21,000 programme of new premises for No. 3. Company, Equatorial Corps, Sudan Defence Force, at Grinti. Enough of this was completed by July to enable the Company to move in. The bulk of a £E. 10,000 programme for the teachers' training college and primary school at Busseri was completed. Six staff houses in Wau were finished, and a new leper colony built on the Busseri river five miles south of Wau. The Tonj school was enlarged, and work on a £E. 15,000 secondary school (first instalment) programme at Rumbek, though delayed, had by December raised the dormitory blocks and two out of three staff houses to roof level.

832. Turning to province work, the tradition whereby the district commissioner also acts as engineer and builder, so far from dying out, was accentuated. The entire Aweil and Rumbek primary schools were erected by the district commissioners. Eight houses for classied staff, and many for Article III staff and police, a new dairy, stables, a veterinary dispensary, latrines and rest-houses were built. Local government council buildings were completed or adapted at Cweibet (Lakes District), Gogrial and Thiet (Jur River District) and at Bisselia (Western District). The brick and tile factory at Tonj deserves special mention : 190,000 bricks were completed and 130,000 tiles of attractive design.

833. Trade was generally slack throughout the province. The main reason for this was psychological, being the lack of money-sense and desire for wealth among the Dinka, whose sales resistance is considerable, combined with the apathy and absence of initiative among traders. The alterations in the permits to trade and closed districts legislation in 1947 did not result in a single addition of new capital or new enterprise from the northern Sudan. To this must be added the steamers strike in the first half of the year, which closed down all external activities, and lack of petrol throughout most of 1948 which throttled any chance of expansion.

Dinka sales of bulls remained dependent upon their food stocks. At Aweil, where in 1947 some 7,000 cattle were sold to buy grain, scarcely any were sold in 1948, and though a permit was given to buy 500 and export to the north only about half that number was procured. In Lakes District on the other hand, where food stocks were low, sales were brisk; daily auctions in Rumbek and Yiroi produced fair prices and 250 bulls were exported via Shambe, bringing from £E. 4. to £E. 6. to the seller and fetching up to £E. 15 in Omdurman. Juba and Yambio butchers have showed no inclination to buy Lakes or Jur River cattle and import on the hoof. The Tonj dried meat factory was closed down. Difficulty of supervision made it of doubtful value and local needs could be obtained on the hoof. There was no lack of meat at any centre, though at one time Rizeigat cattle were being slaughtered in Aweil market.

834. There was scarcely any export trade in ful or simsim ; most of the former was eaten almost before it was ripe by the cultivators, and all available supplies early in the year had to be frozen and used for the Lakes District population. Controlled price and quotas of grain were dropped owing to the good 1948 crop, and most district needs were obtained by ordinary trade channels, without serious increase in prices, except in Lakes District. But grain was costly : at Aweil it was 240mms per kantar at the beginning of the buying season and 320mms. at the end of the year ; at Wau around 600mms. in January and 650mms. to 700 mms. in December ; at Rumbek 325 mms. and 653 mms.

835. The quality of beeswax deteriorated, the merchants being too supine to insist on a standard of cleanliness, and the wax often became unsaleable in the north. Chiefs did their best to bring improvement, and the trade later in the year became fairly brisk.

836. The Equatoria Projects Board affected the province but little, as proposed shops at Rumbek and Wau did not materialise, but travelling sales-cars were run to nearby court and other centres with moderate success. Many consumer goods were decontrolled. Apart from " Wiza 10 " and " Zarag " there was not much shortage of cloth, and difficulty was experienced in disposing of all the sugar stocks.

837. Taxes were collected without difficulty, the Dinka as usual paying the great bulk of 1948 taxes before the end of 1947, and of 1949 taxes by December, 1948. The rate per head on which assessment is made was increased to P.T. 25, and in towns to P.T. 40.

Business profits tax more than doubled, partly owing to a fairly prosperous 1947 season and partly owing to new legislation and stricter assessment.

CHAPTER XX—SUDAN AGENCY IN LONDON

838. Changes in the administrative staff of the Agency were fewer than in preceding years, as also were changes in the personnel of the junior staff, as a result of salary scales and allowances being regulated and maintained in strict conformity with those of the British Civil Service, and the introduction on 1st. January, 1949, of a superannuation scheme comparable to that of the British Civil Service should materially assist in future recruitment and retention of existing staff.

839. Before passing to the detailed work of the sections, reference should be made to some of the responsibilities shouldered by the Chief Inspecting Engineer's branch, which may not be apparent from statistics or from the comments made under the various section notes. While the volume of demands for all categories of materials increased from almost all departments, the level of supplies in the United Kingdom remained below that of the pre-war period, and many basic commodities

continued in short supply. Again, while British Government controls were in some instances relaxed, in others they were tightened, and the general state of markets was unpredictable. From the Sudan end, factors which increased the problems of this branch were the setting up of the Mechanical Transport Department, the increased size of orders from the Stores and Ordnance Department, expansion of work for the Equatoria Projects Board, Ministry of Agriculture and Forests, and the receipt of orders of a capital nature mainly for the Sudan Railways. One feature of the work of the Chief Inspecting Engineer's branch which cannot be revealed by statistics is the supplying of technical information of every conceivable type to all departments in the Sudan and also the provision of preliminary quotations required by all departments to enable them to formulate their programmes of works for the years ahead. Finally a serious fire in October in the stores at Atbara necessitated a special effort by the Agency to provide vitally needed replacements in the minimum possible time.

SUDAN AGENT'S BRANCH.

Appointments Section.

840. The appointments boards of the various universities, as was anticipated, produced larger numbers of candidates for professional and administrative posts and in consequence the standard of recruits finally selected was higher than in the immediate post-war period. In technical appointments the Control of Engagements Order had no a adverse effect on recruitment.

Passage Section.

841. There was again an increase in the volume of work handled. Sea passages were more difficult to obtain than in preceding years and it is only by means of the regular chartered flights that it was possible to meet the demands of outward and homeward traffic. The close and friendly liaison between the section and the staff of the charter company greatly contributed to the smooth running of the arrangements. Visas for passengers in direct transit by air were discontinued as from 1st. April, but applications and enquiries for entry visas showed an increase of almost one hundred per cent on the figures for the preceding year. Comparative statistics are as follows:—

	1947	1948
Number of individuals dealt with	1,821	2,074
Number of passages booked	1,733	2,032
Number of passports attended to	1,646	1,670
Number of transit visas given	11,873	3,052
Number of entry visas given	390	601

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Tickets Issued.	No.	Value	No.	Value
Sudan Railways	77	£361.1s.7d.	124	£444.4s.1d.
Egyptian State Railways	—	—	—	—
Commission earned in respect of bookings		£2,479.2s.9d.		£788.0s.8d.

Publicity Section.

842. Two hundred and thirty-three permits for civil aircraft were issued to charter companies and private individuals. Although the total number of permits showed a decrease as compared with the figure in the preceding year, the number of applications received through foreign embassies doubled. The work involved in these latter applications is more intricate than in the applications of private individuals and was further complicated by the ever-increasing number of directives set forth in "Notices to Airmen." On the other hand, owing to restrictions imposed in the Sudan, the number of applications for permission to traverse the Sudan by motor transport were very few.

843. Distribution of Sudan Government publications in the United Kingdom increased by about fifty per cent. The frequent reference to the Sudan in the British press resulted in a vast increase in general enquiries of a varied nature.

Political and Economic Section

844. The volume of work in this section showed no decrease. On the economic side negotiations were conducted on behalf of the department of economics and trade for supplies of sugar, coffee, wheat and milk foods, and on behalf of the financial secretary for the disposal of cotton seed. Currency problems and anti-inflation measures also came under review, while arrangements for the payment of a further instalment of the British Government's £E. 2,000,000 grant-in-aid were made with the Foreign Office and Treasury. The statutory requirements of the Companies Act in respect of the Kassala Railway Company Limited and the Gedaref Railway and Development Company (Sudan) Limited were carried out, annual reports and accounts published, the requisite payments for the sinking funds duly made and the requirements of the new Companies Act, 1948, implemented. The report of the Executive Committee of the Gordon Memorial College and of the Kitchener School of Medicine and the accounts for the year 1947 were printed and distributed, and the annual meetings were held on 1st. July. The meeting of the London Advisory Committee on Agricultural Research was held on 24th September under the chairmanship of the financial secretary, and the report and memoranda of the committee were prepared and issued.

Welfare Section.

845. Whereas the number of Sudanese students in the United Kingdom was 26 in 1945, by the end of 1948 the figure was 98, representing almost every government department. As in previous years, the finding of living accommodation was the major problem and during the Christmas vacation lodgings were found in London for 33 students from the provinces. The Hostel at Sussex Place continued as the centre of student life in the United Kingdom. Nine students taking extended courses in the United Kingdom spent their leave in the Sudan, travelling both ways by the chartered air service. On 7th April a party attended by distinguished visitors and by many Sudanese students was given at the Hostel in celebration of Mohammed Abdulla Galander winning the Bayliss prize.

CHIEF INSPECTING ENGINEER'S BRANCH.

Accounts Section.

846. The work of this section covers both branches of the Agency. 1948 was the first complete year as a separate accounting unit and the new system became well established and was working smoothly. The cost of the Agency remained at the same level as in 1947, £E. 48,000, of which £E. 30,000 represented salaries.

847. Payments reached a record high level. Although exchange control restrictions remained in force an increased number of transactions was handled. Claims for loss and damage to goods in transit from the United Kingdom to the Sudan increased by fifty per cent and 288 claims were handled involving refunds amounting to £E. 4,710. Statistics were as follows :—

	1947		1948	
	No. of Orders issued	Expenditure	No. of Orders issued	Expenditure
Railways	2,789	£657,536	3,069	£796,229
Other Departments	2,351	£1,757,807	2,576	£5,667,290*
TOTAL	5,140	£2,415,343	5,645	£6,463,519

† includes £E. 2,989,177 for wheat and cotton piece goods, and £E. 1,248,055 for sugar.

Shipping Section.

848. The work of the section increased considerably owing to the greater number of orders and the larger tonnage handled. Throughout the year the shipping position was better from all ports and allocations

of space for all commodities except cement and ammonium nitrate were regular. Owing to the embargo on the shipment of cement during the summer months, the bulk of the requirements could not be despatched until the end of the year and as a result one thousand tons were awaiting shipment at the end of December. The shipment of ammonium nitrate, owing to its hazardous nature, has always constituted an awkward problem, but in view of past experience the delivery programme was put forward and in consequence all allocations of this commodity up to the end of October were shipped. The strike at Port Sudan in March caused apprehension to the steamship companies as several cargoes to Port Sudan were en route at the time, but with the exception of three which were off-loaded at Egyptian ports, all steamers were able to discharge at Port Sudan. A committee appointed by the Port Sudan Harbour Advisory Board reviewed the shipping marks for government cargo and as a result a standard marking of packages was adopted and came under trial.

Comparative statistics over the past three years are as follows:—

	1946	1947	1948
Consignments dealt with	6,621	7,684	10,718
Total number of invoices, freight and insurance accounts, passed for payment	7,389	8,300	11,639
Number of bills of lading	149	187	371
Freight paid :	£E.	£E.	£E.
General stores	81,800	60,135	117,522
Cotton piece goods (Japanese)	—	22,627	19,363
Insurance premiums paid :			
General stores	5,900	5,138	6,777
Cotton piece goods (Japanese)	—	14,560	9,087
Insured Value :			
General stores	1,156,000	1,157,443	1,975,651
Cotton piece goods (Japanese)	—	948,392	649,648
Tonnage Shipped (f.o.b. contracts)	Tons	Tons	Tons
General cargo	25,284	14,828	29,173
Cotton piece goods (Japanese)	—	3,267	2,796
Tonnage Shipped (c.i.f. contracts)	Tons (Value)	Tons (Value)	Tons (Value)
Coal and Coke	50,450 (£217,634)	48,032 (£203,439)	44,264 (£209,190)
Cotton piece goods (Chinese)	—	—	1,548 (£432,155)
Cotton piece goods (Spanish)	—	—	7,096 (£1,678,246)
One full cargo timber	(Contract arranged f.o.b.)	11,674 (£238,173)	6,790 (£169,806)
Other c.i.f. cargo	—	63 (£3,774)	252 (£9,598)

	1946	1947	1948
Tonnage of cargoes shipped through Ministry of Food.	Tons (Value)	Tons (Value)	Tons (Value)
Wheat	—	4,010 (£136,481)	12,933 (£416,841)
Sugar	—	10,473 (£420,080)	23,071 (£873,050)
Coffee	4,014 (£247,290)	4,600 (£344,900)	—

Patterns and Drawings Section.

849. During the course of the year some 550 export licences were obtained, and until June, when goods from the Sudan consigned to the Chief Inspecting Engineer were exempted from import licences, the section obtained the necessary licences to cover all imports. The exemption of such goods from import licences, a very substantial concession by the Board of Trade, resulted from successful negotiations between the Agency, the Board of Trade and His Majesty's Customs Department. The section purchased during the year, on behalf of of Stores and Ordnance Department, over one million yards of various cloths including large quantities of puggaree, a type of cloth most difficult to persuade manufacturers in the United Kingdom to weave at the present time.

General Registry and Typing Section.

850. The number of orders received by the registry showed an increase of twelve per cent over the figures for the preceding year. The inward mail of between 200 and 250 letters daily (the registry deals principally with the Chief Inspecting Engineer's branch) showed a considerable increase and the postage on outgoing mail cost £E. 1,414 as against £E. 1,208 in the preceding year, when the mail of the welfare section, prior to its removal to Sussex Place, was also handled. On the other hand, the number of cables despatched showed a decrease from 2,146 to 1,771. The new progress system on orders from the Sudan Railways (referred to in the 1947 report on the patterns and drawings section) was extended to cover orders from all other departments. As a result of the increased volume of work in all sections of the Chief Inspecting Engineer's branch, the typing section was, in particular during the period following the Atbara stores fire, hard pressed to cover the work and many hours of extra duty resulted.

APPENDICES
APPENDIX I.

TABLE I — GENERAL SURVEY OF FINANCIAL POSITION.

	1941	1942	1943	1944	1945	1946	1947	1948
<i>Revenue</i>								
Provinces	£E. 626,005	£E. 699,026	£E. 753,656	£E. 737,335	£E. 754,640	£E. 807,299	£E. 807,938	£E. 860,062
Departments	1,894,289	1,971,346	2,146,556	2,390,498	2,911,814	3,635,566	4,825,005	6,595,322
	2,520,294	2,670,372	2,900,212	3,127,833	3,666,454	4,442,865	5,632,943	7,455,384
General Central Services	1,151,235	976,253	1,131,427	1,594,902	1,936,358	1,965,102*	1,829,756	2,652,864
	3,671,529	3,646,625	4,031,639	4,722,735	5,602,812	6,407,967	7,462,699	10,108,248
Railways Contribution	495,000	625,000	495,000	595,000	595,000	595,000	450,000	400,000
Irrigation Department	1,462,748	1,542,540	1,335,305	1,261,034	1,565,266	1,286,018	2,728,796	5,227,078
Total Revenue	5,629,277	5,814,165	5,861,944	6,578,769	7,763,078	8,288,985	10,641,495	15,735,326
<i>Expenditure</i>								
Provinces	799,698	864,278	862,934	927,336	941,730	1,048,996	1,466,763	1,739,108
Departments	1,778,954	1,946,873	2,287,463	2,601,972	3,082,096	3,481,696	4,616,222	5,688,485
	2,578,652	2,811,151	3,150,397	3,529,308	4,023,826	4,530,692	6,082,985	7,427,593
General Central Services	962,918	879,325	1,135,451	1,545,045	1,576,582	1,946,717	1,174,895	1,328,644
	3,541,570	3,690,476	4,285,848	5,074,353	5,600,408	6,477,409	7,257,880	8,756,237
Irrigation Department	696,740	698,365	716,792	737,323	752,519	773,543	855,843	918,832
Sudan Defence Force	598,850	598,850	598,850	598,850	598,850	598,850	920,944	645,283
Total Expenditure	4,837,160	4,987,691	5,601,790	6,410,526	6,951,777	7,849,802	8,934,667	10,320,352
Surplus of Revenue over Expenditure	792,117	826,474	260,454	49,107	811,301	439,183	1,706,828	5,414,974
Appropriation of Surplus :								
Cotton Equalisation Account	250,000	—	—	—	—	—	500,000	2,952,980
Civil Buildings Appropriation Account ..	185,000	266,100	100	97,411	537,644	—	—	—
Roads Appropriation Account	20,000	70,100	100	16,515	34,527	—	—	—
Provincial Water Supplies Appropriation Account	5,000	14,000	100	5,210	24,238	—	—	—
General Development Account	—	—	—	—	—	358,000	500,000	1,000,000
General Reserve Account	332,117	476,174	260,154	49,107	214,892	81,183	706,828	1,461,994
	792,117	826,474	260,454	168,243	811,301	439,183	1,706,828	5,414,974

* Includes £E. 290,705 transferred from Price Stabilisation Reserve Account to cover shortfall on budget estimate of profits from sale of sugar.

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APPENDIX I — TABLE 2.

Comparative Statement of Finances for 1947 and 1948.

	1947		1948	
	£s.	£s.	£s.	£s.
<i>Revenue.</i>				
Provinces :—				
Dato Tax	61		63	
Taxed Land	5,827		1,110	
Ushur	21,213		17,500	
Poll Tax	18,629		30,080	
Animal Tax	24,237		30,735	
Tribute	145,510		226,352	
Traders' Licences	14,079		11,033	
House Tax	36,381		46,921	
Rent from Government Land and Properties ..	57,604		65,123	
Contribution from Local Administrations	325,349		253,853	
Miscellaneous	159,048		177,292	
		807,938		860,062
Departments :—				
Agriculture and Forests ..	757,863		1,074,544	
Customs	2,991,943		4,406,342	
Legal	69,150		84,694	
Posts and Telegraphs	569,920		596,717	
Public Works	156,992		128,037	
Veterinary Service	75,515		70,529	
Other Departments and Services	203,622		234,459	
		4,825,005		6,595,322
General Central Services :—				
Sugar	279,145		747,730	
Interest	433,478		447,330	
Business Profits Tax	488,390		463,945	
Profit on Bank Notes and Currency	16,932		15,362	
Sudan Light and Power Co. Ltd.	53,559		54,748	
Railway Contribution	450,000		400,000	
Royalties :—				
Gum	245,032		350,498	
Other Articles	126,263		140,634	
Pension Contributions	128,065		125,632	
Other Items	58,892		306,985	
		2,279,756		3,052,864
Irrigation Department		2,728,796		5,227,078
Total Revenue		10,641,495		15,735,326

APPENDIX I — TABLE 2—(Continued).

	1947		1948	
	£E.	£E.	£E.	£E.
<i>Expenditure.</i>				
Provinces		1,466,763		1,739,108
Departments :—				
Agriculture and Forests ..	916,613		1,001,349	
Audit	18,521		18,652	
Civil Secretary :—				
Civil Secretary's Office	83,989		98,163	
Consulates	3,553		3,793	
Game Proservation ..	15,677		17,903	
Prisons	—		49,966	
Headquarters,				
Sudan Police.	35,265		40,553	
Public Relations	47,996		52,064	
Customs	66,755		72,632	
Economics and Trade ..	72,454		72,519	
Education (a)	491,804		684,329	
Finance	81,939		96,577	
Governor-General's Office ..	25,837		24,757	
Legal	137,799		151,677	
Mechanical Transport ..	—		499,551	
Medical	806,390		895,419	
Posts and Tolographs ..	627,226		700,206	
Public Works	725,043		487,445	
Stores and Ordnance ..	213,910		431,841	
Sudan Agent—Cairo	19,879		19,913	
Sudan Agent—London ..	47,516		47,092	
Survey	61,448		71,852	
Veterinary	116,608		150,241	
		4,616,222		5,688,485
Total for Provinces and Departments		6,082,985		7,427,593
General Central Services ..		1,174,895		1,328,644
Irrigation		855,843		918,832
Sudan Defence Force ..		820,944		645,283
Total Expenditure ..		8,934,667		10,320,352

(a) Excluding provision in Province Budgets which was estimated to be £E. 183,908 in 1947 and £E. 296,118 in 1948.

APPENDIX II.
GENERAL RESERVE ACCOUNT.

1948

	£E.
Balance as at 1st. January, 1948	3,258,919
<i>Add :</i>	
Government's share in the surplus of the Seed Farm Reserve (Sudan Plantations Syndicate)	2,830
Rent of Gezira buildings	7,046
Profit on sales of marketable securities	30,091
Value of stores brought on current account charge	418,653
Advances to the Equatoria Projects Board on Capital Account	150,000
Proportion of rain grown cotton reserves allocated to the Central Government in recovery of losses and by way of contribution towards taxation	304,712
Government's share in the surplus of the Gedaref Rural District Council in 1948	10,130
Recoveries of budgetary expenditure in prior years	7,645
Miscellaneous receipts	45,196
Budget surplus for 1948	1,461,994
Transfer of the balance outstanding at 31st December, 1948 on Cotton Equalisation Account	3,952,980
	9,650,196
<i>Deduct :</i>	
Grants to the reserves of local government authorities	7,814
Initial grant to Tokar tenants' welfare fund	10,000
Transfer to Assuan Dam Compensation Fund to cover excess expenditure	13,048
Transfer of 50 per cent. of the balances of accumulated expenditure relating to the Empire Air Mail Services	26,986
Premium on purchase of investments	74,452
1946 Nile flood relief measures	48,969
Miscellaneous expenditure	23,094
Transfer to Miscellaneous Reserves of unexpended balances of allotments	64,515
Transfer to Reserve for capital for new Gezira Administration	3,100,205
Transfer to the Reserve for Working Capital and Non-Realisable assets	6,000,000
	9,369,083
<i>Balance as at 31st December, 1948</i>	281,113

APPENDIX III.

SUDAN LOANS.

DESCRIPTION.	Extent of guarantee by His Britannic Majesty's Government	Date of Issue	Issue Price	Nominal Amount	Net Proceeds	Cash paid in redemption including cash at bank or in hands of trustees for redemption	Outstanding liability at 31st December 1948
<i>Sudan Guaranteed Loans :</i>				£(sterling)	£(sterling)	£(sterling)	£(sterling)
4½% Guaranteed Stock, 1939-1973 ..						(a)	
First Issue	Principal and Interest	January, 1923	93	3,250,000	3,465,358	607,121	3,156,279
Second Issue		May, 1924	95½	513,400			
4% Guaranteed Stock, 1950-1974 ..	„	November, 1924	86	1,500,000	1,268,711	—	1,500,000
3¾% Guaranteed Stock, 1954-1959 ..	Interest	July, 1939	97	2,000,000	1,900,479	769,701	1,230,299
(a) Includes premium paid in redemption amounting to £. 318,100.							
<i>Loans of Construction Companies in which the Sudan Government is the sole shareholder and for the service of which the Sudan Government is responsible.</i>							

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APPENDIX III. (Contd.)

Kassala Railway Company :								
4½% Guaranteed Debenture Stock, 1934-1953	Principal and Interest (Trade Facilities Act, 1921)	January, 1923	93	1,290,000	1,173,706	1,042,819	397,181	
First Issue		January, 1927	91	150,000	135,799			
Second Issue								
Gedaref Railway and Development Company, (Sudan) Ltd.								
5% Guaranteed Debenture Stock, 1932-1962	Principal and Interest (Trade Facilities Act, 1921-26)	February, 1927	100½	2,160,000	2,132,347	558,938	1,301,062	

NOTES :—

1. Sudan 5½% Guaranteed Loans 1929-59 (issued £6,380,000 nominal) and Sudan Construction and Equipment Company Ltd. 4½% Guaranteed Debenture Stock (issued £540,000 nominal) have been redeemed in full.
2. In addition to the loan liabilities shown, the Sudan Government is indebted to the Egyptian Government in respect of advances amounting to £E. 5,553,359 made for development purposes in the Sudan.
3. There is contingent liability of £400,000 in respect of the 5% Guaranteed Debenture Stock of the Sudan Light and Power Company Ltd. This issue is guaranteed as to principal and interest by His Britannic Majesty's Government under the Trade Facilities, Acts, 1921-25, and also by the Sudan Government. On 31st December, 1948 the Redemption Fund in the hands of Trustees amounted to £256,454

APPENDIX IV.
LOCAL GOVERNMENT (RURAL ADMINISTRATIONS)
1948 FINANCIAL RESULTS.

	Revenue	Expenditure	Contribution to Central Govt.	Surplus
	£E.	£E.	£E.	£E.
<i>Blue Nile :</i>				
Sennar	18,474	6,638	10,430	1,406
Northern White Nile R.D.C. ..	46,582	28,766	16,014	1,802
Southern White Nile R.D.C. ..	64,019	22,636	40,327	1,056
Shukria	16,122	8,381	6,321	1,420
Fung Gism	25,948	12,959	11,629	1,360
Messellamia Gism R.D.C. ..	16,934	9,427	—	7,507
Kamlin Gism R.D.C.	13,082	6,743	1,591	4,748
Halawin Khut R.D.C.	6,557	4,087	282	2,188
Managil	14,310	5,385	8,623	302
Southern Gism R.D.C. (Gezira)	15,171	8,408	2,880	3,883
Centre Gism R.D.C. (Gezira) ..	12,486	8,417	140	3,929
	249,685	121,847	98,237	29,601
<i>Darfur :</i>				
Dar Masalit	11,368	7,182	3,950	236
El Fasher R.D.C.	18,974	16,405	—	2,569
Southern Darfur R.D.C.	26,931	24,901	—	2,030
Eastern Darfur R.D.C.	4,137	3,635	—	502
Zalingei Magdumate	12,260	8,200	4,701	(*) 641
(*) Deficit.	73,670	60,323	8,651	4,696
<i>Kassala :</i>				
Gedaref R.D.C.	108,683	63,497	19,000	26,186
Tokar Meglis Ahli R.D.C.	9,619	7,793	—	1,826
	118,302	71,290	19,000	28,012
<i>Khartoum :</i>				
Khartoum R. D. C.	15,726	11,133	4,593	—
<i>Kordofan :</i>				
Tegali R.D.C.	21,182	17,281	2,673	1,228
Eastern Kordofan R.D.C.	27,777	23,470	—	4,307
Dar Hamid	17,294	11,519	5,450	325
Dar Hamar	35,149	21,504	11,987	1,658
Dar Bederia	10,450	7,038	3,161	251
Dar Kababish	21,218	10,651	10,087	480
Dar Messeria	21,388	12,852	7,412	1,124
Nuba Nymang	6,295	3,487	2,024	784
	160,753	107,802	42,794	10,157
<i>Northern :</i>				
Dongola R.D.C.	25,988	11,115	12,569	2,304
Merowe R.D.C.	33,717	12,140	15,430	6,147
Berber R.D.C.	23,511	9,674	11,533	2,304
Shendi R.D.C.	27,137	11,674	9,267	6,196
Wadi Halfa R.D.C.	15,681	6,156	7,640	1,885
	126,034	59,759	56,439	18,836
TOTAL	744,170	423,154	229,714	91,302

APPENDIX V.
LOCAL GOVERNMENTS.
(MUNICIPALITIES AND TOWN COUNCILS)
1948 FINANCIAL RESULTS.

	Revenue	Expenditure	Surplus
	£E.	£E.	£E.
<i>Municipalities :—</i>			
Khartoum	99,331	93,151	6,180
Omdurman	53,092	50,361	2,731
Khartoum North	22,904	21,164	1,740
Port Sudan	45,100	37,396	7,704
Atbara	14,417	14,289	128
	234,844	216,361	18,483
<i>Town Councils :—</i>			
Wad Medani	22,991	19,494	3,497
Kosti	7,519	6,497	1,022
Rufaa	2,065	1,933	132
Kassala	15,406	11,712	3,694
El Obeid	32,167	22,086	10,081
Ed Damer	4,536	3,895	641
Berber	2,888	2,804	84
Wadi Halfa	7,240	7,240	—
Shendi	5,159	5,246	87†
	99,971	80,907	19,064
	334,815	297,268	37,547

† Deficit.

APPENDIX VI.

JEBEL AULIA COMPENSATION FUND AS AT 31st DECEMBER, 1948.

RECEIPTS.	£E.	£E.	EXPENDITURE.	£E.	£E.
Egyptian Government		750,000	Protection of Towns and Basins :—		
Interest and Dividends etc.		292,818	Towns :—		
Appreciation on Book Value of Investments disposed of during :—			Kosti	27,800	
£E.			Dueim	29,216	
1936	558		Kawa	5,493	
1939	575		Gulli	2,026	
1942	5,130		Basins :—		
1943	55		Sufi-Turaa	12,756	
1944	23		Shabasha-Salati	17,297	
1945	1				94,588
1946	60		Compensation for Individual Damage :—		
1947	25		River Land :—		
1948	4		Cash Awards	150,029	
		6,431	Value of Land Awarded	3,531	
			Town Property :—		
			Geteina	27,613	
			Villages North of Geteina	1,748	
			Villages South of Geteina	52,480	
			Kosti	13,112	
			Dueim	11,905	
			Kawa	2,042	
			Other Interests	29,853	
			Water Supplies in areas of Government registered land	6,347	
			Assessment Costs	32,749	
					331,409

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APPENDIX VI. (Contd.)

Deduct :—				Alternative Livelihood Schemes :—			
Realised Loss on Book Value of Investments disposed of during :—							
	£s.				£s.		
1940	1,374			Abdol Magid	175,360		
1941	173			Expenditure to 31.12.1948	175,360		
1948	7			Less : Amount assumed by Government	175,360		
		1,554		Fatima and Heshaba Pump Schemes	111,810		
			4,877	Umm Gerr L'ump Scheme	65,652		
				Wad Nimr (Sufi) Scheme	9,763		187,225
				Other Schemes :—			
				Wad Rabbah (Ed Ducim) Canal Scheme	1,592		
				Ferries	2,733		
				Abu Gassaba Causeway	2,729		
				Kawda Low Lift Scheme	1,097		8,151
				Other Items			11,903
				Total Expenditure to 31st December, 1948			633,276
				Net Cost of Conversion of Investments in 1939 and 1943			31,022
				Depreciation on revaluation of Investments to middle market price at 31st December :—			
				1938	57,605		
				1939	31,929		
						89,534	
				Deduct :—			
				Appreciation on revaluation of Investments at 31st December :—			
				1942	86,091		
				1943	1,735		
						87,826	
							1,708
				Balance as at 31st December, 1948 :—			
				Investments	365,746		
				Cash with National Bank of Egypt, Cairo	15,943		
							381,689
TOTAL		1,047,695		TOTAL			1,047,695

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