



SUDAN No. 1 (1952)

Report  
on the  
Administration of the Sudan  
for the Year 1949

*Presented by the Secretary of State for Foreign Affairs to Parliament  
by Command of His Majesty  
January, 1952*

LONDON  
HIS MAJESTY'S STATIONERY OFFICE

Cmd. 8434

*Printed in the Sudan*

REPORT BY THE GOVERNOR-GENERAL ON THE  
ADMINISTRATION, FINANCE, AND CONDITIONS  
OF THE SUDAN IN 1949.

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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. 6¼d.
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.

**GLOSSARY.**—(Contd.)

Ret	...	...	=	Paramount Chief (Shilluk).
Rotl	...	...	=	0.99 lb.
Sagia	...	...	=	Water-wheel.
Saidi	...	...	=	Egyptian labourer.
Samad	...	...	=	Sudanese Overseer (Gezira).
Seluka	...	...	=	Land flooded by the Nile.
Semn	...	...	=	Clarified butter (ghee).
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 I — GENERAL

1. To some extent the effects of the unease and even turbulence of the immediate post-war years, in the economic, social and political spheres, in suffering which the Sudan was no exception among most other countries of the world, inclined during 1949 to settle down, and this was evidenced in a greater general application to specific problems in a more practical and objective spirit. Under a still fluid surface, broken only occasionally by minor ebullitions, it was possible to detect the formation of a firmer core as a basis of future progress.

2. Perhaps the most widely observed development was the first year's working of the Executive Council and the Legislative Assembly. The first session of the Assembly, after adjournments from 21st. January to 16th February and from 7th April to 19th October, was finally prorogued on 30th December. During that time a number of members achieved 100 per cent attendance and the standard of attendance was generally high. The public showed increasing interest in the Assembly's deliberations, and the galleries were generally well filled. In the first half of the session much of the business was concerned with questions and answers while legislation was mostly confined to Appropriation Bills and amendments to existing ordinances. Several motions of a controversial nature, such as one calling for the introduction of a stringent company law and another for a time table towards political independence by 1956, were rejected. In the second half of the session a number of important subjects were considered including Dr. Marshall's report on local government in the Sudan, educational policy including the teaching of Arabic in the south, and the future of the Gezira Scheme. The first two were approved in principle and the future of the Gezira was referred to a select committee for consideration. The success of the Assembly to some extent stole the limelight from party factions which might have been able to achieve more if agreement had been reached on a united policy. Several attempts were made to find a common ground but all were unsuccessful.

3. Economic conditions were generally good, but cotton, which accounted again, as in 1948, for about 80 per cent of the total value of exports, continued its dangerously predominant position in the country's economy. A good crop coupled with what were then regarded as very high prices caused severe inflationary pressure in spite of an increase in the export duty from 5 per cent to 10 per cent and the spreading of payment to the tenant cultivators of their share of the proceeds,

4. The position was aggravated by the poor grain crop (*dura*), with cotton cultivators in the Gezira being under no necessity to sell their grain to supplement their cash resources. In the result there was considerable hoarding and grain prices rose throughout the year, at the end of which, when the price has normally fallen after the harvest, the retail price in Khartoum was 30 per cent higher than a year before. This increase, however, only brought the internal price of grain up to approximately world prices.

5. Gum exports showed a slight recession from the previous year's record, but prices were higher, particularly after devaluation of the currency in September, and the value of the crop was some £E. 50,000 greater than in the previous year. The exports of camels, cattle and sheep also increased materially and the prices obtained were slightly higher.

6. Total exports and re-exports reached the record figure of £E. 27½ million, compared with £E. 24½ million in 1948 the increase being mainly attributable to cotton and camel sales. Imports rose to nearly £E. 24 million, compared with £E. 22 million in 1948, the principal increases being in the quantities of wheat, sugar, coffee and tea imported. After taking into account camel and certain other exports, not included in the above, and the deficit on invisible items, it was estimated that the balance of payments was favourable to the extent of £E. 5 million.

7. The major financial event of the year was the devaluation of the Egyptian pound in conformity with the devaluation of sterling in September. Devaluation had, however, little immediate effect upon the general index of prices of imported goods, but it did check the downward trend in export prices.

8. The 1949 budget showed a prospective surplus of £E. 313,026, after providing for appropriations of £E. 2,192,000 to the Development Account and £E. 1,500,000 to a newly created Revenue Equalisation Account. The actual results, largely owing to the substantial increase in the cotton yield and prices over those estimated when framing the budget, were very much more favourable, making it possible to increase the appropriation to the Development Account by £E. 3 billion and the surplus for transfer to the General Reserve from £E. 313,026 to £E. 705,692.

9. The state of public health was satisfactory and no major epidemics occurred; owing to poor rains however and the resultant effect on grain and grazing, conditions of shortage existed in many districts and relief measures were undertaken until new crops should be available.

## CHAPTER II — FRONTIERS

10. On the eastern frontier of Kassala Province with Eritrea local official relations were good and a successful meeting was held between the Eritrean and Beja District authorities for the settlement of certain outstanding claims. Further south, on the Ethiopian border there were no incidents but smuggling and poaching continued to occupy the attention of the standing police patrol at Basunda. In Blue Nile Province frontier relations with the Ethiopian authorities were good and visits were exchanged.

11. In the Boma area of Upper Nile Province the frontier was free from serious disturbance. Visits were exchanged with the Ethiopian authorities in the Anuak area. Little improvement, however, was discernible in the relations between the Toposa and Turkana on the Kenya border, although two combined meetings were held.

12. Relations with the Uganda and Belgian Congo authorities and Equatoria Province were cordial and there was a number of instances of co-operation in arresting fugitive criminals. A combined meeting of Sudan and Uganda Madi chiefs was held.

13. In the west, official relations and also those between the territorial chiefs along the frontier between Darfur Province and French Equatorial Africa, were very cordial and the Sultan of the Masalit from the Sudan visited Goz Beida and Abeche in French territory.

## CHAPTER III — PUBLIC SECURITY

## SUDAN DEFENCE FORCE.

14. All major issues outstanding from the war-time "Cairo Agreement" were settled during the year, and re-equipment of the Sudan Defence Force proceeded. Operationally the year was quiet. Units of the Equatorial Corps co-operated with the civil authorities of the Sudan and of Kenya in controlling the movement of the Nyangatom in the extreme south-east of the country where tribal relations on the Ethiopian and Kenya frontiers offer recurrent difficulties. The Eastern Arab Corps provided a patrol which succeeded in contacting poachers on the River Dinder in Kassala Province.

15. All Corps undertook training patrols in their areas, and collective training was undertaken by corps and units. Thirteen officers and 96 non-commissioned officers passed through the In-

fantry School during 1949, and training teams from the school also visited corps and conducted courses for non-commissioned officers and potential instructors in the corps areas.

16. The Sudan Military College, set up in Omdurman in 1948, continued on a syllabus designed to produce officers at the end of a two-year course. The first out-turn should be available for posting in 1950. In 1949 the numbers undergoing training at the College were 13 in the senior course and 15 in the junior. Officer cadets of the college assisted the staff of the Infantry School in instruction duties at a camp held at Sabaloka which 250 cadets from the Gordon Memorial College, Wadi Seidna Secondary School and Hantoub Secondary School, attended.

17. 42 boys passed out of the Engineer Troops Boys' Technical Company in various trades and enlisted in the Sudan Defence Force. There were 204 boys under training at the end of the year.

18. The Sudan Defence Force Signals Boys' School started in February, 1949, with 43 boys. At the end of this first year results were encouraging.

19. Four Sudanese officers went to the United Kingdom on courses during the year, with very satisfactory results, one officer obtaining a distinguished report on a platoon weapons course.

20. Preliminary work was completed by the Sudan Defence Force War Memorial appeal Committee as a prelude to launching an appeal for funds. The main feature, it was decided, should be an impressive memorial in Khartoum, with smaller local memorials in the four Corps headquarters.

#### POLICE.

21. The establishment of the regular force was increased by two officers and 270 other ranks, bringing the total up to 106 officers and 6,405 other ranks. In addition, the force of emergency police employed by military formations rose to one officer and 165 other ranks.

22. Public security remained satisfactory and crimes of a preventable nature decreased appreciably. There was a slight increase in the number of offences in which firearms were used, totalling 46. There was no important incident of public disorder. In general crimes of violence decreased slightly, and there was a greater general decrease in offences against property.

23. The police training school gave instruction to 95 non-commissioned officers and men from the provinces during the year,

of whom four failed to pass the course tests. In the proficiency examination held in April, 76 non-commissioned officers and men passed and became entitled to proficiency pay. Eight police cadets were accepted into the school, and two cadets from Aden. One police officer attended a course of instruction with the Metropolitan Police, London, and three with Gloucestershire County Police.

24. Cases handled by the criminal investigation department numbered 127, an increase of 23 over the previous year.

25. In the course of the re-organisation of the fingerprint bureau, some 29,000 fiches were destroyed as valueless owing to the previous death of the offender or other causes. The total number of fiches, fingerprint searches and recordings was 77,000. The total number of record slips filed at the end of the year was 210,292, or 11,919 less than at the end of the previous year.

#### PASSPORTS AND PERMITS.

26. There was a large increase in travel both by air and by surface routes. Passengers entering, leaving or in transit through the Sudan totalled 108,522 by air (91,137 in 1948) and 65,252 by surface (57,939 in 1948). The number of aircraft dealt with was 6,816, of which 4,968 were at Khartoum, 750 at Port Sudan, 499 at Juba, 433 at Wadi Halfa, 111 at Kassala and 55 at Geneina.

27. The alien population of the Sudan showed an increase during the year of 252 to 4,363, mainly owing to registration of persons previously not registered.

#### PRISONS.

28. The prisons committee met twice and submitted recommendations on the cadre and scales of pay of staff, juvenile delinquency, quarry camps, the establishment of a warders' training school, and on a number of other subjects. On the recommendation of this committee the prisons section was made responsible for combatting juvenile delinquency both by reformatory schools and by the probation system.

29. At Khartoum North and at Wad Medani the education and training of young offenders was continued on modern lines, and the concentration of recidivists in central prisons continued. Although this interrupted prison industries, industrial revenue at Khartoum North increased from £E. 1,117 to £E. 3,500. Industries in provinces were also developed. Port Sudan central prison again undertook the municipal road maintenance and built police and warders' houses.

30. Discipline in all prisons was good. An ad hoc commission was appointed to inquire into the principles and practice of

classifying prisoners and to make recommendations. These were submitted and were being considered.

31. Health was generally good. Established camps kept up their standards and expanded. New agricultural camps were established or prepared in Darfur, and at Port Sudan; and new quarry camps in Darfur, at Kassala, at Jebel Moya and at Suakin.

32. Six new posts were approved on the prison officer establishment. The warder force was subject to more exacting conditions of recruitment and training, and proposals were submitted for a warders' training school at Port Sudan.

33. A new prison at Kassala was completed and taken into use. Plans were prepared for the erection of a criminal lunatic asylum in 1950.

## CHAPTER IV — LOCAL GOVERNMENT

### GENERAL.

34. Dr. A. H. Marshall, City Treasurer of Coventry, completed his six months' survey and presented a report in April. This was considered by the local government advisory board, by the Executive Council, by province and local councils, and finally was debated in the Legislative Assembly. The report, almost all of whose recommendations were accepted in principle, advised against the major/minor authority system in favour of all-purpose authorities, but otherwise generally approved the course being currently followed. To implement the recommendations preparation of a new local government Ordinance was put in hand. It was also agreed that a special local government branch of the Secretariat should be formed, to deal with financial as well as administrative matters.

### COUNCILS.

35. Issue of individual warrants ceased until the new legislation should come into force, but certain authorities were empowered by warrant to delegate local government powers to provisional councils. Keenness to set up the council form of local government continued to be shown but on the administrative and financial sides it was clear that a period of consolidation was required. There were 42 warranted councils (all but one with independent budgets), seven local administrations and four provisional local authorities also with independent budgets but no warrants. Kassala town council, which had been suspended in 1948, was reinstated.



36. The financial state of councils in 1949 was as follows:—

	Revenue	Expenditure	Contribution to General Revenue	Surplus
	£E.	£E.	£E.	£E.
26 rural areas .. ..	750,389	454,899	200,432	95,058
7 local administrations ..	138,163	66,220	62,940	9,003
Total rural units ..	888,552	521,119	263,372	104,061
5 municipalities .. ..	282,379	259,183	—	23,196
12 town councils .. ..	152,834	135,314	—	17,520
50 units .. ..	1,323,765	915,616	263,372	144,777

16 first division and 149 second division government officials were on secondment to local councils, whilst many more were doing much work for them.

#### COURTS.

37. In the northern provinces there were 95 main and regional courts, 235 branch and 353 meglis courts. In the southern provinces were 302 chiefs' courts of different categories. These saw 61,582 criminal, 28,456 civil and 16,201 personal cases, totalling 106,239 cases in all, compared with 100,214 in 1948; and there were 73,559 convictions compared with 70,832 in 1948. Appeals totalled 3,993 compared with 2,455 in 1948.

38. The warrants of ten court systems (i.e. — a warrant covering a group of related courts on different levels) were revised or brought up to date.

## CHAPTER V — JUSTICE

### GENERAL.

39. The statistics of court work showed a marked increase, but the incidence of serious crime was not excessive.

### JUDICIAL.

40. Summary proceedings by courts established under the Code of Criminal Procedure amounted to 34,197, the average figure for the previous five years being 25,863: non-summary proceedings totalled 2,004 and 1,841 respectively; minor courts 146 and 100, and major courts 432 and 352 respectively.

41. There were 144 convictions for murder: the death sentence was passed in 104 cases and carried out in 40, as compared with averages of 102, 84 and 30 respectively for the previous five years.

42. In civil courts of the first instance under the Civil Justice Ordinance 8,927 suits were registered, compared with an average of 6,528 for the previous five years, and there were 2,671 executions compared with 1,869. Fees showed a corresponding rise from a previous average of £E. 22,386 to £E. 27,693, though the figure in 1948 was £E. 28,499.

43. Sharia court statistics are as follows:—

Nature of proceedings	1948	1949
Cases instituted .. .. .	14,783	15,039
Applications for administration of estates .. .. .	3,961	3,937
Appeals to first class courts:		
Received .. .. .	234	179
Disposed of .. .. .	241	163
Revisions to High Sharia Court:		
Received .. .. .	315	327
Disposed of .. .. .	273	274
Fees .. .. .	£E. 14,561	£E. 13,358

#### LEGISLATION.

44. During the year 1949 the Executive Council and Legislative Assembly Ordinance, 1948, came into operation, whereunder bills require to be passed both by the Executive Council and the Legislative Assembly and to receive the assent of the Governor or-General before becoming law. In addition to the normal procedure for the passage of bills, several provisional orders were made under the special procedure laid down for urgent matters requiring legislation when the Assembly is not sitting. Provisional orders require subsequent confirmation by the Assembly. Besides important financial legislation, of notable interest was the Workshops and Factories Ordinance, representing the last instalment of the code of labour legislation, and the most important amendment of an existing ordinance was the Code of Criminal Procedure Amendment Ordinance which provided for the setting up of a court of criminal appeal and introduced some important simplifications in procedure.

45. Below is a list of Ordinances and Provisional Orders passed by the Assembly and published in the Sudan Government Gazette during the year:—

(a) Ordinances

1. Advance Appropriation Ordinance, 1949.
2. Advance Appropriation of Reserves Ordinance, 1949.
3. The Preservation of Wild Animals (Amendment) Ordinance, 1949.
4. Appropriation Ordinance, 1949.
5. Appropriation of Reserves Ordinance, 1949.
6. The Rent Restriction (Amendment) Ordinance, 1949.
7. The Regulation of Trade Disputes (Amendment) Ordinance, 1949.
8. The Workmen's Compensation (Amendment) Ordinance, 1949.
9. The Cinematograph Ordinance, 1949.
10. The Passports & Permits (Amendment) Ordinance, 1949.
11. The Advocates (Amendment) Ordinance, 1949.
12. The Trade Unions (Amendment) Ordinance, 1949.
13. The Land Settlement and Registration (Amendment) Ordinance, 1949.
14. The Arms Ammunition and Explosives (Amendment) Ordinance, 1949.
15. The Customs (Amendment) Ordinance, 1949.
16. The Boy Scouts Ordinance, 1949.
17. The Girl Guides Ordinance, 1949.
18. The Workshops and Factories Ordinance, 1949.
19. The Economics (Transitional Controls) Constitution Ordinance, 1949.
20. The Supplementary Finance Ordinance, 1949.
21. The Advance 1950/51 Appropriation Ordinance, 1949.
22. The Advance 1950/51 Appropriation of Reserves Ordinance, 1949.
23. The Code of Criminal Procedure (Amendment) Ordinance, 1949.

(b) Provisional Orders

1. The Supplementary Finance Provisional Order, 1949.
2. The Employers and Employed Persons Ordinance (Amendment) Provisional Order, 1949.
3. The Land Acquisition Ordinance (Amendment) Provisional Order, 1949.
4. The Trade Unions Ordinance (Amendment) Provisional Order, 1949.
5. The Regulation of Trade Disputes Ordinance (Amendment) Provisional Order, 1949.
6. The Trade Disputes (Arbitration and Enquiry) Ordinance (Amendment) Provisional Order, 1949.

7. The Supplementary Appropriation Provisional Order, 1949.
8. The Supplementary Appropriation of Reserves Provisional Order, 1949.
9. The Supplementary Appropriation Provisional Order No. 2. of 1949.
10. The Supplementary Finance (Gum Royalties) Provisional Order, 1949.
11. The Supplementary Appropriation of Reserves Provisional Order No. 2. of 1949.

#### LANDS.

46. Progress was made during the year in preparing schemes for the disposal of sites expressly excluded from the operation of the Town Lands Scheme 1947, and accordingly two schemes for the disposal of non-government school sites and petroleum sites were approved. Other schemes for the disposal of sites for religious purposes, for cinemas and for clubs were in course of preparation. Town Lands Scheme 1947 continued to work well and to be more widely understood: this resulted in speedier development and improved building standards, particularly in Khartoum Province, where the public realised that undeveloped sites were likely to be retaken. During 1949 the Village Land Scheme, introduced in 1948, was applied to 97 villages in different parts of the Sudan. Good progress was made in town planning and the draft of a Town Replanning Bill was prepared. A mines and minerals committee was appointed by the board of economics and trade, to succeed the mines and minerals sub-committee. Demand for agricultural leases for pump schemes increased during the year and several areas were settled and registered specifically for that purpose. A declaration under the Lands Acquisition Ordinance, 1930, was published for the acquisition of the whole area required for the north-west extension of the Gezira scheme.

#### ADMINISTRATOR-GENERAL'S OFFICE.

47. There were two bankruptcies in 1949, the first since 1943.
48. Thirty-three new estates were taken under administration during the year and the fees collected thereon amounted to £E. 4,469. The figure for 1948 was £E. 1,796.
49. There were 43 trust estates, amounting to £E. 80,376, vested in the Public Trustee at the beginning of 1949, and one new trust was accepted and formally vested during the year. Two trust estates were formally discharged. Investments of trust funds were confined as usual to loans on mortgages and deposits in the post office savings bank. Twenty applications for loans on mortgages were received and of these fourteen were approved.

50. There was no change in the situation as to enemy property and German and other enemy funds held by the Custodian of Enemy Property amount to £E. 67,680.

LAND REGISTRATION.

51. The number of deeds registered remained constant, but there was again an increase in fees owing to the rise in land values. The figures were :—

Year	Town Lands		Agricultural Lands		TOTAL	
	Deeds	Fees	Deeds	Fees	Deeds	Fees
		£E.		£E.		£E.
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
1949 .. .. .	4,396	22,754	6,435	3,988	10,831	26,742

52. The land registry working party, started in 1947, continued its work and the town lands registers in the Omdurman, Khartoum, El Obeid and Shendi land registries have been completely reorganised and that of Ed Damer was nearing completion by the end of the year. In all some 47,000 registers were dealt with, and the corresponding 47,000 plot files. The Shendi basin registers amounting to 3,294 were also dealt with.

53. Fourteen companies incorporated in the Sudan were registered of which ten were private companies. Three foreign companies were registered under Part VIII of the Ordinance, of which two were private. One foreign company ceased to have a place of business in the Sudan.

TRADE MARKS.

54. Trade marks statistics were as follows :—

Applications received .. .. .	216
Applications under consideration .. .. .	—
Marks placed in the register .. .. .	214
Applications cancelled .. .. .	2
Assignments of marks recorded .. .. .	11
Marks removed from the register .. .. .	—
Marks withdrawn after registration .. .. .	1
Renewals of marks recorded .. .. .	16

PARTNERSHIPS.

55. 33 partnerships were registered and 18 were dissolved compared with 51 and 15 respectively during 1948.

BUSINESS NAMES.

56. 57 firms and individuals were registered under the Registration of Business Names Ordinance, 1931, compared with 77 in 1948. In 19 cases notices of cessation of business were given, compared with 18 in 1948.

MARRIAGES.

57. 438 marriages were registered under the Non-Mohammedan Marriage Ordinance, 1926, compared with 575 in 1948. One special marriage licence was granted.

BIRTHS AND DEATHS.

58. 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
1948 .. .. .	37,425	819	15,073
1949 .. .. .	36,166	861	15,546

The total number of certificates issued for births and deaths was 9,710 as against 7,849 in 1948.

TRADE UNIONS.

59. The office of the registrar of trade unions set up early in 1948 started to receive applications, and up to the end of the year 12 applications were received for registration and five trade unions were issued with certificates of registration.

CHAPTER VI — FINANCE

60. Certain of the figures relating to 1948 results which are used in the following statements differ from those given in the 1948

annual report. These differences result from adjustments arising from the Auditor General's report on the final 1948 accounts from which source the figures used in the 1948 annual report were taken.

**FINANCIAL RESULTS, 1949.**

61. In the 1949 budget estimated revenue was put at £E. 15,578,766 and expenditure at £E. 11,573,740. Of the surplus of £E. 4,005,026, £E. 2,192,000 was appropriated to the Development Account, and £E. 1,500,000 to a newly created Revenue Equalisation Account, leaving an unallotted balance of £E. 313,026. In the event revenue amounted to £E. 19,172,105 and expenditure to £E. 11,774,413, final appropriations of the surplus of £E. 7,397,692 being £E. 5,192,000 to the Development Account, £E. 1,500,000 to the Revenue Equalisation Account and £E. 705,692 to the General Reserve Account. Appendix 1, Table 1 sets out in detail the financial results of the year together with comparative figures for the last seven years. Both revenue and expenditure figures were the highest yet recorded.

**REVENUE.**

62. The year's results are compared with the estimates and with 1948 results in the following table :—

	1948 Results	1949 Estimates	1949 Results	Excess of results 1949 over estimates
	£E.	£E.	£E.	£E.
Provinces .. ..	860,062	877,799	879,008	1,209
Ministries and Depart- ments .. ..	6,605,042	7,120,657	8,779,213	1,658,556
General Central Services	2,958,608	2,722,650	3,553,228	830,578
Irrigation Department	5,227,078	4,857,660	5,960,656	1,102,996
	15,650,790	15,578,766	19,172,105	3,593,339

63. Of the provinces, Kordofan again alone showed a short-fall as a result of a deficit in the contributions from local authorities. This was, however, slightly more than balanced by surpluses in other provinces.

64. Of the Ministries and Departments, the Customs Department produced an increase of £E. 1,341,911 over the estimate, the main causes being the increase in export duty on cotton lint and cotton seed from 5 per cent to 10 per cent, and the increased value

of public imports following the relaxation of import control. Receipts from the Gezira Cotton concessions and White Nile and Gondal schemes, which comprise almost the whole of the Irrigation Department's revenue, exceeded the budget estimate by £E. 1,100,807, the total of £E. 5,908,911 accounting for nearly one third of the total central government revenue. Cotton also contributed to the excess of £E. 144,161 over the estimates in the Ministry of Agriculture budget; it was derived from increases in the government's share in the Gash and Tokar cotton crops, commissions on sales and receipts from ginning factories, only partially offset by shortfalls on sales of firewood and timber. Other major increases occurred in the Stores and Ordnance Department (£E. 68,655, resulting from an abnormally heavy manufacturing programme), the Legal Department (£E. 34,959), the Mechanical Transport Department (£E. 31,615), Sudan Airways (£E. 15,807). In each case the increase was due to a greater volume of work undertaken. The main deficits were in the Posts and Telegraphs Department (£E. 13,150, principally caused by a shortfall on receipts from telegrams), and in Civil Aviation (£E. 11,142, caused by overestimation of landing fees).

65. There was a substantial excess on revenue under the heading general central services. Increased consumption of sugar accounted for £E. 318,757, business profits tax exceeded the estimate by £E. 164,854, the royalty on gum, which was increased after devaluation, produced an excess of £E. 120,939 and miscellaneous receipts were up by £E. 282,727 as a result of taking to revenue items previously credited to the general reserve. There was a deficit of £E. 57,740 on interest as a result of charging general central services with premia on the purchase of investments, which were formerly debited to the general reserve.

Detailed revenue figures are given in Appendix I, Table 2, and an analysis of the main sources of revenue in Appendix II.



## EXPENDITURE.

66: 1949 results are compared bel. w with 1949 estimates and 1948 results :—

	1948 Results	1949 Estimates	1949 Results	1949 Results compared with Estimates
	£E.	£E.	£E.	£E.
Provinces .. .. .	1,739,108	1,971,375	1,992,982	+ 21,607
Ministries and Depart- ments .. .. .	5,688,485	6,727,581	6,738,797	+ 11,216
General Central Services	1,326,881	1,242,932	1,477,866	+ 234,934
Irrigation .. .. .	918,832	984,112	966,628	— 17,484
Sudan Defence Force ..	645,283	647,740	598,140	— 49,600
	10,318,589	11,573,740	11,774,413	+ 200,673

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

	1948 Expenditure	1949 Estimates	1949 Expenditure	1949 Results compared with Estimates
	£E.	£E.	£E.	£E.
Personnel .. .. .	4,480,845	4,952,118	4,906,307	— 45,811
Services .. .. .	5,336,620	5,764,926	6,240,585	+ 475,659
Extraordinary Expen- diture .. .. .	501,124	856,696	627,521	— 229,175
	10,318,589	11,573,740	11,774,413	+ 200,673

67. There was over-expenditure of varying amounts on nearly half of the budgetary votes, making a total of £E. 565,687, which was reduced by economies elsewhere to the figure of £E. 200,673. Most of the increase over budgetted expenditure was caused by increased wages and high prices, the Ministry of Health in particular showing a substantial over-expenditure amounting to £E. 87,393; famine relief totalled £E. 71,533 against the budgetary token figure of £E. 5,000, while the charge to general central services of miscellaneous items previously debited to general reserve was mainly responsible for the increase of £E. 203,240 on this item. The main economies were in the personnel chapter of the budget, as many posts approved remained unfilled, and in extraordinary expenditure chapter, as a great deal of approved work remained uncompleted.

The balance of the latter was revoked in the subsequent budget. Further details of expenditure are given in Appendix I Table 2.

CURRENT ASSETS.

68. The position as at 31st. December, 1949, as compared with that at 31st. December, 1948, was as follows :—

	Balance as at 31st Dec.		Increase (+) or Decrease (—)
	1948	1949	
	£E.	£E.	£E.
Cash .. .. .	1,634,831	2,370,943	+ 736,112
Marketable Securities .. .. .	10,990,246	14,785,244	+ 3,794,998
Accounts Receivable .. .. .	1,755,749	1,852,002	+ 96,253
Stock on hand .. .. .	7,976,460	9,692,648	+ 1,716,188
Loans .. .. .	325,099	555,201	+ 230,202
Investments .. .. .	820,136	1,000,058	+ 179,922
Payments under adjustment .. .. .	91,973	192,252	+ 100,279
Jebel Aulia Compensation Fund .. .. .	381,689	365,924	— 15,765
	23,976,183	30,814,372	+ 6,838,189
REPRESENTING			
(*) Current Liabilities and Commitments .. .. .	5,416,882	5,539,590	+ 122,708
Reserve for Working Capital .. .. .	6,000,000	6,403,826	+ 403,826
General Reserve .. .. .	198,341	404,033	+ 205,692
General Development Account .. .. .	2,407,571	5,968,556	+ 3,560,985
Price Stabilisation Reserve Account .. .. .	1,628,387	1,378,940	— 249,447
Reserve for Capital of Gezira Board .. .. .	3,500,000	4,000,000	+ 500,000
Sudan Railways Capital and Renewals Account .. .. .	4,709,722	5,482,622	+ 772,900
Revenue Equalisation Account .. .. .	—	1,500,000	+ 1,500,000
Miscellaneous Reserves .. .. .	115,280	136,805	+ 21,525
	23,976,183	30,814,372	+ 6,838,189

(\*) includes Provident Funds and Jebel Aulia Compensation Fund.

Details of Sudan Government loans are given in Appendix III.

RESERVE FOR WORKING CAPITAL.

69. This reserve account, which was set up in 1948, represents (1) the reasonable cash and bank balances of all government units, (2) the source from which stocks of stores and supplies and the excess of accounts receivable over accounts payable have to be financed, (3) certain medium and long-term loans and investments which cannot be realised quickly. The reserve has been augmented by £E. 180,000 invested as capital in the Equatoria Projects Board and £E. 223,826 being the value of stores purchased before 1st. January 1949 but taken on charge at that date.

GENERAL RESERVE ACCOUNT.

70. This account represents current assets at the free disposal of the Government.

GENERAL DEVELOPMENT ACCOUNT.

71. The total credits since the inception of this account in 1946 up to 31st. December, 1949, were £E. 13,000,000. Expenditure has been :—

	£E.
1945/46	675,785
1946/47	1,421,747
1947/48	2,425,397
1949	2,508,515

making a total of £E. 7,031,444, the balance at the end of the year being £E. 5,968,556.

PRICE STABILISATION RESERVE ACCOUNT.

72. The main expenditure against this account in 1949 was £E. 247,577 on subsidising the price of cotton piece goods.

RESERVE FOR CAPITAL OF THE GEZIRA BOARD.

73. This reserve was created in 1948 at £E. 3,500,000 to provide the capital required by the new Gezira Board on taking over the management of the Gezira Scheme from the concession companies on 30th June, 1950. It was found necessary to augment this reserve by a further £E. 500,000.

REVENUE EQUALISATION ACCOUNT.

74. This reserve was newly created in 1949 to provide a cover against fluctuations of revenue so as to avoid drastic cuts in public services during bad years. The original intention was to build the reserve up to a total of from £E. 5. to £E. 6. million, but with the rapid expansion of government activities it may prove necessary to aim at a higher figure.

JEBEL AULIA COMPENSATION FUND.

75. This fund was created 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 former assuming responsibility for all compensation payments, interest on unspent balances being credited to the fund and payments from it

being made on the recommendation of the compensation committee. The following table summarises the position at the end of 1949 :—

	Expenditure		
	To end of 1948	During 1949	Total at end of 1949
	£E.	£E.	£E.
Protection of towns and basins .. ..	94,588	726	95,314
Compensation—individual damages .. ..	331,409	61,225	392,634
Alternative Livelihood Schemes :			
Fatisa and Hashaba .. .. .	111,810	—	111,810
Um Gerr .. .. .	65,652	381	66,033
Wad Nimr .. .. .	9,763	—	9,763
Other Schemes :			
Wad Rabbah (Dueim) canal cultivation .. .. .	1,592	579	2,171
Ferries .. .. .	2,733	—	2,733
Abu Gassaba Causeway .. .. .	2,729	—	2,729
Kawa low lift scheme .. .. .	1,097	—	1,097
Other items .. .. .	11,903	(Cr) 171	11,732
<b>TOTALS .. .. .</b>	<b>633,276</b>	<b>62,740</b>	<b>696,016</b>

The unexpended balance of the fund as at 31st. December, 1949 was £E. 328,176. Further details are given in Appendix VI.

#### LOCAL FINANCES.

76. The 1949 Marshall Report on Local Government included proposals for the reorganisation of the financial arrangements between central government and local authorities. Decisions were taken which should lay the foundation for further advance. Meanwhile six more authorities were given warrants in 1949. Five of these were promoted from local administration status, namely, the Western Darfur, Dar Hamid, Dar Hamar and Dar Messeria district councils and the Shukria (Rufaa) rural council. The sixth new unit was a district council for the Gogrial area of Bahr el Ghazal Province, the first rural authority in the southern Sudan to receive a warrant. New urban authorities for the towns of Nahud and Gedaref were created out of the Dar Hamar and Gedaref district councils respectively, and a town council was established at Malakal, the first urban authority in the southern Sudan. Thus there were in 1949 26 rural and 17 urban authorities with warrants and 7 local administrations without warrants — the total increasing from 45 in 1948 to 50. Revenue increased from £E. 1,078,985 in 1948 to £E. 1,281,992 in 1949. The financial results for the year are compared with the estimates in the following table. There was a

shortfall on rural administrations revenue of £E. 49,736, poor rains and animal losses having led to a widespread postponement of certain tax collections :

	Estimates	Results	+ or — on estimates
	£E.	£E.	£E.
<b>Rural Administrations :</b>			
Revenue .. .. .	888,552	838,816	— 49,736
Expenditure .. .. .	521,119	493,361	— 27,758
	367,433	345,455	— 21,978
<b>Contributions to Central Government</b>	263,372	238,160	— 25,212
	104,061	107,295	+ 3,234
	=====	=====	=====
<b>Municipalities and Town Councils :</b>			
Revenue .. .. .	435,213	443,176	+ 7,963
Expenditure .. .. .	394,497	391,025	— 3,472
	40,716	52,151	+ 11,435

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

**COTTON GROWING.**

(a) *General.*

77. With the exception of a small amount auctioned the 1948/49 crop was sold to the Raw Cotton Commission at record prices. This price level is not fully reflected in the figures of net divisible proceeds in the following tables owing to the increase in export duty from 5 per cent to 10 per cent.

The kantars quoted in the tables are of 315 rotls ( = 312 lbs).

(b) *Gezira Irrigation Scheme.*

78. The cotton crop showed a higher yield per feddan than in recent years, the total crop was well above average and with prices maintained at a high level, there was a substantial rise in revenue. The following table gives details of the crop and compares it with those of the two previous seasons :—

	1946/47	1947/48	1948/49
Area under cotton (feddans) ...	206,176	206,346	206,778
Total yield of seed cotton (kantars)	811,571	700,463	880,007
Average yield per feddan (kantars)	3.936	3.395	4.256
Bales of 430 lbs. lint (approx:) ...	201,967	174,949	234,126
Cotton seed (metric tons) ...	75,509	65,393	80,784
Net divisible proceeds (£E.) ...	6,776,394	11,752,497	13,819,831
Government share in net proceeds (£E.)	2,712,241	4,700,999	5,523,844

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

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

	1946/47	1947/48	1948/49
Area under cotton (feddans) ...	27,448	33,240	46,537
Total yield of seed cotton (kantars)	49,602	73,128	103,912
Average yield per feddan (kantars)	1.807	2.200	2.233
Bales of 430 lbs. lint (approx) ...	11,811	17,646	25,384
Cotton seed (metric tons) ...	4,731	6,876	9,769
Net divisible proceeds (£E.) ...	389,708	1,137,113	1,619,018
<i>Shares:</i>			
Tenants (£E.) ...	194,854	567,510	809,509
Government (£E.)	81,878	266,275	409,450
Gash Board (£E.)	112,976	301,234	400,059

(d) *Tokar Cotton.*

80. The crop was once more satisfactory, amounting to 87,757 kantars of seed cotton. The net proceeds of £E. 440,472 were distributed as follows:—

	£E.
Cultivators 70 per cent ... ..	308,331
Government 20 per cent ... ..	88,094
Cultivators' Financing Account 10 per cent ...	44,047

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

81. The 1948/49 season was marked by a further substantial increase in the area sown from 22,717 in 1947/48 to 65,711 feddans. The yield of seed cotton for the last three seasons was as follows:

	(Kantars)
1946/47	2,104
1947/48	30,030
1948/49	63,994

Following the reorganisation in 1948 of the finances of the Nuba Mountains cotton undertaking and the specification of shares in the proceeds the government's 20 per cent share in the 1948/49 proceeds amounted to £E. 91,296: the remaining 80 per cent distributed to cultivators or credited to the Cotton Equalisation Reserve Account was £E. 365,185.

(f) *White Nile Schemes Board.*

82. The following table shows the last three seasons' results in the Abdel Magid, and the Fatisa, Hashaba, Um Gerr, Wad Nimr and Dueim schemes:

	1946/47	1947/48	1948/49
<i>Abdel Magid:</i>			
Area under cotton (feddans) ...	7,864	9,985	9,985
Total yield (kantars)	23,542	30,702	40,072
Average yield per feddan (kantars)	2,994	3.075	4.013
Net divisible proceeds (£E.) ...	184,573	463,302	513,103
<i>Shares:</i>			
Tenants (£E.) ...	73,829	185,321	205,241

Government or Board (£E.) ...	110,744	277,981	307,862
<i>Fatisa, Hashaba, Um Gerr, Wad Nimr and Dueim :</i>			
Area under cotton (feddans) ...	4,657	6,093	6,544
Total yield (kantars)	12,312	21,368	28,725
Average yield per feddan (kantars)	2.64	3.51	4.39
Net divisible proceeds (£E.) ...	96,979	317,675	412,693
<i>Shares :</i>			
Tenants (£E.) ...	38,792	127,070	165,077
Government or Board (£E.) ...	58,187	190,605	247,616

#### EXCHANGE CONTROL.

83. Exchange control, operating through government departments and the three banks in the Sudan, namely the National Bank of Egypt, Barclays Bank (Dominions, Colonial & Overseas) and the Ottoman Bank, continued to function efficiently. On 18th September, 1949, the pound Egyptian was devalued in relation to the dollar to the same extent as the pound sterling; the Sudan continuing to be part of the Egyptian monetary area. In the course of the year it was possible to relax considerably the stringent import licencing that had been introduced in 1947.

#### CUSTOMS.

84. Customs revenue in 1949 was £E. 5,923,909 compared with £E. 4,406,341 in 1948. Collections on behalf of other departments, including royalties, quay dues and revenue from sugar, totalled £E. 1,756,404, making the total revenue collected by the department £E. 7,680,313 compared with £E. 5,878,346 in 1948. The enhanced value of imports and exports, additional export duty on cotton and cottonseed and higher royalties, all contributed to the overall increase.



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

Item	1948	1949	Increase or decrease on previous year
	£E.	£E.	£E.
<i>Customs Budget.</i>			
<i>Import duties—</i>			
Tobacco .. .. .	303,480	768,876	— 34,604
Alcohol .. .. .	139,523	222,747	+ 83,224
General .. .. .	2,134,300	2,603,237	+ 468,937
Export duties .. .. .	922,798	1,968,497	+ 1,045,699
Consumption duties .. .. .	388,200	334,493	— 53,707
Net surtax on re-export to Egypt ..	605	771	+ 166
Contraventions .. .. .	5,037	11,265	+ 6,228
Miscellaneous, including cost of collections of surtax .. .. .	13,003	14,794	+ 1,791
	4,406,946	5,924,680	+ 1,517,734
<i>Deduct surtax credited to Egypt ..</i>	605	771	+ 166
<i>Net budgetary revenue .. .. .</i>	4,406,341	5,923,909	+ 1,517,568
<i>Collections on behalf of other departments :—</i>			
Royalties .. .. .	466,638	603,844	+ 137,206
Rental on petroleum and bonded installations .. .. .	3,012	3,041	+ 29
Quay dues, etc. .. .. .	290,689	273,764	— 16,925
Revenue from sugar .. .. .	711,666	875,755	+ 164,091
<b>TOTAL NET REVENUE .. .. .</b>	<b>5,878,346</b>	<b>7,680,313</b>	<b>+ 1,801,967</b>

86. The only important legislation introduced in 1949 was the Customs (Amendment) Ordinance, 1949, which increased the period allowed for the return of the export advice note from Egypt from 60 to 120 days. The Royalties (Amendment No. 2.) Order, 1948, and the Customs Ordinance (Amendment of Schedule) No. 3. Order, 1948, which had been passed in 1948 came into force at the beginning of the year.

87. It will be noted that more than half of the increase in customs revenue was derived from export duty; this resulted mainly from the raising of the duty on cotton and cottonseed from 5 per cent to 10 per cent, and also from an increase in the quantities exported. The increased revenue from alcohol is attributable to increased imports, particularly of beer.

88. Customs expenditure during 1949 was £E. 73,557 which represented .96 per cent of total net collections.

89. At Port Sudan 38,419 declarations were handled compared with 24,821 in 1948. About 87 per cent of the total revenue was collected at this station. The number of passengers arriving at Port Sudan by sea was 4,281 compared with 2,924 in 1948.

90. At Wadi Halfa the number of declarations handled was 11,384 compared with 10,955 in 1948. The number of passengers entering the Sudan via Wadi Halfa increased from 20,791 to 23,255, but the number leaving by this route decreased from 18,981 to 17,933. There was a substantial decrease in the number of steamers dealt with, from 437 to 372, but there was an increase in the number of sailing craft from 166 to 272.

91. Khartoum customs revenue again showed an increase over the previous year and totalled £E. 545,760 as against £E. 505,225 in 1948, owing to increases in imports and exports. The number of postal parcels both from Egypt and other countries also increased. At Kassala revenue further increased from £E. 25,683 to £E. 33,055. Import and consumption duty were the items principally affected due to considerable increases in the quantities of liquors and matches imported. Trade through Juba continued to decrease and revenue fell from £E. 128,313 in 1948 to £E. 96,950 in 1949; the quantities of sugar imported through this station decreased from 7,857 tons in 1948 to 1,618 tons in 1949, owing to a serious breakdown in the Uganda sugar factory. At Kurmuk and Roseires there was a decrease in revenue owing to reduced imports of coffee from Ethiopia, whose product, owing to the high world price, was attracted to markets other than the Sudan. The volume of trade through Gencina remained much the same as in 1948 but revenue showed a slight increase from £E. 4,114 to £E. 5,347 owing mainly to increased imports of coffee.

92. The number of aircraft handled showed a slight decrease; the number dealt with at Khartoum customs was 2,608 compared with 2,776 in 1948, although the number of aircraft carrying passengers and freight to and from the Sudan itself showed a considerable increase.

93. The revenue derived from contraventions more than doubled owing in the main to smuggling on the Red Sea littoral at a time when prices in Arabia were attractive. Several large hauls were made and a number of successful prosecutions instituted.

94. The British Ministry of Food increased its allocation of sugar to the Sudan from 30,000 to 38,000 tons, thus obviating the necessity of negotiating new purchases from other sources. The total quantity actually imported during the year amounted to 40,300 metric tons, of which 7,783 metric tons represented completion of

deliveries from Egypt and European sources under contracts made in 1948. The controlled retail price per rofl was reduced by 5 mms. on 1st. January, 1949 and sales were unrestricted throughout the year. Monthly sales to merchants averaged 4,383 metric tons. Total sales during the year were 52,593 tons compared with 33,036 in 1948, and the net profit was £E. 875,755 compared with £E. 711,666.

## CHAPTER VII — ECONOMICS & TRADE

95. Statistical tables appear at the end of the chapter. In all those dealing with foreign trade the value shown for imports is their "c.i.f." (cost, insurance and freight) value and that for exports their "f.a.s." (free alongside ship) value. The latter includes any royalties leviable, but excludes quay dues, export duties and exporters' profits. In two tables — 3 and 4 — an adjustment has been made to convert "f.a.s." into "f.o.b." (free on board) in order to give a truer picture of the balance of trade. Imports are credited to their apparent country of origin and exports to their apparent destination; but it is known that in some cases these are not the actual countries of origin or destination. India and Pakistan have had to be treated as one unit, but will be separately denoted in future. Camels exported to Egypt do not normally pass through a customs station and cannot therefore be accurately recorded. Their value is, however, so great that an estimate has been attempted for the purposes of tables 2, 3, 4 and 12. In all other tables they are omitted.

### FOREIGN TRADE.

#### *Value (Table 1).*

96. The total value of imports increased by eight per cent, that of exports by 11.4 per cent., and that of re-exports by 60.7 per cent.

### BALANCE.

97. The balance of trade was favourable to the extent of something like £E. 8 millions. Data for the calculation of the net adverse balance on account on invisible items is incomplete, but it is estimated that the total balance of payments on account of all items both visible and invisible was favourable to the extent of about £E. 5. millions in the Sudan's dealings with the world as a whole and about £E. 4 millions in dealings with all countries other than Egypt. This favourable balance of trade was the main inflationary influence in the Sudan's economy, meaning, as it did, that the larger

incomes generated by the production and sale of exports were not absorbed by a corresponding flow of imports. This was to a large extent offset by budgetary counter-measures, but there was still a margin left over to force up the price of local produce.

#### VOLUME.

98. The volume of imports again rose and was some 21 per cent. above that of 1938. The volume of exports also rose but was only some 11 per cent. above that of 1938 and owed its rise to record figures for both cotton and cotton seed. Exports of dura and sesame were still prevented by the demands of internal consumption.

#### TERMS OF TRADE.

99. These were practically the same as in 1948, with the prices of both imports and exports, taken over the year as a whole, falling slightly (table 2). The effects of the devaluation of the pound sterling, followed by that of the Egyptian pound, were felt in the last quarter. In general, the halting of the downward trend of the prices of most exports more than offset the rises in the prices of some imports.

#### PRINCIPAL IMPORTS (*Table 6*).

100. The only substantial increases were in tea, sacks and wheat flour. Of these the two former were partly due to the chance effect of delivery dates and the latter — offset by a decrease in the import of wheat — represented a reversion to the pre-war practice of importing ready-milled flour rather than bringing in wheat for local milling. There were decreases in the imports of sugar, coffee, timber and motor vehicles. The fall in sugar was not significant, being mainly due to delivery dates; that in coffee reflected the world shortage; that in timber represented a slackening off after the fulfilling of back-log orders in 1948, and that in motor vehicles was due to a temporary lull while the switch of demand from the dollar area was completed.

#### PRINCIPAL EXPORTS (*Table 7*).

101. Cotton and cotton seed were again the dominant exports, accounting for 80 per cent. of the total value. The next highest commodity was gum, with only 6.2 per cent. of the total, and animals, (excluding camels) and animal products with 5.1 per cent., were the only other items of major importance. Camels may have amounted to another 5 per cent. Exports of all these main products increased in volume, except gum, which fell slightly, and all but gum and cotton seed increased in value.

102. Among minor exports, maize declined, owing to a ban on its export being imposed half way through the year in order to preserve the country's stocks of food grains when harvest prospects became poor; dates were less owing to partial crop failure, and garad, melonseed and senna also decreased. Groundnuts were again freed for export, after being banned for some years, and contributed to the world's oilseed requirements. Beeswax and chillies — mainly produced in the southern provinces — also increased in both volume and value.

103. The total value of all exports (excluding camels), at £E. 26,435,396, was the greatest ever recorded.

#### DISTRIBUTION OF FOREIGN TRADE.

104. Table 8 gives the distribution of the Sudan's foreign trade by countries, grouped by their currency areas. The value of the United Kingdom's share of both imports and exports increased and in the case of Egypt there were decreases on both sides of the account, in exports of maize, dates and melon seed and in imports of rice, sugar, cotton seed oil, confectionery, cement and certain textiles. In showing the details of exports to Egypt in table 12, camels are shown separately, being, as they are, based not on customs records, but on an estimate. Details of the Sudan's trade with the United Kingdom, Egypt, India and Pakistan and the United States are given in tables 9 — 16.

#### LOCAL PRODUCTION.

##### *Cotton.*

105. Production was greater than in the previous season, but below the ten years' average. Full details appear in the next chapter and particulars of exports in table 20.

##### *Gum (Tables 21 and 22).*

106. Arrivals in markets of both hashab and talh were less than in the 1947/48 season — the total decline being 20.3 per cent., — but the arrivals in that season were the largest ever recorded and 1948/49 was still well above the average. The average monthly price of hashab at El Obeid in December was P.T. 147 per kantar, compared with P.T. 104 in 1948. Immediately after the devaluation of the Egyptian pound royalties on gum were increased and a minimum f.o.b. price was fixed, below which no gum was licensed for export, in order to secure for the Sudanese producer and for the Sudan's balance of payments the greatest possible benefit of the higher prices obtainable in foreign markets.

*Dura and Dukhn (Millet).*

107. The 1948/49 crop as a whole was below average, owing to poor rains, and by September it became clear that the 1949/50 crop would also be below average. During the summer famine conditions developed locally in areas where grazing as well as grain crops had failed, and government reserves of dura were drawn on to meet the shortage. In addition 1,000 tons of South African "Kaffir corn" were imported by the Egyptian Government and distributed under the aegis of a central famine relief committee. In September the Sudan Government decided to import grain from abroad to cover its own requirements, in order not to disturb the local market by making large purchases, and also to import up to 20,000 tons as a central reserve against local shortage. It also suspended the 15 per cent customs duty so as to encourage import by private traders. Prices remained high throughout the year and the retail price of the "ruba" (approximately 14 rotls) of feterita type dura again reached P.T. 18 in Omdurman at the beginning of September, as it had in 1948. Later a slight fall took place and the year ended with signs of a downward trend, stimulated by the news of government imports.

Retail prices appeared particularly high on pre-war comparison, because it so happened that 1938 was the last of five years of bumper crops and consequent low prices. Comparison with years of poor crops, however, showed that the price had risen less steeply than those of most other commodities — whether imports, exports or local produce. It was, moreover, not out of accord with world prices, as was illustrated by the fact that traders showed no eagerness to import on their own account, even after the suspension of the duty.

Prices were, however, undoubtedly higher than they would have been without the added stimulus of the very high prices received by the producers of cotton for their 1947/48 crop, as these led them to hoard their own grain instead of putting it on the market and also to invest part of their profits in the purchase of grain from other areas.

*Sesame, Groundnuts (Table 23).*

108. Arrivals in markets of sesame were more than double, and of groundnuts slightly larger than those of the 1947/48 season and exports of the latter were able to be resumed in April.

*Melonsced (Table 23).*

109. The crop was a fair, average one but fell far below the bumper crop of the previous year.

*Pulses.*

110. Exports were higher in volume but slightly lower in value than in 1948. Horse beans showed the biggest increase in volume but their unit value fell from nearly £E. 30 per ton to £E. 22.

ANIMALS AND ANIMAL PRODUCTS.

111. Exports of both cattle and sheep increased (see Table 7) as did the number slaughtered in the chief towns. Exports of hides and skins increased in volume and value and accounted for 2.4 per cent. of the total value of all exports. Parallel with the developments of protective measures against epizootic diseases, described in a later chapter, plans were made for absorbing the increased surplus of animals expected to be available in the future and negotiations were completed with Messrs. Liebig's Extract of Meat Company Ltd. for the erection of a meat-processing factory at Kosti on the White Nile. Their subsidiary company (Sudan Meat Products Limited) was registered and the railway siding to the factory site was begun. The factory is to be able to deal with 100,000 head of cattle a year.

SECONDARY INDUSTRIES.

112. The Sudan Portland Cement Company's works, near Atbara, came into full production from local raw materials in the middle of the year, up till then they had only been grinding clinker imported from Egypt. This is a fine modern plant capable of supplying all local needs and providing a surplus for export.

Three plants for the mechanical crushing of oilseeds were completed at Khartoum North, one of which began producing improved types of soap.

A small factory for the production of oxygen for use in welding was nearly completed at Khartoum.

NEW COMPANIES.

113. A large number of new companies was approved and registered. In some cases existing firms turned themselves into limited liability companies and in other new associations were formed for the promotion of a wide range of agricultural, industrial, trading and transport enterprises.

EQUATORIA PROJECTS BOARD.

114. The trading division of this board, which is charged with the opening and operation of a chain of shops and travelling

sales-vans in Equatoria and Bahr el Ghazal provinces, continued its expansion, but was handicapped by staffing difficulties at all levels. In spite of this, however, its shops and vans were able to bring a wide variety of consumer goods into hitherto poorly served areas and thus to assist in their development, not only directly but also by their indirect effect of stimulating established traders to show greater enterprise and sell at more competitive prices.

#### SUPPLY CONTROLS.

115. Controls continued to be removed wherever practicable — the greatest single measure being the freeing from distributional control of all grey cloth on 1st. April. With improved supplies of petrol, this was derationed on 1st. March.

The persistent re-export of Sudan gum to hard-currency areas by several importing countries led to the unwelcome step of applying export licensing to all gum for all destinations.

The devaluation of the pound led to a certain re-orientation of policy, but by the end of the year all but a short list of commodities had been entirely freed from import licensing from all countries included in the “Scheduled Territories” and “Transferable Accounts Area” and from certain other countries. The list of articles required to be declared on import had also been further reduced, as had that of Sudan products subject to export licence.

All special temporary staff, engaged to deal with the control of distribution, was discharged in the course of year, except for a diminishing number of officials in the office of the Controller of Supply.

#### COST OF LIVING.

116. Tables 18 and 19 show that the cost of living index and the index of wholesale prices continued to rise, but that the pace of this rise slowed down. More than three quarters of that in the cost of living of Sudanese with income below £E. 12 per month was accounted for by the high price of dura.

#### CO-OPERATION.

117. A registrar of co-operative societies was appointed to the staff of the Department of Economics and Trade in 1947. His first task was to draft a Co-operative Societies Ordinance, which became law in September, 1948. Since then the nucleus of a Sudanese inspectorate has been trained — one man being sent to the United Kingdom, one to Cyprus and five others to Egypt to study co-operative procedure. Numerous conferences in the United



Kingdom and elsewhere were attended by the registrar and the services of a trained Egyptian co-operative officer were obtained. Staff were posted to Northern Province — the cradle of co-operation in the Sudan — and to Blue Nile Province, where the movement was rapidly gaining ground. The Khartoum rural area was inspected from headquarters and the registrar paid visits to other districts. By the end of the year eight societies had been formally registered under the Ordinance, 33 others had applied for registration and a further 25 were in process of formation, the majority being agricultural producers' societies.

#### FISHERIES.

118. Increasing attention was paid to this important field of development. The fisheries officer, appointed in 1948, spent some time in preliminary investigation of local problems, mainly in Upper Nile Province. An assistant fisheries officer was selected and sent for a course of training in Egypt. Plans were made for further expansion and a first detailed budget drawn up to provide for this. Practical steps were taken towards starting an export trade in dried fish to the Belgian Congo.

#### STATISTICAL SECTION.

119. This section was provided with an installation of Powers-Samas punch-card equipment, the machines of which were all installed by early February. These machines are complicated and the task of training operatives to work them is formidable, but many of the inevitable "teething troubles" were overcome and by the end of the year all foreign trade statistics were being tabulated on them and a start had been made on payrolls, monthly pension statements and various other tasks. Some 120,000 forms of the Omdurman census had also been coded, ready for analysis.

The scope of both the "Monthly Bulletin of Foreign Trade and Internal Statistics" and also the annual "Foreign Trade Report (with some internal statistics)" was enlarged and these publications are now sent abroad to 35 countries, often in exchange for similar publications.

#### BOARD OF ECONOMICS AND TRADE.

120. The board held five meetings and among the matters on which it made recommendations were the meat processing project, mechanised crop production, river transport, the aircraft-handling and agency business and a brewery project.

In the exercise of their duty to advise the Controller of Supply the board kept the dura situation under constant review.

The board's three standing committees on livestock and veterinary policy, mines and minerals, and fisheries, held a number of meetings. The firstnamed gave much attention to the meat-processing project and to the problem of trypanosomiasis. The second completed a draft Mines and Quarries Bill and considered questions arising from the mining of alluvial gold in Equatoria, and the fisheries committee was closely concerned with the developments described above.

SUDAN CHAMBER OF COMMERCE.

121. Close co-operation was maintained with the Chamber of Commerce to the mutual advantage of trade and government. One meeting of the joint trade committee of the Chamber and the Board of Economics and Trade was held and several meetings with representatives of the main exporters of gum, especially for the purpose of settling the special arrangements following on the devaluation of the pound.

TABLE I.  
FOREIGN TRADE STATISTICS.

	IMPORTS (i)			
	United Kingdom	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
1949 .. .. .	7,747,193	3,908,379	12,213,997	23,869,569

(i) Includes other government imports prior to 1943. Excludes prior to 1949 imports and re-exports of currency notes and coinage.

				EXPORTS AND RE-EXPORTS			
				United Kingdom	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	..	..	..	14,650,786	3,322,903	5,904,852	23,878,541
1949	..	..	..	18,050,640	2,880,286	6,505,551	27,436,477

TABLE 2.  
FOREIGN TRADE INDICES (i).  
(1938=100)

		RETAINED IMPORTS			EXPORTS		
		Value	Price	(ii) Volume	Value	Price	(ii) Volume
1943	..	149.5	290.9	51.4	138.0	79.0	77.1
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	439.1	472.8	92.9
1949	..	395.4	326.3	121.0	508.4	459.0	110.8

(i) Camel exports are included in this table.  
(ii) Quotient of value over price.

TABLE 3.

ESTIMATED VISIBLE BALANCE OF TRADE WITH WORLD. (i)

Item	1948	1949	Item	1948	1949
	£E.	£E.		£E.	£E.
Imports c.i.f.	22,153,000	23,870,000	Exports and re-ex- ports (f.a.s.)	23,879,000	27,437,000
			Estimated deliveries of petrol to for- eign aircraft tanks	(ii) 11,000	—
			Estimated camel ex- ports .. ..	1,335,000	1,977,000
			Estimated adjust- ment to convert f.a.s. to f.o.b. values .. ..	(iv) 1,600,000	(iii) 2,830,000
TOTAL	22,153,000	23,870,000	Total .. ..	26,924,000	32,244,000
			Estimated favour- able visible bal- ance of trade ..	(iv) +4,771,000	8,374,000

(i) Imports and exports of currency are excluded.

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

(iii) The increase over the 1948 figure is on account of the raising of the ad valorem duty on cotton and cotton seed exports from 5 to 10 per cent.

(iv) Revised figures.

TABLE 4.  
ESTIMATED VISIBLE BALANCE OF TRADE WITH ALL COUNTRIES  
EXCEPT EGYPT (i).

Item	1948	1949	Item	1948	1949
	£E.	£E.		£E.	£E.
Imports c.i.f.	17,466,000	19,969,000	Exports and re-exports .. ..	20,556,000	24,611,000
			Estimated deliveries of petrol to fore- ign aircraft tanks	(ii) 110,000	—
			Estimated adjust- ment to convert f.a.s. to f.o.b. values .. ..	1,340,000	(iii) 2,600,000
TOTAL ..	17,466,000	19,969,000	Total .. ..	22,006,000	27,211,000
			Estimated favour- able visible bal- ance of trade ..	+ 4,550,000	7,242,000

- (i) Imports and exports of currency are excluded.  
(ii) For first quarter only, afterwards included in re-exports.  
(iii) The increase over the 1948 figure is on account of the raising of the ad valorem duty on cotton and cotton seed exports from 5 to 10 per cent.

TABLE 5.  
SUMMARY BY TRADE ROUTES.

	1946	1947	1948	1949
	£E.	£E.	£E.	£E.
RED SEA.				
Imports .. ..	8,041,984	11,184,321	16,874,874	19,841,008
Exports .. ..	7,482,210	13,473,364	22,214,991	24,780,325
Re-exports ..	288,902	172,629	191,849	403,668
TOTAL .. ..	15,813,096	24,830,314	39,281,714	45,025,001
NORTHERN NILE.				
Imports .. ..	2,213,922	4,037,279	4,082,168	2,422,416
Exports .. ..	1,688,000	1,308,013	1,375,692	1,569,416
Re-exports ..	226,461	152,067	229,705	88,134
TOTAL .. ..	4,128,383	5,497,359	5,687,565	4,079,966
FRONTIER STATIONS.				
Imports .. ..	1,173,637	985,529	1,196,215	1,606,145
Exports .. ..	96,934	84,471	74,568	85,655
Re-exports ..	257,904	205,137	206,948	509,279
TOTAL .. ..	1,528,475	1,275,137	1,477,731	2,201,079
GRAND TOTAL ..	21,469,954	31,602,810	46,447,010	51,306,046

TABLE 6.  
PRINCIPAL IMPORTS

	Unit of quantity	Quantity		Value £r.		Percentage of total value	
		1948	1949	1948	1949	1948	1949
Cement ..	tons	31,119	32,800	214,400	210,377	1.0	0.9
Cigarettes ..	"	407	380	427,316	458,532	1.5	1.2
Coal and coke ..	"	75,009	75,092	325,508	297,799	1.5	1.2
Coffee ..	"	11,442	7,295	1,059,334	748,208	4.8	3.1
Dura ..	"	—	7,475	—	182,762	—	0.8
Dyestuffs, tanstuffs and colours ..	—	—	—	82,015	182,766	0.4	0.8
Kerosene ..	tons	9,086	10,860	79,678	99,404	0.4	0.4
Metals and metal manufactures ..	—	—	—	1,392,918	1,757,879	6.3	7.4
Machinery and appliances ..	—	—	—	1,240,837	1,527,734	5.6	6.4
Oil fuel ..	tons	77,020	83,423	483,579	543,671	2.2	2.3
Oranges and mandarines ..	"	722	1,308	30,967	63,522	0.1	0.3
Petrol ..	"	35,970	37,602	390,390	471,901	1.8	2.0
Piece goods of mixed cotton and artificial silk ..	"	611	429	797,917	498,465	3.6	2.1
Piece goods, cotton ..	"	7,690	8,288	4,572,778	4,408,020	20.6	18.5
Rice ..	"	6,562	4,432	247,821	151,082	1.1	0.6
Sacks and hessian ..	"	5,586	6,916	752,014	847,149	3.4	3.5
Soap, common ..	"	930	1,628	91,992	150,358	0.4	0.6
Spirits, wines and beer ..	1000 litres	2,429	4,509	275,687	476,610	1.2	2.0
Sugar ..	tons	50,557	38,892	1,950,923	1,487,895	8.8	6.2
Tea ..	"	1,951	4,614	465,956	1,089,551	2.1	4.6
Timber ..	cubic metres	23,351	14,026	425,350	196,879	1.9	0.8
Tyres, motor-car ..	No	17,730	12,943	142,630	158,025	0.6	0.7
Vehicles and transport equipment ..	—	1,122	1,065	503,122	450,478	2.3	1.9
Wheat ..	tons	11,943	2,216	395,988	76,994	1.8	0.3
Wheat flour ..	"	1,193	12,594	59,328	508,653	0.3	2.1
Other ..	—	—	—	5,699,809	6,824,855	25.7	28.6
TOTAL				22,153,257	23,869,569	100	100

TABLE 7.  
PRINCIPAL EXPORTS.

	Unit of quantity	Quantity		Value £.		Percentage of total value	
		1948	1949	1948	1949	1948	1949
Beeswax ..	tons	123	211	30,259	51,517	0.1	0.2
Cattle ..	No.	21,583	31,403	318,158	471,039	1.4	1.8
Chillies ..	tons	354	485	57,451	73,719	0.2	0.3
Cotton ..	"	50,836	65,334	15,702,809	19,064,478	67.5	72.1
Cotton seed ..	"	90,387	102,927	2,338,850	2,077,216	10.1	7.9
Dates ..	"	8,486	4,446	203,771	135,520	0.9	0.5
Donnuts and their products ..	"	5,486	5,812	49,250	72,149	0.2	0.3
Dura ..	"	487	—	10,511	—	—	—
Fish ..	"	1,241	1,382	82,995	64,602	0.4	0.2
Garad ..	"	2,397	1,892	30,938	20,885	0.1	0.1
Groundnuts ..	"	—	13,044	15	423,983	—	1.6
Gum Arabic ..	"	34,656	32,916	1,656,351	1,641,041	7.1	6.2
Hides and skins ..	"	3,379	3,981	529,724	634,791	2.2	2.4
Maize ..	"	20,881	1,208	590,476	24,955	2.5	0.1
Melonseed ..	"	17,974	14,569	547,610	442,733	2.4	1.7
Mother of pearl shell ..	"	136	109	19,331	17,999	0.1	0.1
Oilcake ..	"	16,468	16,718	340,094	251,320	1.5	1.0
Pulses ..	"	11,866	13,733	380,450	371,281	1.6	1.4
Salt ..	"	5,847	6,752	51,318	54,353	0.2	0.2
Senna ..	"	322	140	25,223	11,221	0.1	—
Sheep ..	No.	36,070	56,626	128,318	212,346	0.6	0.8
Trochus shell ..	tons	1,477	1,244	58,714	55,175	0.3	0.2
Other ..	—	—	—	97,423	263,093	0.5	0.9
TOTAL				23,250,039	26,435,396	100	100

TABLE 8.  
FOREIGN TRADE—CLASSIFIED BY COUNTRIES.

	EXPORTS £E.		RETAINED IMPORTS £E.		EXPORTS percent		IMPORTS percent	
	1948	1949	1948	1949	1948	1949	1948	1949
<i>1. Scheduled Territories and transferable accounts group</i>								
Australia ..	41,787	108,255	343,228	578,283	0.2	0.4	1.6	2.5
Ceylon ..	8,735	893	201,576	46,351	—	—	0.9	0.2
Cyprus ..	34,510	25,937	58,353	68,901	0.1	0.1	0.3	0.3
Czechoslovakia ..	303,796	174,630	113,506	425,949	1.3	0.7	0.5	1.9
Ethiopia ..	42,042	77,720	272,418	231,436	0.2	0.3	1.3	1.0
India and Pakistan	2,709,377	1,764,547	1,525,842	3,467,079	11.7	6.7	7.0	15.2
Israel ..	414,576	59,246	17,653	(i) 726	1.8	0.2	0.1	—
Italy ..	199,264	344,714	60,650	339,772	0.9	1.3	0.3	1.5
Kenya ..	1,241	15,910	264,477	169,610	—	0.1	1.2	0.7
Mauritius	—	—	545,878	69,173	—	—	2.5	0.3
Netherlands	137,163	473,665	122,570	160,536	0.6	1.8	0.6	0.7
Persia ..	1,957	19,202	954,132	1,105,848	—	0.1	4.4	4.8
South Africa	40,48	396,116	378,043	305,323	—	1.5	1.7	1.3
Spain ..	5,309	6,422	1,888,283	96,776	—	—	8.7	0.4
Uganda ..	393	213	363,104	134,352	—	—	1.7	0.6
United Kingdom ..	14,536,016	17,868,287	6,535,372	7,564,840	62.5	67.6	30.0	33.1
Other ..	160,096	202,310	337,440	674,987	0.7	0.8	1.5	3.0
TOTAL ..	18,600,310	21,538,067	13,982,525	15,438,490	80.0	81.5	64.2	67.5
<i>2. Dollar group</i>								
Canada ..	8,535	8,715	482,639	10,168	—	—	2.2	—
United States	572,334	389,335	638,992	494,074	2.5	1.5	3.0	2.2
Other ..	—	—	—	2	—	—	—	—
TOTAL ..	580,869	398,050	1,121,631	504,244	2.5	1.5	5.2	2.2
<i>3. Egyptian Group.</i>								
Egypt ..	3,239,901	2,788,582	4,645,466	3,818,098	13.9	10.6	21.3	16.7
Eritrea ..	21,855	6,604	149,289	156,241	0.1	—	0.7	0.7
TOTAL ..	3,261,756	2,795,186	4,794,755	3,974,339	14.0	10.6	22.0	17.4
<i>4. Other Countries.</i>								
Belgian Congo ..	32,049	32,024	246,535	198,245	0.2	0.1	1.1	0.9
Belgium ..	79,579	85,222	101,871	190,851	0.3	0.3	0.5	0.8
China ..	13,205	4,304	223,018	1,025,446	0.1	—	1.0	4.5
Franco ..	311,557	657,727	85,893	126,609	1.4	2.5	0.4	0.6
Greece ..	53,444	59,908	6,420	9,852	0.2	0.2	—	—
Japan ..	9,401	123,322	732,314	465,331	—	0.5	3.4	2.0
Other ..	307,869	741,586	484,062	936,504	1.3	2.8	2.2	4.1
TOTAL ..	807,104	1,704,093	1,880,113	2,952,838	3.5	6.4	8.6	12.9
GRAND TOTAL	23,250,039	26,435,396	21,779,024	22,869,911	100	100	100	100

(i) Re-exports greater than imports.



TABLE 9.  
PRINCIPAL IMPORTS FROM UNITED KINGDOM.

ITEM	Unit of Quantity	Quantity		Value £E.	
		1948	1949	1948	1949
Sugar .. .. .	tons net.	15,614	24,129	625,045	869,913
Whisky .. .. .	1000 litres	63	55	22,626	20,393
Cigarettes and Tobacco .. .. .	kilos net	409,157	374,166	471,343	450,414
Disinfectants .. .. .	tons net	204	396	26,373	100,519
Pharmaceuticals .. .. .	"	493	258	184,839	135,796
Prepared paints .. .. .	"	469	641	77,108	97,972
Soap, toilet and common .. .. .	"	423	1,334	58,071	163,830
Fertilisers .. .. .	"	3,249	10,501	98,343	296,336
Motorcar tyres .. .. .	No.	15,529	10,890	116,169	128,201
Fabrics of wool .. .. .	tons net	64	40	93,867	103,161
Cotton piece goods, bleached .. .. .	"	237	196	264,669	252,779
Cotton piece goods, dyed in the piece .. .. .	"	200	145	186,566	161,889
Cotton piece goods, printed .. .. .	"	79	220	116,197	237,348
Lubricating oils and greases .. .. .	"	1,170	1,578	43,332	75,698
China and glassware .. .. .	"	300	696	40,054	84,188
Asbestos manufactures .. .. .	"	3,117	3,398	104,299	90,844
Iron and steel .. .. .	"	7,415	7,543	259,714	264,541
Manufactures of base metals (n.e.s.) .. .. .	"	1,033	1,021	133,346	141,853
Steam, gas and oil engines and parts .. .. .	"	1,203	1,442	269,903	295,160
Agricultural machinery .. .. .	"	—	622	64,790	139,861
Pumps and parts .. .. .	"	—	334	48,951	49,938
Motor vehicles and chassis .. .. .	No.	591	779	296,648	359,046
All other items .. .. .	—	—	—	3,045,189	3,227,413
<b>TOTAL</b>				<b>6,650,142</b>	<b>7,747,193</b>

TABLE 10.  
EXPORTS TO THE UNITED KINGDOM.

	Unit of Quantity	Quantity		Value £.	
		1948	1949	1948	1949
Groundnuts .. ..	tons net	—	7,413	14	239,727
Oilcake .. ..	"	5,757	6,876	116,557	105,297
Cotton seed .. ..	"	44,443	48,055	1,152,634	883,768
Beeswax .. ..	"	71	120	17,900	29,346
Sheepskins .. ..	"	693	815	122,419	123,920
Cotton, sateen .. ..	"	38,868	51,038	12,387,232	15,367,677
Cotton, American .. ..	"	2,154	3,243	316,959	560,836
Dom nuts and dom- nut products .. ..	"	57	77	9,818	5,272
Gum, bleached .. ..	"	25	29	2,070	2,459
Gum, talh .. ..	"	503	406	14,514	11,185
Gum, hashab .. ..	"	7,400	9,787	349,547	473,103
Other .. ..	—	—	—	46,352	65,697
<b>TOTAL EXPORTS</b>	—	—	—	<b>14,536,016</b>	<b>17,868,287</b>
<b>RE-EXPORTS</b>	—	—	—	<b>114,770</b>	<b>182,353</b>
<b>TOTAL EXPORTS AND RE-EXPORTS</b>				<b>14,650,786</b>	<b>18,050,640</b>

TABLE 11.  
IMPORTS FROM EGYPT.

	Unit of Quantity	Quantity		Value £E.	
		1948	1949	1948	1949
Rice .. .. .	tons	6,562	4,431	247,819	151,055
Oranges .. .. .	"	629	1,167	27,605	56,944
Lentils .. .. .	"	828	557	39,265	24,905
Sugar .. .. .	"	8,727	1,284	392,268	57,223
Molasses .. .. .	"	375	204	9,706	6,244
Confectionery .. .. .	"	921	670	185,790	125,509
Tobacco and cigar-ettes .. .. .	kilos net	16,225	10,714	19,664	13,929
Cotton seed oil .. .. .	tons net	196	1	28,899	50
Perfumery, alcoholic	litres	26,075	8,294	38,900	31,913
Soap, common and toilet .. .. .	tons net	673	497	63,725	40,335
Cotton piece goods :					
Mixed artificial silk and cotton	"	610	413	795,895	487,916
Grey .. .. .	"	185	276	140,910	169,696
Bleached .. .. .	"	39	31	52,823	43,365
Dyed in piece .. .. .	"	54	81	66,519	91,159
Printed .. .. .	"	23	54	22,944	43,994
Dyed in yarn .. .. .	"	94	68	53,976	37,766
Lubricating oils and greases .. .. .	"	1,378	2,383	48,575	96,546
Cement .. .. .	"	18,591	11,316	118,361	66,654
Glass and glassware .. .. .	"	323	366	37,650	34,165
Base metal manufactures .. .. .	—	—	—	150,252	73,316
Machinery .. .. .	—	—	—	29,981	39,883
Photographic and cinematographic material and films .. .. .	—	—	—	20,687	26,719
Specie .. .. .	—	—	—	41,696	89,421
Postal parcels .. .. .	—	—	—	1,438,826	1,486,129
Other items .. .. .	—	—	—	614,036	613,543
<b>TOTAL IMPORTS</b>				<b>4,686,772</b>	<b>3,908,379</b>

TABLE 12.  
EXPORTS TO EGYPT.

	Unit of Quantity	Quantity		Value £E.	
		1948	1949	1948	1949
Cattle .. ..	Number	21,583	31,372	318,158	470,580
Sheep .. ..	"	36,070	40,112	128,318	150,420
Fish .. ..	tons net	1,241	1,382	82,972	64,597
Maize .. ..	"	14,071	1,045	398,949	21,802
Dates .. ..	"	8,289	4,344	200,585	133,818
Haricot beans ..	"	1,361	1,351	67,714	47,748
Lupines .. ..	"	744	762	19,807	17,929
Chillies .. ..	"	351	452	56,911	68,879
Groundnuts .. ..	"	—	1,938	—	62,185
Cotton seed .. ..	"	42,896	38,032	1,106,055	824,663
Melon seed .. ..	"	15,217	12,629	464,795	380,340
Hides and skins ..	"	909	1,381	136,866	239,786
Gum hashab .. ..	"	690	288	33,472	13,606
Garad .. ..	"	2,365	1,876	30,543	20,715
Gold metal .. ..	troy ozs.	312	381	4,966	5,100
Other items .. ..	—	—	—	189,790	213,766
<b>TOTAL .. ..</b>		—	—	<b>3,239,901</b>	<b>2,735,934</b>
<b>RE-EXPORTS .. ..</b>		—	—	<b>83,002</b>	<b>90,281</b>
<b>TOTAL EXPORTS &amp; RE-EXPORTS .. ..</b>		—	—	<b>3,322,903</b>	<b>2,826,215</b>
Estimated camel exports .. ..	Number	54,600	78,000	1,335,000	1,977,000
<b>GRAND TOTAL</b>				<b>4,657,903</b>	<b>4,803,215</b>

TABLE 13.  
IMPORTS FROM INDIA AND PAKISTAN

	Unit of Quantity	Quantity		Value £.	
		1948	1949	1948	1949
Tea .. .. .	tons net	520	2,783	122,261	630,370
Pepper .. .. .	"	—	52	—	16,927
Other spices .. .. .	"	254	295	18,301	45,179
Essential oils .. .. .	"	25	40	42,186	68,605
Cotton piece goods :					
Grey .. .. .	"	903	2,612	373,043	916,557
Bleached .. .. .	"	70	776	53,268	384,163
Dyed in piece .. .. .	"	44	76	28,227	48,985
Printed .. .. .	"	37	90	32,730	68,403
Dyed in yarn .. .. .	"	85	297	42,428	174,786
Sacks .. .. .	"	4,972	6,571	619,165	796,743
Hessian .. .. .	"	714	412	117,455	59,158
Manufactures of aluminium .. .. .	"	52	245	15,005	75,890
Other .. .. .	—	—	—	63,129	196,579
<b>TOTAL</b>				<b>1,527,198</b>	<b>3,482,345</b>

TABLE 14.  
EXPORTS TO INDIA AND PAKISTAN.

	Unit of Quantity	Quantity		Value £.	
		1948	1949	1948	1949
Kashrangeig .. .. .	tons	4,331	3,269	109,329	72,078
Lubia helwa .. .. .	"	66	168	1,950	4,503
Chick peas .. .. .	"	914	208	24,940	6,613
Groundnuts .. .. .	"	—	803	—	26,813
Cotton, sakel .. .. .	"	7,022	5,053	2,237,911	1,522,528
Cotton, American .. .. .	"	19	80	3,465	16,793
Domnuts .. .. .	"	1,834	707	13,404	5,166
Gur hashab .. .. .	"	5,049	1,943	237,321	89,078
Gam talh .. .. .	"	1,494	687	41,007	18,218
Other items .. .. .	—	—	—	40,050	2,757
<b>TOTAL</b>				<b>2,709,377</b>	<b>1,764,547</b>
<b>RE-EXPORTS</b>				<b>1,356</b>	<b>2,744</b>
<b>TOTAL EXPORTS AND RE-EXPORTS</b>				<b>2,710,733</b>	<b>1,767,291</b>

TABLE 15.  
IMPORTS FROM U.S.A.

	Unit of Quantity	Quantity		Value £.	
		1948	1949	1948	1949
Base metal and manufactures ..	—	—	—	28,877	57,458
Paper and cardboard	Kilos net	181,774	1,601	11,379	198
Lubricating oils and greases .. ..	tons net	1,538	401	60,099	21,554
Machinery .. ..	—	—	—	112,031	155,522
Electrical machinery	—	—	—	2,176	9,967
Tractors and parts	tons net	52	87	13,203	29,454
Motor vehicles ..	No.	351	41	138,263	20,764
Bodies and parts of motor vehicles..	tons gross	300	318	106,817	154,133
Cotton piece goods ..	tons	150	—	104,676	11
Other items ..	—	—	—	63,124	61,628
<b>TOTAL</b>				<b>640,645</b>	<b>510,689</b>

TABLE 16.  
EXPORTS TO U.S.A.

	Unit of Quantity	Quantity		Value £.	
		1948	1949	1948	1949
Hides and skins ..	tons net	423	481	70,647	75,289
Trochus and mother of pearl shell ..	„	108	93	15,799	15,639
Senna .. ..	„	194	27	8,547	941
Gum, all kinds ..	„	5,829	5,825	279,604	293,574
Cotton, ginned sakol	„	616	—	196,319	36
Other items ..	—	—	—	1,418	3,856
<b>TOTAL</b>				<b>572,334</b>	<b>389,335</b>
<b>RE-EXPORTS</b>				<b>1,653</b>	<b>16,615</b>
<b>TOTAL EXPORTS AND RE-EXPORTS</b>				<b>573,987</b>	<b>405,950</b>

TABLE 17.  
**WHOLESALE PRICES OF SOME IMPORTANT COMMODITIES (Actual Prices are in £E.)**  
 (Indices 1938=100).

Commodity	Market	Unit of Quantity	Actual price or Index	1938 Average	1948				1949			
					1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Dura .. .. .	W.Medani	Kantar	Price Index	.161 100	.630 391	.852 529	1.185 736	1.004 624	.863 536	1.110 689	1.035 643	1.000 621
Cattle .. .. .	El Obeid	Head	Price Index	2.240 100	5.551 248	5.293 236	4.906 219	4.692 209	5.279 236	5.150 230	4.845 216	4.238 189
Camels .. .. .	El Obeid	Head	Price Index	3.472 100	12.587 363	11.116 320	12.880 371	13.768 396	12.124 349	8.277 238	9.068 261	15.222 438
Sheep .. .. .	El Obeid	Head	Price Index	.574 100	1.530 267	1.476 257	1.499 261	1.444 252	1.445 252	1.350 235	1.374 239	1.740 303
Goats .. .. .	El Obeid	Head	Price Index	.233 100	.916 393	1.168 501	.707 303	.737 316	.940 403	.872 374	.634 272	.738 336
Gum Hashab .. .. .	El Obeid	Kantar	Price Index	.453 100	1.015 224	1.038 229	.893 197	.987 218	.918 203	.924 204	1.097 241	1.477 326
Gum Talh .. .. .	Singa	Kantar	Price Index	.194 100	.480 247	.510 263	.510 263	.605 312	.555 286	.510 263	.510 263	.681 320
Sesame .. .. .	Tendelti	Kantar	Price Index	.297 100	1.757 592	1.885 635	1.833 617	1.212 408	1.333 449	1.408 474	1.539 518	2.119 713
Groundnuts .. .. .	Tendelti	Kantar	Price Index	.201 100	1.120 557	1.175 585	.863 429	.683 340	.781 389	1.036 515	1.106 550	1.373 688

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TABLE 18.  
**COST OF LIVING INDICES.**  
 (1938 = 100).

				Sudanese with monthly income under £E. 12.
December, 31st	1944	..	..	160.4
"	"	1945	..	170.2
"	"	1946	..	183.4
"	"	1947	..	229.3
"	"	1948	..	288.7
"	"	1949	..	307.0

TABLE 19.  
**WHOLESALE PRICE INDICES (1938=100).**

Date	Food, drink and tobacco (2)	Industrial raw materials	All Wholesale goods (2)
Average 1944 .. .. .	187.1	185.7	205.6
" 1945 .. .. .	191.6	195.1	204.8
" 1946 .. .. .	236.9	231.2	244.4
" 1947 (1) .. .. .	253.2	307.1	284.3
" 1948 (1) .. .. .	349.5	512.6	422.6
" 1949 (1) .. .. .	385.4	488.2	427.1
1st Quarter, 1948 .. .. .	296.2	507.5	389.5
2nd " 1948 .. .. .	343.5	508.4	415.6
3rd " 1948 .. .. .	381.7	518.2	445.2
4th " 1948 .. .. .	378.7	516.2	439.9
1st Quarter, 1949 .. .. .	367.7	485.7	420.6
2nd " 1949 .. .. .	376.5	489.1	422.4
3rd " 1949 .. .. .	389.3	486.3	431.6
4th " 1949 .. .. .	408.0	491.9	441.9

(1) Average of the quarterly indices,  
 (2) Revised indices,



TABLE 20.  
COTTON EXPORTS.  
(Metric tons)

							Cotton	Cottonseed
Average	1907/11	..	..	..	..	..	4,190	2,786
„	1912/16	..	..	..	..	..	3,185	5,542
„	1917/21	..	..	..	..	..	3,538	6,266
„	1922/26	..	..	..	..	..	9,608	19,392
„	1927/31	..	..	..	..	..	23,972	53,902
„	1932/36	..	..	..	..	..	36,282	74,197
„	1937/41	..	..	..	..	..	63,334	77,458
„	1942/46	..	..	..	..	..	55,280	95,894
„	1947	..	..	..	..	..	52,589	89,483
„	1948	..	..	..	..	..	50,118	90,387
„	1949	..	..	..	..	..	65,334	102,927

PERCENTAGE EXPORTED TO VARIOUS COUNTRIES.

COUNTRY	SAKEL		AMERICAN	
	1948	1949	1948	1949
United Kingdom .. .. .	81	85	99	61
India .. .. .	15	8	1	2
United States .. .. .	1	—	—	—
Others .. .. .	3	7	—	37
	100	100	100	100

TABLE 21.  
GUM ARRIVALS—BY PROVINCES.  
(In thousands of kantars).

	HASHAB					Average over past five seasons	
	1944/45	1945/46	1946/47	1947/48	1948/49	000s kantars	percent of total
Kordofan ..	204.2	351.7	374.0	547.0	436.5	382.7	67.0
Darfur ..	9.0	9.7	37.0	41.7	35.0	26.5	4.6
Kassala ..	34.0	25.3	53.2	70.6	48.5	46.3	8.1
Blue Nile ..	90.7	112.3	97.2	128.4	108.7	107.5	18.8
Upper Nile..	9.2	8.8	10.1	10.6	3.9	8.5	1.5
<b>TOTAL</b>	<b>347.1</b>	<b>507.8</b>	<b>571.5</b>	<b>798.3</b>	<b>632.6</b>	<b>571.5</b>	<b>100.0</b>
	TALH						
Kordofan ..	2.1	1.9	1.1	1.4	1.7	1.6	6.7
Darfur ..	—	—	—	—	—	—	—
Kassala ..	12.0	11.2	8.9	20.3	16.4	13.8	57.5
Blue Nile ..	6.7	7.0	19.6	4.0	5.6	8.6	35.8
Upper Nile..	—	—	0.5	—	—	—	—
<b>TOTAL</b>	<b>20.8</b>	<b>20.1</b>	<b>30.1</b>	<b>25.7</b>	<b>23.7</b>	<b>24.0</b>	<b>100.0</b>

TABLE 22.  
GUM EXPORTS (Metric tons).

PERIOD	Quantity
Average 1908/12 .. .. .	14,188
„ 1913/17 .. .. .	13,842
„ 1918/22 .. .. .	13,906
„ 1923/27 .. .. .	21,145
„ 1928/32 .. .. .	19,835
„ 1933/37 .. .. .	20,604
„ 1938/42 .. .. .	20,344
„ 1943/47 .. .. .	20,621
„ 1948 .. .. .	34,658
„ 1949 .. .. .	33,916

TABLE 23.  
MARKET ARRIVALS OF CERTAIN AGRICULTURAL PRODUCTS  
(Kantars)

CROP	1944/45	1945/46	1946/47	1947/48	1948/49
Sesame .. ..	344,404	269,298	344,129	340,473	689,584
Groundnuts .. ..	16,637	30,987	120,906	156,633	166,105
Melonsced .. ..	228,034	169,570	228,319	454,379	217,623

TABLE 24.  
MARKET ARRIVALS OF TOBACCO.  
El Fasher.

Year	Quantity Kantars	Value £r.
1945 .. .. .	23,070	40,910
1946 .. .. .	21,815	85,072
1947 .. .. .	41,508	65,318
1948 .. .. .	14,175	25,177
1949 .. .. .	8,279	16,233

TABLE 25.  
EXPORTS OF PULSES.

	Haricot Beans		Horse Beans		Chick Peas		Peas	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
		£r.		£r.		£r.		£r.
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
1949	3,741	129,277	2,583	56,827	2,406	71,464	28	594

TABLE 26.  
EXPORTS OF MINOR FOREST PRODUCTS.

	Beeswax		Senna		Garad		Domnuts (all types)	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
		£E.		£E.		£E		£E,
1944	146	20,213	204	8,768	4,098	52,982	2,062	85,019
1945	89	14,575	200	11,222	4,105	44,116	2,265	83,238
1946	145	33,818	549	26,716	1,695	16,262	7,149	136,752
1947	132	34,508	599	37,049	985	10,435	6,073	79,373
1948	123	30,259	321	25,223	2,397	30,938	5,581	67,101
1949	211	51,517	140	11,221	1,892	20,885	5,812	72,151

TABLE 27.  
EXPORTS OF FISH AND MARINE PRODUCTS.

	Fish		Trochus Shell		Mother of Pearl		
	Tons	Value	Tons	Value	Tons	Value	
		£E.		£E.		£E	
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
1949	..	1,382	64,602	1,244	55,175	109	17,991

TABLE 28.  
SHIPS\* ARRIVING AT PORT SUDAN.

	British		United States		Other		TOTAL	
	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage
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	2,184,236
1949	454	1,958,635	36	142,935	423	952,532	913	3,054,102

\* including coasting vessels.

## CHAPTER VIII — AGRICULTURE &amp; FORESTS

## GENERAL.

122. The 1949 rains were exceptional in that large areas of Northern Province received heavier falls than for many years previously, whereas the regions which normally receive between 100 and 400 mm. per annum showed a deficiency of nearly thirty per cent, on their averages. This materially reduced summer grazing and rain-grown crops. Whereas in 1948/49 the grazing in the northern part of this zone was poor while the grain in the southern zone was excellent, the prospects for 1950 were that both areas would be equally affected.

123. The Nile flood was later and more prolonged than in 1948, and the areas flooded in Northern Province showed a welcome increase, although still below average.

124. The 1948/49 crop of long staple cotton was good, Gezira cotton producing over  $4\frac{1}{4}$  kantars per feddan. Full details are given later in this chapter. The 1949/50 cotton prospects were also good. While the crop in the Gezira was forecast to be a little below that of the previous season (the estimate of about four kantars per feddan being much better than was feared earlier in the season), the grade was expected to be considerably better than that of the 1948/49 crop which was disappointing. The Gash delta achieved a good watered area in spite of a small flood, and the Tokar flood was only slightly below normal, a big improvement on the previous year, although the lack of rains towards the end of the year did not augur well for the ultimate yield. In the Nuba Mountains the rains were good and there was an increase in the area sown, but the total yield was not expected to exceed that of 1948/49. In Equatoria, despite heavy attacks of pests, the final return was expected to be slightly in excess of that of the previous year.

125. The staff position eased somewhat during the year, new appointments more than offsetting retirements and resignations in all sections except the research division.

## NORTHERN PROVINCE.

126. Heavy showers of rain falling in most areas of the province in August led to the rather optimistic sowing of large areas of feterita in the wadis. Absence of adequate rain in September, however, resulted in disappointing crops. While the grain situation, therefore, was not materially affected, fodder was generally improved.

127. The Nile flood was better and held its level longer than in 1948, hence there was considerably more flooding of basins and gerf lands. The main crops were as usual, dura and lubia, both of which gave adequate crops, and a fairly large area of fasulia was also sown which promised a good yield at the end of the year. The cotton at Zeidab also gave an excellent yield in spite of a heavy attack of pink bollworm; but at Fadlab, where it was late sown and badly cultivated, there was a poor crop. The area under wheat increased in 1949, mainly at the expense of fasulia and ful masri, and the crop got away to a good start. The yield was expected to be satisfactory.

128. Much work was carried out by the administrative and agricultural staffs in regularising pump schemes. As a result a considerable increase in actual irrigated area was obtained with a material reduction in the overall water liability. At the close of the year, 338 private pump schemes were licensed in the province, of which 72 were co-operative, considerable numbers of others were rapidly reaching the stage when applications could be put forward.

129. The ten government pump schemes made excellent progress during the year. Nearly 10,000 feddans of summer crops were harvested and the area of winter cropping reached over 14,000 feddans. Of the summer area, over 5,000 feddans were under dura, while of the winter sowings nearly 8,000 feddans were wheat and over 2,000 ful masri. The main seifi dura crop was not up to average largely owing to heavy incidence of buda and stemborer, but the other crops were satisfactory, and the winter sowings were expected to give excellent yields.

#### KHARTOUM PROVINCE.

130. The average rainfall for the province in 1949 at 73 mm. (as against 90 mm. in 1948), was heavier than normal in the south and much lower than normal in the vicinity of Khartoum. In spite of this an area of about 11,000 feddans was sown to rain dura. Unfortunately the rainfall, small in itself, was badly spaced and the crop as a whole was a failure. Grazing also was poor and the livestock outlook for the dry season was not encouraging.

131. Though lower than in 1948, the Nile flood was fair and was more prolonged. Flooding on the White Nile flats was better, but not so good on the banks and islands in the central and northern khuts. Shifting of the channel continued to give anxiety especially in the Kadaru, Abu Halima and Nofalab districts, good sagia land being eroded in some places and pump channels being silted up and rendered useless in others.

132. Several new pumping schemes were approved and commenced operations in the year, and others were regularised and amended. There was a tendency for dura to replace cotton on these schemes, and for the amount of berseem grown to increase. Fasulia and groundnuts were attacked by a fungus and yielded badly, and cotton was generally poor, possibly on account of the low rainfall and the long warm spell at the beginning of flowering. The number of schemes, government and private, operating at the end of 1949 was 118 as against 103 a year earlier.

133. 354 sagias were in operation in 1949, one less than in the previous year, but the number of shadoofs rose from 161 to 191. Most of these increased their areas of wheat and maize and reduced their vegetables, but results were disappointing owing to heavy stemborer damage on the maize, though the wheat yielded well.

134. The experimental farm at Shambat had a more successful year with the replacement of the old pumping plant at the end of 1948, and the arrival of a tractor for cultivation in April. Apart from its main purposes of home-farm for the School of Agriculture, and trial ground for the Research Division, the farm grew quantities of berseem, dura and lubia 'afin for fodder, bulked good quality wheat seed for the local cultivator, and carried out experiments in the utilisation of unfamiliar crops. The new fruit garden came into first bearing, and the output of citrus fruits from this garden should be appreciable in 1950.

BLUE NILE PROVINCE.

*Gezira Irrigation Scheme.*

135. The following areas, in feddans, were sown to crops in 1948/49:—

Crop	Sudan Plantations Syndicate	Kassala Cotton Company	Total
Cotton .. .. .	167,314	39,464	206,778
Dura .. .. .	91,608	22,412	114,020
Lubia .. .. .	42,456	8,122	50,578
Wheat .. .. .	2,619	476	3,095
Other Crops .. .. .	4,360	1,397	5,757
	308,357	71,871	380,228

136. The cotton crop got away to a good start and bore a heavy crop of bolls, but these were late in opening and even then appeared to have opened prematurely. Jassid attack was fairly heavy but less than in the previous year, and 77,850 feddans were sprayed with D.D.T. Whitefly were reported to be more numerous than usual, especially on the sprayed areas. Final yields were (in kantars per feddan) :—

Domains Sakel	3.86
Evelyns Sakel	4.13
X1730A	4.90
Average	4.256

137. The dura crop was very good but the lubia and wheat were only average.

138. The 1949 growing season was remarkable for the light rainfall in July and August. As a result of this, weed growth was slight and the cotton crop was easily established. Growth was slow at first but improved in November and December, and gave a good crop of bolls. Jassid infestation was heavy and extended further south than usual, and about 125,000 feddans were sprayed with D.D.T. The yield was expected to be lower than in the previous year (estimated at about four kantars per feddan), but greater than was anticipated on the basis of the July-August rainfall prognosis. Boll opening appeared satisfactory and the indications were that the crop would grade well. Excellent yields of dura were obtained in the north, but were disappointing in the south; the overall average being about five ardebs per feddan. More lubia was grown and some of it made excellent growth. The areas sown to these crops were :—

Cotton	206,737 feddans
Dura	103,679 feddans
Lubia	61,740 feddans

*White Nile Schemes Board.*

139. Details of tenancies and areas on the various schemes in 1948/49 were :—

Scheme	No. of Tenancies	Areas in feddans				
		Cotton	Dura	Lubia	Wheat	Vegetables
Abdol Magid ..	1,999	10,003	6,013	6,005	3,884	823
Fatisa ..	302	1,288	1,209	932	14	161
Hashaba ..	455	1,978	1,700	1,137	26	66
Wad Nimr ..	68	340	215	204	70	22
Duoim ..	95	421	304	234	92	127
Um Gerr ..	455	2,517	1,650	1,365	453	308
	3,374	16,547	11,091	9,877	4,539	1,507



140. All schemes were sown with X1730A variety cotton from the Gash and ammonium nitrate was applied to the whole of this crop at rates varying from 53 to 73 kilos per feddan. A total of 15,097 feddans were sprayed with D.D.T. as a jassid control measure. Comparative yields for the past four seasons in kantars per feddan were :—

	1945/46	1946/47	1947/48	1948/49
Abdel Magid	3.00	3.00	3.07	4.01
Fatisa	1.94	1.92	3.63	4.69
Hashaba	2.00	1.64	4.01	4.33
Wad Nimr	3.32	2.80	2.91	5.81
Dueim	2.23	2.42	2.84	3.90
Um Gerr	2.69	3.78	3.25	4.57

141. Yields of dura were generally good especially at Abdel Magid, Wad Nimr and Dueim, and Lubia also produced an excellent crop in all places and would have been better still with more control of grazing animals before harvesting. Wheat, however, was variable, good crops being realised in Abdel Magid and Wad Nimr, while Dueim reported a particularly poor one.

142. The 1949 cropping was as follows :—

	Area in feddans.				
	Cotton	Dura	Lubia	Wheat	Vegetables
Abdel Magid .. .. .	9,985	5,991	5,991	1,997	87
Fatisa .. .. .	1,304	1,270	959	—	120
Hashaba .. .. .	1,962	1,811	1,137	—	63
Wad Nimr .. .. .	340	299	204	—	22
Dueim .. .. .	382	374	238	—	146
Um Gerr .. .. .	2,523	2,268	1,383	—	260
Bakht or Ruda .. .. .	46	33	10	3	6
	16,542	12,046	9,922	2,000	704

143. All the cotton sown was X1730A from the Gash, and little difficulty was experienced in establishing the crop. Ammonium nitrate dressings were given on all schemes, varying from 60 to 80 kilos per feddan, and the whole of the area with the exception of a few inaccessible plots was sprayed with D.D.T. against jassids. The end of the year crop estimate was that the yield should be approximately the same as in the previous year.

144. Record yields of dura were obtained at Um Gerr and Dueim, and elsewhere a better than average crop was harvested. Cultivators on the White Nile schemes increasingly turned to

fertiliser to augment their yields, but there was no response to the offer of ammonium nitrate at cost price at Abdel Magid. Lobia did exceedingly well at Um Gerr, and also at Abdel Magid, but Hashaba, which usually has the best crop, was poor, owing to late sowing and the use of bad seed. The wheat crop promised well at Abdel Magid, and also on the White Nile schemes, where, with the exception of Fatisa, it took up by far the greater part of the vegetable area.

145. Tenants' councils continued to operate reasonably well under supervision.

*Private Schemes.*

146. The cotton crop for the 1948/49 season, grown on 16,241 feddans, which was estimated to yield 60,000 kantars of lint actually realised 66,169 kantars. For the 1949/50 season the number of such schemes growing cotton rose from 48 to 56 and the area sown increased from 16,241 to 19,853 feddans, expected to yield in the neighbourhood of 60,000 kantars. The number of private schemes licensed in the province had risen to 155 by the end of the year; but the water liability had been somewhat reduced by the campaign of regularisation undertaken in the summer months.

*Rain Cultivation.*

147. In contrast with the 1948 season, that of 1949 showed a regular rain pattern, the southern part of the accepted rains area having adequate rainfall, and the northern insufficient. The dividing line could be taken as from Hasira, through Karkoj, to Jebel Geifrat. South of this line dura and sesame crops were average, and in the southern Fung the sesame yield was outstanding. North of the line the crops were much below average, and amounted to failure in wide areas of the significant dura belt. Owing to partial failure of the early "bildat" crops the harig area increased considerably, and an influx of cultivators from further afield led to indiscriminate burning, resulting in the loss of good grass which would have been available in 1950, and with little benefit accruing in the current year. Where the late rains were adequate, the harig cultivation gave excellent returns, but elsewhere not more than about 40 per cent matured to give a crop. Most of the hafirs filled to capacity in the 1949 rains, even in areas where rainfall was well below average. Fire-lining and fire protection continued, and the use of a tractor outfit in the area west of the Blue Nile quickly demonstrated that mechanical fire-lining was not only speedier but also more economical than the old hand and animal teams system.

KASSALA PROVINCE.

*Gash Delta.*

148. At the end of 1948 the areas and estimated yields of the 1948/49 Gash cotton crop were as follows :—

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

149. There was an attack of thrips on both the early and late crop and some incidence of Egyptian and Sudan bollworm. The early sown Sakel showed some leaf-curl but the late sown was practically free. In spite of these attacks and the depredations of animals in the latter part of the picking season, the final yield was very nearly a delta record, being second only to the 1942/43 season, and was made up as follows :—

Variety	Effective area in feddans	Crop in Kantars	Yield in kantars per feddan
X1730A .. .. .	26,051½	59,990.10	2.30
Bar X1730L .. .. .	900	2,796.97	3.10
Bar X1730L1 .. .. .	125	454.15	3.63
Total for X1730 varieties	27,076½	63,241.22	2.33
Domains Sakel .. .. .	16,801	34,628.21	2.06
Evelyns Sakel .. .. .	2,549½	5,793.07	2.27
Sakel Bar 14/7 .. .. .	105	242.21	2.30
L.C.R. Sakel .. .. .	5	6.97	1.40
Total Sakel .. .. .	19,460½	40,670.46	2.09
Grand Total .. .. .	46,537	103,911.68	2.23

150. Dura allotment to the extent of 16,493 feddans brought the total effective area cultivated to 63,030 feddans, the largest in the history of the delta with the exception of 1929.

151. The arrival of carry-all scrapers enabled an extensive programme of improvement to be carried out on the embankments and well centres in the delta between the seasons with consequent amelioration in the domestic water supply.

152. The Gash flood in 1949 was the second lowest on record, only 325 million cubic metres passing Magauda. A small early flush passed Kassala on 20th May and the first flood water was reported from Tessenei on 4th July, but there was no reasonable volume until 25th July. Owing to a slackening of the flood in early August the change over to the second rotation could not be completed until 25th August. The areas watered in the first rotation were satisfactory, but the late change over and feeble September flood resulted in reduced second rotation areas and a less thorough watering than was desirable. In spite of the low flood volume a gross area of 61,505 feddans was watered, of which 48,551 were allotted to cotton and 11,559 to dura. The effective area established under cotton was 44,840 feddans of which 28,360 was sown to X1730A, 16,036 to Domains Sakel and 2,169 to Evelyns Sakel. The estimated yield was a little over 90,000 kantars.

153. Labour for sowing and weeding was plentiful and, although grass was heavy, weeding was satisfactory. A caterpillar attack in several areas of the second rotation, necessitating considerable resowing, seriously delayed the establishment of the late cotton. Resowings were in the main successful, but there was a small loss of area. Thrips incidence was general over the crop in October and was higher than in the two previous years. The cotton both early and late made good growth, and at the end of the year was healthy and well developed. The Sakel sown in the first rotation on Metateib showed good promise and appeared to be less affected by leaf-curl than in the two previous years, but jassids caused damage.

154. The dura crop was moderate and it was estimated at the end of the year that the yield inclusive of rain dura in the delta would be 4,000 tons.

#### *Tokar.*

155. 1949 opened with an exceptionally cold spell, retarding crop maturity, from late January to the middle of March. Several light showers fell in this period, but none was sufficiently heavy to provide lasting benefit to the crops. As the 1948 Baraka flood was one of the poorest on record, approximately only 40 per cent of the previous season's total area being flooded, the sown areas were well below average. Of the total flooded area of 45,500 feddans, made

up of 26,000 from the Baraka, 10,000 from the Khor Sebat and October rains, and 9,500 from the December — January rains, the effective area sown to cotton was 20,685 feddans, to dura 3,245 feddans, and the dukhn 8,940 feddans.

156. Flood dura and dukhn both yielded well above average, four ardebs per feddan for dura, and  $2\frac{1}{2}$  for dukhn. The rain sown dukhn, however, was badly affected by the prolonged cold spell in the early part of the year and did not average more than half an ardeb per feddan. The final estimated yield of the grain crops was 3,095 tons, of which 1,920 were dura and 1,175 dukhn, and while this was 33 per cent. below the 1947/48 return, it was considerably greater than at first seemed possible.

157. The cotton crop which looked better than had been expected at the beginning of the year was also affected by the cold spells, continuing its vigorous vegetative growth at the expense of boll opening. The cold high winds also gave rise to pronounced leaf-shrivel and boll shedding. Picking, therefore, was late in commencing, and did not gain real momentum until the middle of March. The final yield secured from the 1948/49 crop was 27,859 kantars, giving an average of 1.35 kantars per feddan, a low figure after the higher yields of recent seasons, but in keeping with the poor flood and the severe aphis attack during the final three months. Though yield and average were therefore the lowest since the 1933/34 season, yet the crop value amounted to over £E. 440,000, about one quarter of the value of the 1947/48 crop.

158. The 1949 Baraka flood was both late and below average, and the first flush did not reach the delta until early August. There were only five flushes as against the normal eight to ten, and the total flood period was only 25 days, one of the shortest on record. The hot, humid, mainly calm conditions which followed were exceedingly beneficial to the young crops; but the severe north-easterly winds which then set in until late November retarded the plants, and the absence of any appreciable rain in the last three months was a further unfavourable factor. Despite the poor volume, the flood watered an area of 56,250 feddans, of which 51,100 received a reasonable watering, or about the average. An estimated area of 38,850 feddans of cotton and 15,340 feddans of grain were sown, of which the final effective areas were assessed at 30,265 feddans of cotton and 9,650 feddans under grain.

159. The cotton crop got away to a good start in spite of local attacks of cut worm, and by mid-October it was promising well. The severe winds which followed, however, battered it considerably and caused some bud and boll shedding, which was also increased by attacks of Egyptian boll worm and creontiades. By

the end of December the well flooded areas were carrying good, strongly growing crops, while in the more lightly watered regions the crops were poor, patchy and backward. The cold and high winds of late December caused some leaf shrivel everywhere. By the end of the year the estimate of yield was 48,000 kantars, or considerably less than earlier crop prospects indicated.

160. The grain crop in general progressed satisfactorily, although there was some loss of area in the fringes and the southern section owing to the severe winds. With the return of calmer conditions in late December, the dura made moderately good progress but the lack of rain was responsible for the depression of the yield, which was estimated at 1,410 tons. This, with an expected 1,920 tons of dukhn, brought the total to 3330 tons of grain or approximately ten per cent. more than in the previous season.

*Gedaref District.*

161. The 1948 rains in the southern half of the district were fairly satisfactory and although the village crops did not come up to expectation the harig areas compensated for them and 25,000 tons of dura were weighed through the markets in 1948/49. This figure was considerably below the estimate but it did not take into account the quantities of grain stored by cultivators and merchants against later higher prices. Nearly 6,000 tons of sesame were marketed and over 750 tons of sunt pods, the latter at a much reduced price compared with 1947/48. Some 300,000 feddans were protected for harig cultivation.

162. In the 1949 season, the railway line could be taken as dividing the effective from the non-effective rainfall. South and east of it, rain was adequate to produce crops of grain and sesame. To the north and west the initial showers were insufficient for sowing, and when sowing eventually took place there was not enough moisture to maintain growth. Heavy showers fell later, towards the end of August and in September, but did not produce the grain expected. A little under 250,000 feddans were fire-lined in 1949 for harig cultivation in the following year, and a further 30,000 feddans for grazing.

163. Bird damage was considerable in the area south-east of Ban, 20 per cent loss of crop being estimated. Grasshoppers caused much damage to seedlings in the Mafaza area, and again to the ripening crop in October, but elsewhere the attacks of this pest were anticipated and the destruction was less than might have been expected. Stemborer and asal did only minor damage locally. Other pests were present but insignificant.

164. Work continued at the Khor Kaffai experimental farm on the optimum date for sowing various local crops. The results with duras, cotton, and groundnuts were encouraging, but the trials with sunflower and safflower were failures.

*Mechanised Crop Production Scheme.*

165. The area of 8,805 feddans which was sown to dura in the 1948/49 season gave a total of 2,780 tons of grain, giving an average yield of 744 rotls per feddan. There was, however, great variation in the returns from individual holdings and different areas. In Camp 6, for example, yields of over half a ton per feddan were not uncommon, whereas in Kilo 12 and among the "outsiders" holding, no holdings reached this level. The following table shows the percentage of holdings with average yields per feddan :—

	Over ½ ton	700 rotls to ½ ton	400-700 rotls	Under 400 rotls
	percent	percent	percent	percent
Kilo 12 .. .. .	—	35	40	25
Camp 6 .. .. .	22	56	19	3
Leiya .. .. .	11	56	28	5
" Outsiders " .. .. .	—	—	42	58
Whole Scheme .. .. .	11	48	29	12

166. The 1949 rains were notable for late arrival and for being in the form of a large number of light showers. Consequently the soil was not properly soaked, and in July it dried out completely. Even in August the surface dried out on several occasions, and following rains did not penetrate to the moisture level below. Maximum penetration was only 60 cm. The total area cropped was 8,367 feddans, of which 20 feddans were put down to sesame and 20 to safflower; of this area 3,884 and 2575 feddans were cropped by the two established village settlements and divided into 136 and 84 holdings respectively; 1,701 feddans were in seven large holdings, and the rest in experimental work.

167. Establishment of the crop was difficult on account of the rains, and discing although easy and effective, was discontinuous. Weed growth was weak. 1,515 feddans had to be resown under unsatisfactory conditions. Heavier showers in September and in particular one heavy shower on 18th October markedly improved the prospects. Owing to the light rains as large an area as possible was sown with quick maturing feterita, F. maatuk and F. managil; and consequent on these two factors harvesting started in early

December. Yields to the end of the year were very poor, at 333 rotls per feddan. It was hoped, however, that these would improve when the managil variety was threshed out.

168. Experimental farm work was confined to a trial of weed-killers in co-operation with Imperial Chemical Industries, Ltd., and the cropping of the 1948 fallow discing experiment with dura, sesame and safflower. The sesame and safflower suffered heavy insect damage, but the dura was strikingly good.

169. A bad grasshopper year was expected but did not materialise, an invasion experienced in October over an area of 1,000 feddans was successfully handled by baiting. Most damage, in some areas considerable, was done by a stemborer in the seedling stage. This latter was the main reason for the resowing. Other pests were only present in light intensity.

170. An area of some 2,600 feddans of harig was reserved for 300 Beja, brought to the scheme by the province authorities. This experiment was reasonably successful and the majority settled down for the season. Work was of a much higher standard than expected, but unfortunately the harig yields were no exception to the general rule for the area as a whole.

#### KORDOFAN PROVINCE.

171. The main features of the agricultural year in Kordofan were the continued re-expansion of the Nuba Mountains cotton industry, record sesame crop on the goz lands, a greatly reduced grain crop, and the mechanical excavation of a chain of 49 hafirs in the Nuba Mountains.

172. Although handicapped by unfavourable rains, Nuba Mountains cotton was harvested with a crop of just over 200,000 small kantars of seed cotton yielding some 66,000 kantars of lint and a surplus of 4,000 tons of seed. The following table shows progress in the re-expansion of the industry :—

Season	Area in feddans	Crop in kantars (315 rotls)	Cash paid to cultivators	Ginneries in operation
			£s.	
1946/47 .. .. .	2,226	1,628	3,600	2
1947/48 .. .. .	22,787	29,548	75,000	5
1948/49 .. .. .	65,700	63,994	202,000	7



173. The poor mid-season rains stunted the crop's early development in all areas and resulted in early and premature ripening, Um Berembeita, Abu Gebeiha and Dilling districts suffering the most. Pest damage did not attain significant proportions but pink and Egyptian boll worm and cotton stainer bug were generally in evidence. The effect of the unfavourable rains is apparent in the district figures :—

Ginnery district	Estimated area	Kantars of seed cotton purchased	Seed cotton per feddan
Um Berembeita .. ..	7,000	2,894	0.41
Abu Gebeiha .. ..	7,600	5,469	0.72
Kalogi .. ..	7,000	7,387	1.06
Talodi .. ..	11,400	11,212	0.98
Kadugli .. ..	15,700	24,357	1.55
Dilling .. ..	9,000	4,370	0.49
Lagowa .. ..	8,000	8,190	1.02
TOTAL .. ..	65,700	63,879	0.972

174. In 1949 the rains were fair in the cotton growing areas, being above average at Kadugli, Talodi and Kalogi, and below average at all other stations. Poor distribution, however, retarded the early sown crops at Kadugli and Talodi, but at Abu Gebeiha good distribution of a below average rainfall gave excellent crops of all kinds. In general, north of the twelfth parallel rainfall was very poor and late, and with the exception of sesame crops returned little more than their seed.

175. 26,000 kantars of BAR/SP84 variety seed, reserved from the 1948/49 crop, were issued and, except at Um Berembeita and Abbassiya, were taken up eagerly by the cultivators. The two stations mentioned are nearer to rail head and, at current prices, dura, sesame and groundnuts competed fairly successfully with cotton for the cultivator's interest. Pests reduced the crop considerably, pink and Egyptian boll worm doing much harm, and stainer bugs were plentiful. Blackarm too, was responsible for some damage. At the end of the year the cotton areas and yields were estimated as follows :—

Ginning Factory	Area in feddans	Estimated yield of seed cotton in kantars of 315 rotls.
Um Berembeita .. .. .	7,800	2,400
Abu Gebeiha .. .. .	9,000	12,700
Kalogi .. .. .	8,000	7,900
Talodi .. .. .	10,000	9,500
Kadugli.. .. .	21,000	22,200
Dilling .. .. .	7,500	6,350
Lagawa .. .. .	11,000	12,700
TOTAL .. .. .	74,300	73,750

176. South of the twelfth parallel yields of grain were good, and it was estimated by necessarily imprecise methods that in the ginning areas of the Nuba Mountains a little over 300,000 feddans were sown to yield two million kantars of grain. Dukhn yielded well in the Dilling area, but on the goz lands in general the returns were poor. The grain supply was considered to be adequate for province needs, provided there were no significant exports. Sesame was sown late owing to the late arrival of the rains, but crops were fair. Threshing consequently commenced late and was still continuing as the year ended. Quality was below average, but prices of both oil and cake were high. Sesame seed bug did considerable local damage but did not seriously affect the crop in general. Groundnuts, so dependent on the early rains which did not arrive in 1949, practically failed on the goz lands. In the vicinity of Dilling and Kadero, however, yields were fair but in the Sunjikai experimental farm they did not seem likely to exceed 125 rotls per feddan. An encouraging feature was the capacity of variety Barberton to produce a crop under conditions of rainfall which caused total failure in local varieties. Gum received more attention through the crop failures on the goz lands, and the quality of produce arriving at El Obeid was very good.

177. The 49 hafirs excavated by the team in the 1948/49 season proved an outstanding success. Most of them filled to surface level, one overflowed, and only two failed. Improvement work on the in-takes was planned for the 1950 dry season, and it should be possible to fill all the hafirs to the highest levels attained in the supply khors during the 1950 rains. Crops in the vicinity of these hafirs were excellent and the areas should extend greatly in 1950.

## UPPER NILE PROVINCE.

178. Heavy storms were a feature of the weather in the southern Shilluk area which unfavourably affected the grain crop; but among the northern Shilluk the rains were better distributed and resulted in improved returns. The dura lwali yielded well in Kodok and Fame, but results were poor in Tonga and Donjol. Dura agono and angove, however, were generally below the previous year in yields.

179. Experimental work was continued on the farm at Kodok. Sunflower, cotton, dura lwali, sesame and various species and strains of lubia were grown, and rotation experiments were carried out. Much work was done in harig protection, and the area showed an increase of nearly one hundred per cent. on the previous season. In the Paloich and Dar es Sagea areas dura cultivation continued to expand satisfactorily.

## EQUATORIA PROVINCE.

180. The areas and yields for the 1948/49 cotton crop were :—

Ibba Sub-district	2,300 feddans.	2,286 kantars.
Meridi Sub-District	800 feddans.	825 kantars.
Total	3,100 feddans.	3,111 kantars.

The markets, which were opened in December, 1948, in 12 places in the Ibba Sub-district and 11 in the Meridi Sub-district, closed in mid-April, 1949. The Meridi area was responsible for the greater part of the decline in yield, being nearly 30 per cent down on 1947/48, whereas returns from Ibba were only 3 per cent below those of the previous year.

181. Despite differences of rainfall between districts 1949 was a good year and little want was experienced except in the Moru area. Nevertheless in July the Bari were selling cattle, including female stock, as early flooding of the Nile had spoiled crops, and in Central District advantage was not taken of the rains, which were late in many cases, so that the sudden heat of October dried up the groundnut crop. Dura yields on the heavy lands of the Latuka were good but neglect at harvesting allowed much to sprout in the head. The light soils in Torit produced average crops and at Kapoeta good returns of high quality were reported. In the Bari and Yei areas early duras were below average but good crops over a much larger area than in previous years came from the late duras. Dukhn cultivation increased on the light soils of Kajo-Kaji

and in the drier parts of Torit and Eastern District, giving good yields of both the earlier tall types and the late types sown in October. Extensive areas of telebun were sown in the Acholi district and yielded well. The early sown crop in the southern Yei area also gave good returns but the late sown telebun there suffered extensive damage from army worm.

182. In all districts where the early rains were good an unprecedented acreage of maize was sown and there were as many as three sowings in the year in the Yei District. In consequence the markets were flooded with the crop and 2,000 bags were on hand in Yei at the end of the year. In the Acholi country sesame yields were average. Elsewhere yields were lower but more than average amounts were sown owing to the prevailing high prices. Groundnuts, a very popular crop, gave less than normal yields in the eastern areas. These low returns were aggravated by the practice of lifting the crops too early in order to take advantage of the excellent price. Cultivation of the other pulse crop, Bawlera groundnut, increased in popularity, and the usual cowpeas, etc., continued to command a ready sale. The acreage of pigeon pea increased once more and this crop was prominent in most local markets. Cassava held its own on the west bank, being popular with women for its ease of preparation. It is doubtful, however, if it could be established on the east bank. The yield of sweet potatoes was disappointing, except for a new variety grown in Juba, introduced by the Research Farm at Wad Medani from Porto Rico stock, which gave excellent yields of palatable tubers with no fibre.

183. Cotton growing continued on a limited scale in Kajo-Kaji. The seed came from Uganda and the crop went to Rhino Camp for ginning. The rains were late so that yields were poor, but the grade was good. In the Meridi and Ibba districts rains were irregular and insect damage severe, so that the estimate of 4,000 kantars from the 3,700 feddans sown made conservatively in July appeared in December to be excessive.

184. The dairy at Juba continued to increase production. Several lactations of 300 gallons were achieved and the average yields per cow also showed a steady and satisfactory increase over previous years. At Meridi, however, the total yield from the dairy fell, probably to a higher incidence of trypanosomiasis.

#### EQUATORIA PROJECTS BOARD. PRODUCTION DIVISION.

185. The final figures for the cotton crop of the 1948/49 season showed a total yield of 7,602 kantars of seed cotton from 6,374 feddans grown on 12,709 holdings. Thus the crop was 20 per cent below that of the previous year, from an area nearly 20

per cent larger, on a 10 per cent greater number of holdings; hence the average yield per feddan fell to 1.14 kantars from 1.70 in 1947/48. This disappointing result was due mainly to poor seed of low germinating quality, which led to re-sowing too late in the season.

186. The 1949 season on the whole was unfavourable; after a very early start, 80 mm. in March and a further 86 mm. in the first half of April, the rains ceased almost completely in many areas until the end of May. During the ensuing months, however, the rainfall was nearly average and continued normally until the middle of November. In consequence of the uncertainty and finally late start of the rains proper there was a considerable reduction in areas and yields of early sown crops such as groundnuts, maize and pumpkins, especially to the north and east of Yambio. In an attempt at compensation cultivators cleared large eleusine plots from which, except in parts of the Tambura District which suffered a heavy attack of laphygma, excellent crops were harvested. The sesame crop also was well up to average. Dura, on the other hand, was a partial or total failure on many plots through poor seed germination, probably due either to faulty storage or poor or to lack of after-sowing rains in July.

187. About a third of the sowing of cotton was completed by mid-June, and the remainder by the beginning of July, which was a satisfactory start. Germination was good and the plants came away well in the following rains. By October the crop promised well; but on the commencement of flowering the prospect changed and by mid-November it was obvious that pest damage on an unprecedented scale had taken place, boll worms, helopeltes, stainer bugs, and jassids being the worst offenders. In consequence yield estimates were reduced to the region of 10,000 kantars, and it was expected that the grade of the resulting lint would also be adversely affected. The area established was estimated to be 8,950 feddans on a total of 17,900 plots.

188. Alterations and improvements were carried out in the sugar factory between June and November which increased the daily output by 50 per cent. 17 feddans of new land were cleared and planted for cane, and about three of these were planted in the first rains of April in the hopes of maturing at the end of a single rainy season.

189. A distribution of Yambio-grown oil-palm seedlings was made to cultivators during the rains, the seedlings of the selected Nigerian strain being left in the nursery to be used to plant the board's plantations at Nzara and Sakure. A consignment of seed

from the Belgian Congo was received and germinated satisfactorily.

#### BAHR EL GHAZAL PROVINCE.

190. The distribution of rainfall throughout the season was on the whole good in 1949, although the rains were late in starting and tailed off in October. Accordingly, except in the Rumbek area, the grain crop was fair, and, for the second year in succession, there was a surplus for export. Aweil, in particular, showed marked improvement, and the Malwal and Abien appeared to be turning from the cultivation of the toiches with their liability to flood, to the Gok hinterland north of the River Lol, a movement which could be encouraged by the sinking of bores. Both sesame and groundnuts gave better returns and there was a fair export surplus. The ploughing experiments at Tonj and Yar were disappointing. The soil at Tonj proved too hard and abrasive for the machinery used, as well as very variable in character. Fair yields of sesame and dura were obtained, but not sufficient to establish mechanised ploughing as an economic proposition. Yar, with its better soil and more favourable site, suffered from the absence of good sowing rains until it was too late, and the area was then heavily flooded by excessive rains in August.

#### POMOLOGY AND HORTICULTURE.

191. Date yields were below those of the years since the 1946 flood, but high prices compensated the growers for the reduced crop. Unexpected rain in the Nuri district affected the initial production of packed soft dates but subsequent output at the Nuri date factory was increased beyond that of previous years. Fair crops of mangoes were general but lower retail prices reflected the growing competition these fruits were encountering from increased imports of apples and other exotic fruits. The citrus crop was excellent in all districts, and good prices were realised. The Khartoum crop was harvested by the end of November before the Egyptian crop, with which Northern Province produce must compete, appeared on the market. Production of citrus commenced in the Kassala sagias, and the good prices obtained stimulated growers to increase planting. The government nurseries continued to produce large quantities of grafted fruit trees from selected stocks, and receipts indicated a general increase in distribution from these centres.

192. Horticultural produce was exhibited to good advantage at a number of shows throughout the country.

#### FORESTRY DIVISION.

193. In 1949 all vacant forestry and saw-milling posts were filled. Three Sudanese officials who were attending Edinburgh University School of Forestry returned to the Sudan after receiving

their degrees and were posted to forest districts. The programmes of afforestation and of the acquisition of lands for forest reserves advanced. On the production side the output of timber and sleepers rose to 480,820 cubic feet. The total of all classes of gum exported was 33,916 tons valued at £E. 1,641,041; the value was a record, although the tonnage was slightly less than the 1948 figure. Progress in the conversion of wood-burning steamers to oil reduced the consumption of firewood from the depleted forests between Khartoum and Malakal by 70,000 cubic metres per annum. The Sudan's first oil-fired brick kiln commenced operation at Atbara.

194. In forest reservation the most noteworthy single work was the commencement of settlement of 163,000 feddans of forests in Gedaref District. In afforestation, the teak and cypress planting programmes in Equatoria made good progress as a result of increased supplies of planting stock yielded by new forest nurseries. The early-burning campaigns in Equatoria and Bahr el Ghazal Provinces showed increased efficiency as staff and fire guards gained experience.

195. Reports from Blue Nile Province of a steady decrease in unreserved forest, particularly in the densely populated areas, gave cause for concern. The absence of public appreciation of the necessity of confining numbers of grazing animals to the limit which a given area can safely sustain, the ruthless lopping of trees by graziers, the increasing difficulty of acquiring even small areas of land for forest reserves, the progressively higher prices received for sales of forest produce in the existing reserves, and reports of increased desiccation and sand-drift in Rufaa and Dueim Districts, are all interrelated, and point to the need for public appreciation of the vital necessity of better land management.

#### MECHANICAL DIVISION.

196. Progress was made in the replacement of obsolete plant in pump schemes, and new engines and pumps were installed at Kitiab and Nuri. The programme of staff housing to replace that damaged by flood was nearing completion by the end of the year. Weirs and recorders were installed at all stations in preparation for the supply of water by volume. The position at Gendettu and Bouga pumping sites continued to deteriorate. At the former a further move of the floating plant was necessary, and at the latter, whilst a channel to the main river was kept open by an excavator during 1949, the growth of the island opposite the old pump house rendered it improbable that this plant could be kept working beyond the 1950/51 season: preparations were in hand for the supply of new plant.

197. All ginning factories came into operation. A new bale size was introduced for the Nuba Mountains ginneries which resulted in a saving of materials by some 20 per cent, and better truck load for the Sudan Railways. Most of the plant for the Yirol oil mill arrived in time for erection to be started early in 1950.

198. At the agricultural machinery depot, Wad el Huri, experimental work to find the most suitable implements for mechanical cultivation of dura on the marginal rainfall areas was concluded, permitting standardisation in tractors, implements and operations. A second road and hafir team was authorised early in the year. Plant was ordered and obtained, staff recruited, and the team proceeded into the field in December. With the expansion in road grading and scraping, hafir excavation, fire-lining, etc., the mobile commitments of the depot ranged over most of the central Sudan, as well as being seasonably localised in the various mechanical crop production schemes.

#### COTTON.

##### *Areas and Output.*

199. 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
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
1948/49 .. .. .	75,291	245,020	67,222	387,533

The output of Sakel 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	Sakel	American	Total
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	56,395	1,041,477
1948/49 .. .. .	1,151,196	94,424	1,245,620



*Yields.*

200. The following table shows the final yield of cotton from all the various centres of production for the season 1948/49:—

Type of cotton and locality	Amount stated as harvested		Amount received at ginning factories		Equivalent in bales of 430 lbs.
	Area feddans	kantars (315 rotls)	kantars (315 rotls)	kantars lint (100 rotls)	
<i>A. Sakel Type.</i>					
Sudan Plantations Syndicate Ltd. . .	104,834	412,524			
Kassala Cotton Company Ltd. . .	101,944	467,482	880,007	983,756	226,492
TOTAL GEZIRA AREA	206,778	880,006	880,007	983,756	226,492
Tokar Delta . .	20,685	27,859	27,805	29,276	6,740
Gash Delta . .	46,537	103,911	104,759	106,388	244,494
<i>GOVERNMENT ESTATES:</i>					
Abdel Magid . .	9,985	40,072	* 40,045	45,473	10,469
Fatisa . .	1,288	6,045	* 28,709	32,435	7,467
Hashaba . .	1,820	8,112			
Wad Nimr . .	340	1,977			
Um Gerr . .	2,517	11,011			
Dueim . .	421	1,580			
Gondal . .	642	2,795	2,780	3,199	736
Research Farm . .	228	921	† 921	866	199
<i>PRIVATE ESTATES:</i>					
White Nile . .	16,000	61,833	66,170	74,773	17,215
TOTAL SAKEL TYPE	307,241	1,146,122	1,151,196	1,276,166	293,812
<i>B. American Irrigated Private Estates</i>					
Zeidab . .	5,001	18,011	18,010	18,572	4,276
<i>C. American Rain Grown.</i>					
Kordofan . .	65,806	64,189	64,205	65,175	15,005
Equatoria . .	9,485	10,748	10,698	11,704	2,695
TOTAL RAIN GROWN	75,291	74,937	74,903	76,879	17,700
TOTAL AMERICAN TYPE . .	80,292	92,948	92,913	95,451	21,976
TOTAL ALL VARIETIES	387,533	1,239,070	1,244,109	1,371,617	315,788

\* Extracted from Sudan Plantations Syndicate returns.

† Ginned at the Gezira Research Farm.

*Ginning.*

201. The total quantity of cotton received at ginneries amounted to 1,244,699.73 kantars of 315 rotls seed cotton. The out-turn from this amounted to:—

1,372,703.70 kantars of 100 rotls lint.

18,221.31 scarto.

107,435 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 7,066 tons of which 4,310 tons were exported and the remainder was used for sowing, suction gas fuel or destroyed. The ginning out-turn of lint was again satisfactory, the average lint figure for Sakel and American being 110.90 and 102.77 rotls respectively per kantar of seed cotton.

*Sales.*

202. Except for a small quantity sold by public auction at Port Sudan, the crop was sold to the British Raw Cotton Commission and shipped to England.

*Prospects.*

203. The following table gives the areas cropped with cotton as far as can be ascertained, and the probable yields for the 1949/50 season :—

	Area (feddans)	Estimated yield (Kantars of 315 rotls)
<i>Sakel Type.</i>		
Sudan Plantations Syndicate Ltd. (Sakel) .. .. .	111,388	424,539
Kassala Cotton Co. Ltd. (X1730A).. .. .	95,349	402,193
TOTAL GEZIRA .. .. .	206,737	826,732
Research Division .. .. .	175	900
Gondal .. .. .	642	2,500
Tokar Delta .. .. .	30,265	50,000
Gash Delta .. .. .	44,840	90,000
GOVERNMENT ESTATES :		
Abdel Magid .. .. .	9,985	37,500
Fatisa .. .. .	1,304	6,000
Hashaba .. .. .	1,962	8,000
Um Gerr .. .. .	2,523	11,000
Wad Nimr .. .. .	340	2,000
Dueim .. .. .	428	1,600
Private Estates .. .. .	18,500	80,000
TOTAL SAKEL .. .. .	317,701	1,116,232
<i>American Type.</i>		
(a) IRRIGATED.		
Zeidab .. .. .	5,284	21,000
Other Private Estates .. .. .	1,484	2,200
TOTAL IRRIGATED .. .. .	6,768	23,200
(b) RAINGROWN COTTON.		
Kordofan .. .. .	74,930	73,000
Equatoria .. .. .	12,650	12,500
TOTAL RAIN GROWN .. .. .	87,580	85,500
TOTAL AMERICAN TYPE .. .. .	94,348	108,700
TOTAL SAKEL AND AMERICAN .. .. .	412,049	1,224,932

*Research Division.*

204. The following paragraphs give the results of work in the season 1948/49.

205. Yields of cotton in the Gezira Scheme were slightly above average, and 3 per cent higher than had been forecast by the "rainfall formula". Yields were good on the White Nile Schemes. The Gash Delta had a large area watered and also gave good yields. In Tokar Delta the reverse was the case. The area of American cotton in Kordofan increased, but the yield was poor, owing to the partial failure of the rains, while yields in Equatoria were average.

206. The cotton jassid, the most important pest of cotton in the Gezira and White Nile Schemes, showed signs of being as numerous as usual. Storms in September and October, however, killed off a large number, and the infestation was smaller than for several years. 93,000 feddans were sprayed with D.D.T., but the increase in yield from the spraying was smaller than usual, as the insects were less numerous. Attempts to control the jassids during the dead season for cotton, when the insects concentrate in gardens, were unsuccessful, as reinfestation occurred soon after spraying; investigations continued but it was suspected that migrations may take place over long distances, in which case even complete control in gardens would be only partially effective.

207. Other cotton pests to receive attention were the pink bollworm and the caterpillar, *Laphygma exigua*, at Zeidab. The pink bollworm is a much more serious pest at Zeidab than elsewhere in the Sudan. Boll samplings, however, indicate that the damage caused is less than had been thought, since the early maturation of the cotton grown at Zeidab enables the bulk of the crop to be picked before infestation reaches its height. The evidence is that *Laphygma* can be controlled by a certain system of watering which is now practised at Zeidab. Investigations into the causes of bud shedding at Tokar showed that a Capsid bug and the Egyptian boll worm were largely responsible. A severe attack of aphis caused serious damage to the cotton at Tokar.

208. The cotton diseases leaf curl and blackarm did not do serious damage except in a few patches. Further experiments in transmission of leaf curl, by means of whitefly, from plants suspected of harbouring the disease, were carried out. The disease can apparently be transmitted to Sakel from the resistant variety X1730A only when the latter shows symptoms of the disease, and then only with difficulty. Of other plants tried, it was found possible to transmit the disease to Sakel from *Sida spinosa* only, and then with great difficulty.

209. A feature of the 1948/49 crop was the premature and incomplete opening of the bolls. This had an adverse effect on grade, but apparently did not greatly reduce the yield.

210. The long term experiments at the Gezira Research Farm continued. The various rotations behaved much as usual. Cotton, grown on land which had been kept weeded during the previous year's rains, was very little better than the normal crop, owing to the light rains of 1947, with consequent poor growth of weeds. Another experiment was carried out on methods of economising irrigation water after 31st. December, when supplies are strictly limited. 10th March was selected as the date for closing water. In the Gezira the areas so treated showed a slight loss of crop when compared with the normal areas, but the loss was greater on the White Nile Schemes.

211. The policy in cotton breeding continued to be that of producing strains resistant to diseases and pests while retaining their present quality. The production of a Domains Sakel type resistant to blackarm is complete as regards one resistance factor, and large scale trials are now being carried out. From this type a strain also resistant to leaf curl has been selected. Breeding for jassid resistance continued, and it is hoped to produce strains of the two main commercial varieties resistant to blackarm, leaf curl and jassids. Work on American cottons continued at Kadugli. The question of deterioration of cotton seed in Equatoria was investigated. It was found that germination was best with seed from the early pickings, and stainer bugs are suspected of being the cause of the trouble, as they become more numerous late in the season.

212. Much attention was paid to pests of dura, the staple food of most of the Sudan. The swarming cycle of the desert locust which began in 1941 is now finished; a few swarms were reported in 1948, but they disappeared without breeding, and none appeared in 1949. An outbreak in the Red Sea littoral outbreak area took place on the Sudan-Eritrean border in April, 1949, and necessitated control measures to suppress it. Following on preliminary trials with explosives against the weaver birds, a large scale campaign was undertaken when the birds were concentrated near rivers during the dry season. Thirty tons of gelignite were used between January and March, and the success of the campaign may be assessed by the comparatively small amount of nesting which took place in September. Studies on the grasshopper pests of Gedaref District continued. It is now established that the most important species, *Aiolopus Savignyi*, migrates in swarms. Some knowledge of its seasonal movements has been acquired, and the possibility of dealing with their existing outbreak centres, as in the case of locusts, is being investigated.

213. Observations on the effect of weeding Gezira fallows reached their third season. Fallow weeding reduces the number of weed plants which appear in the following year, but the percentage of land covered by weeds is little altered. There were several experiments in chemical weed control. Hormone weed killers for floating weeds in canals were promising, although the formulations used were less satisfactory than those of the previous year.

214. Soil surveys during the season dealt with areas in seven provinces. Two irrigable areas with good soil were found on the east bank of the Blue Nile, totalling over 20,000 feddans. Work continued at Yambio experimental farm and Darfur Province was visited by a soil chemist for the first time. Other work on soils included routine examination of certain Gezira rotations for nitrate movements, evolution of carbon dioxide from Gezira soil, and testing of methods for determining organic matter.

215. The Sudan Plantations Syndicate has for many years made an annual contribution of £E. 2,925 towards cost of research work undertaken by the government. The Empire Cotton Growing Corporation not only supplied several members of the scientific staff but also contributed £E. 9,500 in 1949 to cover their pay and allowances. Grateful acknowledgment is made for their continued interest and assistance.

## CHAPTER IX -- VETERINARY

### GENERAL.

216. Grazing conditions over a large portion of the northern part of the country were exceptionally poor owing to inadequate rains and losses in flocks and herds were reported from many areas.

### DISEASES.

217. There was a further reduction in the number of outbreaks of cattle plague and losses generally were very low. Large scale vaccination was continued in Darfur and Bahr el Ghazal provinces, approximately 343,000 head of cattle were immunised. In Kordofan Province 90,000 doses of vaccine were made available for the control of the disease in Dar Messeria. Some of the previous year's vaccine became contaminated with pathogenic anaerobes and it was necessary in 1949 to begin routine bacteriological and biological testing of all batches of vaccine produced. This additional operation reduced the output. In December attenuated goat virus vaccine was used on a large scale for the first time in the Sudan and by the end of the month some 24,000 cattle had been vaccinated. Casualties resulting from the inoculation of the vaccine were no higher than expected, at less than one per cent.

218. Contagious bovine pleuro-pneumonia remained confined to the western and southern provinces where it gained ground in some areas. More vaccine was issued than in any previous year but the output was insufficient for all demands. Shortage of staff and equipment limited production, but by the end of the year there were prospects of early improvement.

219. The campaign against bovine trypanosomiasis in the non-tsetse areas of the southern Sudan was continued and virtually all the cattle in one area of about 25,000 square miles, numbering over a quarter of a million, were inoculated with antrycide. Several thousands, many from heavily infected herds, were inspected a few months after treatment and were in good condition. Losses from the disease were reported to have ceased and blood examination of representative groups of cattle from many herds showed no trypanosomes. In consequence of the poor rains in the northern Sudan the incidence of camel trypanosomiasis was less than usual.

#### TRADE IN LIVESTOCK AND LIVESTOCK PRODUCTS.

220. Although the cattle and sheep export trade was delayed at various times for a period of about ten weeks on account of transport difficulties and foot-and-mouth disease, exports were greater than in 1948, and the total value of livestock and livestock products amounted to over three and a quarter million pounds — an increase of about one million pounds. The main exports were 78,000 camels, valued at £E. 1,977,000; 31,403 cattle valued at £E. 471,039; 2,383 tons of hides valued at £E. 373,409; 1,590 tons of sheep and goat skins valued at £E. 249,539 and 56,626 sheep valued at £E. 212,346. The numbers of cattle, sheep, camels and goats sold in the main internal markets continued to increase. Average prices for cattle and sheep were slightly greater. 262,683 sheep, 44,768 cattle and 26,096 goats were slaughtered in the ten principal towns of the Sudan. 376,904 hides, an increase of over 90,000, were received at the grading depots in Omdurman, Wadi Halfa and El Obeid. Large numbers of hides continued to arrive severely damaged by the larvae of the hide beetle, which could be avoided by the use of the modern insecticides available in the market. Further improvements were made to the Khartoum slaughterhouse and plans were made for the reconstruction of slaughterhouses in the provinces.

#### LABORATORY SERVICES.

221. The Assistant Director (Research) became, as Commissioner for Animal Trypanosomiasis Control, responsible for recommending measures for the control of trypanosomiasis in live-

stock both outside and inside the tsetse infested areas. Experimental work on the chemotherapeutic and chemoprophylactic values of antrycide in bovine and camel trypanosomiasis continued throughout the year with encouraging results.

CHAPTER X — IRRIGATION

222. The 1949 Nile was, except for an unusually low volume in May, consistently a little over normal. The flood, however, was uneventful in character and the absence of the usual high peak discharges from the Blue Nile in August and September made it, to the man on the bank, a poor one.

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

	Millions of M3
Evaporation losses, etc. in Sennar Reservoir ... ..	125
Gezira Scheme — Irrigation water ... ..	588
Domestic water, pumped ... ..	34
Compensation for pump irrigation, elsewhere in the Sudan ... ..	117
Balance unused, and released to the river before the flood ... ..	58
Total ...	922

Because the Sudan is also entitled to certain "free areas" under established pumping rights, these figures give a deceptive comparison. The correct proportions are :—

for the Gezira ...	622 million M3
By pump schemes ...	260 million M3

Had all approved pump schemes been in fact in use, the figure would have been about 40 per cent higher.

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

	1948-49 feddans	1949-50 feddans
Cotton ... ..	217,686	217,588
Dura ... ..	123,020	123,616
Lubia ... ..	57,199	68,479
Wheat ... ..	6,979	2,619
Other crops ... ..	6,741	5,758
	411,625	418,060

In addition, some 19,000 feddans of dura sown on lands adjacent to the scheme were given water to supplement rainfall. Irrigation for the 1949-50 season began normally. The lightness of the rains kept demand steady, and high. A very unusual feature, only possible with light rains, was the combination of sustained high discharge and complete absence of escapage which prevailed for many weeks from mid-August. All local surplus was diverted to adjacent grain land.

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

				1948-49 feddans	1949-50 feddans
Cotton	...	...	...	6,544	6,555
Dura	...	...	...	5,080	6,055
Lubia	...	...	...	3,897	3,931
Wheat	...	...	...	655	—
Other crops	...	...	...	684	682
				<hr/> 16,860	<hr/> 17,223

226. In the Gash Delta the flood was very short and the result of 44,846 feddans effective cotton area and nearly 12,000 feddans allotted to dura proved that the optimum use was made of the limited available supplies.

227. Basin areas in Northern Province suffered from the absence of high flood peaks, but over 59,000 feddans were watered in the end.

228. The arrival and erection of additional dragline excavators permitted substantial advances in development projects, some 2,600,000 cubic metres of earth being moved in the main canal remodelling and north-west extension area. In the extension area construction and housing of regulators began. Delivery dates for steel for regulators, if held to, should ensure no delay in putting the first instalment under crop in 1951.

229. In the labour field progress was made towards mutual co-operation by recognised negotiating machinery. Opposition to the trade union idea proved the main stumbling-block.

230. Shortage of technical staff remained acute, especially in junior Sudanese engineers. But, in spite of that, the continued operation of existing schemes, together with substantial visible progress in development work in the field, was a satisfactory result of the year's operations.



## CHAPTER XI — PUBLIC WORKS

## GENERAL.

231. Total expenditure amounted to £E. 2,131,475, of which £E. 273,000 was accounted for under personnel and allowances, £E. 309,000 under recurrent expenditure, £E. 1,252,000 under new expenditure, £E. 271,300 represented the value of stores supplied to other government units and other authorities, and £E. 26,195 represented the value of workshop services chargeable to other units.

## CIVIL BUILDINGS.

232. Pre-war standards of maintenance were aimed at but difficulty was experienced in adhering to them owing to the continued distraction of urgent capital works which demanded the diversion of supervisory staff. On the whole buildings were kept in a reasonable state of repair. The programme of capital works was considerable. The Khor Taggat secondary school was built at a cost of £E. 135,000, and the first instalment of the Rumbek secondary school was completed and opened. The Omdurman girls' secondary school was also completed and opened. At the intermediate level extensions were carried out to the girls' schools at Wad Medani and El Obeid, and to the boys' rural schools at Dueim, Dilling and Shendi. At the elementary level, the department built boys' schools at Gueisi, Gulli, Nyala, Fashier, Deim Musa, Lagowa, Demeira and Keddada, and girls' schools at Gedaref, Rufaa, Abu Usher, Hosh, Aba Island, Naima, Rashed and Muglad, as well as a number of masters' and mistresses' quarters at existing schools. Other educational buildings completed during the year were a £E. 63,000 instalment in the expansion of the Institute of Education at Bakht er Ruda, the agricultural training college at Yambio and the first instalment of the Juba training centre. On the technical education side, the El Obeid technical school was built and boarding accommodation provided at the Omdurman technical school. Amongst medical buildings built during the year was the Khartoum North civil hospital at a cost of £E. 38,700, offices for the Ministry of Health, and numbers of dispensaries and quarters for medical assistants and dressers. In addition, numbers of buildings for general administration and other purposes were completed, the most notable of which were the police headquarters, Omdurman, the extensions to the mechanical transport department, Khartoum North, Dueim mosque, Kassala prison, Dueim government offices, laboratories for the government analyst, Khartoum, offices for the Ministry of Agriculture at Juba, town council offices at Malakal and 173 houses and quarters for staff in all parts of the Sudan.

MILITARY AND ROYAL AIR FORCE BUILDINGS.

233. Buildings for the Sudan Defence Force at the infantry school, Omdurman, included quarters for 16 officer-cadets, four barrack blocks, lecture rooms, an administrative block, stores and ancillary buildings, whilst for the British troops in Khartoum, South Barracks, construction included a large dining hall, cookhouse and store, an educational centre, an air-conditioned dental centre and various additional offices and stores. Quarters for 24 officers were added to the officers' mess. For the Royal Air Force the control building at Khartoum airport was extended to accommodate the meteorological forecast section and a number of smaller building works were constructed.

AERODROMES.

234. The ten permanent aerodromes on charge of the department were maintained in a satisfactory state and without difficulty, except at Malakal, where the burnt soil extension of the main runway deteriorated and had to be closed pending partial reconstruction. There were no capital works of importance other than a scheme for resurfacing and draining of the Kassala runway. Heavy traffic was carried by the Khartoum airport and expenditure on maintaining it amounted to £E. 38,000.

WATER SUPPLIES.

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

	1945	1946	1947	1948	1949
	£E.	£E.	£E.	£E.	£E.
Port Sudan .. .. .	28,489	28,610	31,568	33,869	33,145
Tokar .. .. .	2,730	3,462	3,568	4,297	4,132
El Obeid .. .. .	8,339	8,772	10,191	10,741	15,010
Kordofan, Darfur and Blue Nile	25,574	30,905	34,486	36,882	49,150
Juba .. .. .	2,318	2,308	2,215	2,972	2,930
Torit .. .. .	—	—	885	916	1,306
Kosti .. .. .	—	—	—	260	2,400
Halfa .. .. .	3,349	3,625	3,707	3,685	4,306
Malakal .. .. .	2,110	1,984	1,978	2,296	2,200
Wadi Seidna .. .. .	—	—	134	942	1,200
	72,909	79,666	88,732	96,860	115,779

236. No undue difficulties were encountered in meeting demand except at Port Sudan where, following the total failure of the 1948 floods in Khor Arbaat, water table levels at the headworks fell to the lowest ever recorded. The position was relieved by the sinking in March and April of a system of emergency wells which contributed an extra 250,000 gallons daily to the supply and although minor restrictions had to be enforced as a safeguard, no actual shortage occurred. Unfortunately the 1949 floods were also extremely poor and did little to restore the levels. At the end of the year therefore work was started in sinking a series of deep bores from which it would be possible to derive an alternative supply should the water table drop below the operating levels of the existing collecting systems.

237. At Fasher the Wadi Golo reservoir and pipeline were nearing completion by the end of the year. The final scheme has many features which should be applicable to water conservation projects in other parts of the Sudan. Basically it consists of a large, relatively shallow reservoir, two kilometres long and 800 metres wide, which must be filled by the khors before they can flow past the reservoir site. At the end of the reservoir is built a large hafir which can hold six and a half metres depth of water. This hafir fills up to four and a half metres by gravity from the reservoir, and the next two metres is pumped in from the reservoir. Water is supplied from the reservoir to Fasher until February each year, by which time the hafir has been pumped full. From February onwards Fasher will be supplied from the hafir and any water left in the reservoir can be used for irrigation. In addition about 500 tons of water a day can be supplied for irrigation purposes from the reservoir until February. The reservoir area is also available for controlled cultivation as the water recedes. The area of the reservoir and hafir is about 200 feddans, and the total capacity two and quarter million tons. The amount of earthwork involved is 400,000 cubic metres, whilst 15,000 cubic metres of stone have been quarried and transported for pitching to embankments, pipe-making and road work. 13,000 metres of 18-inch concrete pipes have been cast and laid in the connecting pipe line to Fasher. The scheme should give Fasher an assured supply of 1,000 tons daily all the year, capable of easy expansion should the need arise. The total cost of the work is £E. 59,000.

238. At Juba a scheme for improving the supply and extending it to newly developed areas was undertaken, and at Tokar the diesel driven stand-by pumps in the nine collecting wells were electrified. A water supply, yielding both purified and irrigation water was installed at the Institute of Education at Bakht er Ruda at a cost of £E. 11,000 and also a self-contained and fully piped

supply at the Khor Taggat secondary school. The Kassala water and electricity supply scheme was commenced in September by direct labour and by the end of the year most of the mains had been laid. At Wau a system supplying crude water to the main centres of distribution was set up pending the installation of the permanent water and electricity scheme. In rural areas new water yards were established at Magrur (west Kordofan), Keddada (east Kordofan), Markib (west Kordofan), Wadi Mareig (northern Darfur), and Hagar Sari (northern Darfur).

#### ELECTRICITY SUPPLIES.

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

	1945	1946	1947	1948	1949
	£E.	£E.	£E.	£E.	£E.
El Obeid .. .. .	6,744	7,934	8,043	8,433	9,870
Juba .. .. .	4,037	4,782	4,465	4,166	4,610
Malakal .. .. .	4,464	4,387	3,633	3,485	3,400
Wadi Seidna .. .. .	—	—	268	1,885	1,900
Kosti .. .. .	—	—	—	—	2,200
	15,245	17,103	16,409	17,969	21,980

240. Delay in arrival of new generating plant and electrical equipment made it impossible to complete the expansion of certain supplies as planned and in consequence difficulty was experienced in meeting the load particularly at El Obeid and Malakal. At the former station the extension of the power house and the installation of the new generating plant was completed by the end of the year but could not be put into operation as the switchboard and transformers had not arrived. At Kassala the new power station was built, the generating plant installed, and the distribution system completed. By the end of the year the inauguration of this new supply awaited only the arrival of the switchboard. At Bakht er Ruda Institute of Education a small lighting plant was installed.

#### ROADS AND BRIDGES.

241. Continued shortage of plant, staff and transport again hindered progress on new construction, but towards the end of the year the position improved and a start was made on the new all-season road from El Obeid to Talodi via Dilling and Kadugli. The new trace from Talodi to Umm Ruaba was surveyed, and stabilisation experiments carried out on the El Obeid — Fasher

road. The Gash bridge at Kassala, a five span reinforced concrete bridge, 400 ft. in length on piled foundations, was completed at a cost of £E. 59,000 and opened to traffic in July.

#### OTHER WORKS.

242. The Department was called upon to carry out two river protection works of importance. At Atbara 6,500 metres of stone-pitched embankment, in some places over 11 metres deep, were constructed at a cost of £E. 19,000 protecting the south and south-east parts of the town and the Dakhla and Sayala villages which were in danger of falling into the main river. Similar work was carried out at Gambeila where serious erosion had taken place. An unusual project carried out at Burri on the outskirts of Khartoum was the construction of a brickworks using oil fired continuous kilns. The capacity of the factory is up to ten million bricks a year and its cost £E. 13,000.

#### MECHANICAL ENGINEERING.

243. The work of this section continued to be hampered by difficulty in obtaining machinery and equipment by promised dates and by the lack of mechanical staff. But good progress was made with the Kassala electricity and water supply, the Juba water supply extensions and the Bakht er Ruda water supply, to which reference is made in preceding paragraphs. Two new garden irrigation schemes were carried out during the year in the new Khartoum North and Moghren residential areas and a scheme drawn up for an extensive irrigation system for Omdurman.

#### STORES SECTION.

244. The total expenditure brought to account was £E. 1,079,322 compared with £E. 982,778 in 1948 (exclusive of petrol). The value of stores issued was £E. 1,001,385. The general supply position continued to improve, the only serious difficulty, other than plant and electrical equipment, being over corrugated iron. The completion of the Atbara cement factory put an end to the anxieties experienced for years over this essential commodity. Stores to the value of £E. 401,148 were obtained from the United Kingdom and over 26,000 requisitions dealt with during the year.

#### ARCHITECTURAL SECTION.

245. During the year 376 sheets of finished working drawings (as compared with 403 in 1948) and about 350 (as compared with

375 in 1948) pages of schedules of quantities were issued from the projects office.

#### GEOLOGICAL SURVEY.

246. Surveys were made of parts of northern and central Kordofan, of the left bank of the Nile near Wadi Halfa, and of eastern Darfur (in connection with water supply problems there). Some 750 specimens were registered during the year and a rock slide cutting machine was installed. The drilling section was heavily engaged in the programme of bores sponsored by the rural water supply and soil conservation board and on bores for compensating expropriated landholders in connection with the mechanical crop production scheme (Gedaref). In addition, emergency bores were sunk in the neighbourhood of Nahud owing to a serious water shortage there and at Muqueisim to relieve pressure on the Khuwei water yard. In all some 39 bores were sunk, of which eight were unsuccessful.

## CHAPTER XII — COMMUNICATIONS SUDAN RAILWAYS AND STEAMERS.

#### GENERAL.

247. In 1949 the gross revenue amounted to £E. 5,507,745, and exceeded by £E. 860,122 the 1948 figure, which was the highest previously recorded. Net revenue totalled £E. 1,730,007, or £E. 754,722 more than in the preceding year. The ratio of expenditure to earnings fell from 79 per cent in 1948 to 68.6 per cent in 1949, and was the lowest recorded since 1942. The improvement arose from the substantial increase in revenue, and was achieved in spite of the high levels of prices and wages throughout the year. Expenditure increased by £E. 105,400 over the 1948 figure; this was largely due to the absence of strikes which resulted in a greater number of days worked compared with the previous year. Price rises, and the cost of additional revenue-earning services also contributed to the increase.

248. Depreciation amounting to £E. 319,560 was charged to working expenses. After making appropriations for loan charges, capital and renewals account, etc., to the total of £E. 1,430,007, the balance accruing to government was £E. 300,000.

A summary of the main figures for the past five years is given below:—

Year	Revenue	Expenditure	Ratio of Expenditure to Earnings	Gross Profit	Appropriations from Gross Profit	Balance accruing to Govt.
	£E.	£E.	per cent	£E.	£E.	£E.
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
1949 ..	5,507,745	3,777,738	68.6	1,730,007	1,430,007	300,000

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

249. At 31st. December, 1949, the total recorded capital expenditure was £E. 14,678,846. Of this amount £E. 11,529,489 was on account of the railways and £E. 3,149,357 was on account of the steamers and other ancillary services. Expenditure capitalised during 1949 amounted to £E. 265,962. A considerable proportion of this, however, represents the difference between replacement cost and original cost of assets renewed during the year.

250. The route mileage of the railways at the end of the year was 2,015 (3,244 kilometres) and the mileage of the river services operated was 2,325 (3,744 kilometres).

#### RAILWAYS.

251. The following table gives details of the number of passengers carried and the relevant revenue for the years 1948 and 1949:—

	1948		1949	
	Number	£E.	Number	£E.
Sleeping car .. .. .	9,893	15,393	9,033	13,852
First class .. .. .	25,796	77,560	25,963	79,223
Second class .. .. .	59,660	79,771	59,240	87,791
Third class .. .. .	86,225	81,224	90,933	79,863
Fourth class .. .. .	1,242,381	297,698	1,409,622	351,951
	*		*	
	1,414,062	551,646	1,585,758	612,680

\* Not including sleeping car.

252. The total revenue-earning goods traffic, including military stores, amounted to 982,816 tons, or 143,155 tons more than in 1948. Goods receipts increased by £E. 595,533 from £E. 2,648,691 in 1948 to £E. 3,244,224 in 1949. The average earning per ton mile was 1.845 pence, as compared with 1.589 pence in the previous year. Receipts from the transport of livestock increased from £E. 111,934 in 1948 to £E. 186,139 in 1949, and the number of head from 251,174 to 376,291.

The following tables show the tonnages of the principal commodities carried during the last five years:—

EXPORTS	1945	1946	1947	1948	1949
	Tons	Tons	Tons	Tons	Tons
Beans and peas .. ..	4,012	10,072	22,507	13,347	14,036
Benzine .. .. .	146	105	35	232	112
Butter .. .. .	567	275	591	341	625
Cement .. .. .	60	46	—	160	361
Charcoal .. .. .	1,718	4,761	722	71	116
Chillies .. .. .	421	418	394	392	568
Coffee .. .. .	128	517	198	437	815
Cotton, unginced .. ..	11,692	5,856	7,191	10,477	14,866
Cotton, ginned .. ..	64,959	41,663	49,098	49,895	61,030
Cotton, scarto .. ..	654	508	634	347	522
Cotton, seed .. .. .	111,582	70,499	86,704	85,673	101,407
Dates .. .. .	5,368	2,015	2,855	3,463	2,668
Dom nuts.. .. .	1,920	7,969	7,238	5,023	3,804
Dukhn and dura .. ..	15,908	15,388	38,482	18,199	13,535
Empties, benzine, kerosene and oil .. .. .	675	449	367	64	133
Firewood .. .. .	425	1,198	1,146	384	171
Fish .. .. .	1,657	1,835	1,637	1,217	1,348
Flour, dura, dukhn or maize ..	366	194	112	120	159
Forage .. .. .	3,080	2,919	2,051	540	2,634
Garad .. .. .	4,120	1,800	806	2,803	1,937
Ground nuts .. .. .	534	671	975	375	13,833
Gum hashab .. .. .	21,493	28,038	25,644	35,115	32,834
Gum talh .. .. .	1,505	1,800	1,578	2,133	1,617
Hides and skins .. ..	2,078	2,288	2,650	3,318	3,874
Joinery work .. .. .	4,038	97	299	24	46
Maize .. .. .	447	1,184	23,181	20,321	953
Melon seed .. .. .	11,580	7,135	12,665	20,420	11,734
Motor vehicles and parts packed	38	93	51	267	51
Oil cake .. .. .	3,892	4,584	13,880	15,936	14,566
Oil, lubricating .. ..	251	35	228	108	23
Provisions.. .. .	1,356	218	206	133	580
Railway and tramway materials	1,489	32	68	75	17
Senna mecca .. .. .	271	631	627	295	150
Simsim or sesame .. ..	425	110	21	82	173
Timber .. .. .	230	846	1,127	188	220
Vehicles, assembled .. ..	2,257	333	1,665	241	131
Various .. .. .	15,648	8,450	9,574	7,860	9,953
Total, excluding military stores	296,990	225,622	317,207	300,076	311,602
Military stores .. .. .	9,491	1,419	914	886	980
TOTAL .. .. .	306,481	227,041	318,121	300,962	312,582

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



IMPORTS	1945	1946	1947	1948	1949
	Tons	Tons	Tons	Tons	Tons
Sudan Government .. ..	32,976	31,531	11,716	22,034	46,328
Public .. ..	167,004	175,668	210,092	222,265	283,099
<b>TOTAL .. ..</b>	<b>199,980</b>	<b>207,199</b>	<b>221,808</b>	<b>244,299</b>	<b>329,427</b>
Beans and peas .. ..	774	1,270	998	695	633
Benzine .. ..	42,860	26,644	34,448	31,972	40,793
Cement .. ..	20,646	24,348	11,799	23,603	31,760
Coal or patent fuel .. ..	617	1,423	1,079	1,009	732
Coffee .. ..	2,172	6,645	5,180	3,532	4,013
Confectionery .. ..	283	675	1,225	1,357	1,553
Cotton seed .. ..	4,095	3,406	4,305	4,391	3,981
Dates .. ..	164	971	1,074	190	879
Dura, dukhn and maize ..	9,213	30	1,367	1,261	13,156
Empties, kerosene or oil .. ..	634	415	490	148	167
Flour .. ..	761	5,487	2,099	1,241	10,061
Hoops, iron and fastening studs for cotton bales .. ..	1,265	1,075	1,051	1,502	3,544
Iron, wrought or cast, and steel .. ..	1,752	5,807	6,184	6,016	9,349
Liquors and beer .. ..	745	894	2,645	2,471	5,919
Machinery, agricultural, ginning and irrigation .. ..	493	622	813	1,426	3,597
Manure, chemical or artificial ..	42	3,332	366	3,315	15,484
Motor road vehicles and parts packed .. ..	1,007	1,724	2,197	2,274	1,764
Oil, fuel and burning .. ..	23,853	24,414	28,251	28,759	37,528
Oil, lubricating .. ..	2,676	2,444	3,078	3,252	3,069
Perishables .. ..	80	154	24	22	4
Pipes and tubes .. ..	521	630	933	1,232	859
Potatoes .. ..	42	106	169	247	724
Provisions .. ..	2,724	2,313	2,587	1,911	2,436
Railway and tramway materials	195	106	1,633	62	34
Rice .. ..	1,807	2,051	1,791	4,191	3,457
Sacks and sacking .. ..	4,912	4,210	5,361	6,111	5,619
Salt .. ..	20,862	25,905	24,630	26,798	25,140
Soap .. ..	110	1,127	1,137	809	1,610
Sugar .. ..	19,432	19,425	25,394	26,948	41,917
Tea .. ..	357	513	1,309	2,190	4,579
Textile piece goods .. ..	6,529	6,635	5,521	4,943	7,236
Timber .. ..	1,488	1,467	4,557	6,472	8,615
Vehicles, assembled .. ..	1,259	904	1,039	1,123	1,731
Wheat .. ..	42	8,088	5,646	9,320	2,219
Various .. ..	15,505	18,835	24,866	28,709	31,671
<b>Total, excluding military stores</b>	<b>189,917</b>	<b>204,095</b>	<b>215,246</b>	<b>239,502</b>	<b>325,833</b>
<b>Military stores .. ..</b>	<b>10,063</b>	<b>3,104</b>	<b>6,562</b>	<b>4,797</b>	<b>3,594</b>
<b>TOTAL .. ..</b>	<b>199,980</b>	<b>207,199</b>	<b>221,808</b>	<b>244,299</b>	<b>329,427</b>

N.B.—(1) Imports via Juba are not included in the above figures.

(2) The above figures represent tonnage of commodities consigned from different ports to the interior and they therefore include commodities not imported but consigned internally from the ports to other parts of the Sudan.

LOCAL TRAFFIC	1945	1946	1947	1948	1949
	Tons	Tons	Tons	Tons	Tons
Beans and peas .. .. .	15,375	11,196	2,361	1,861	2,447
Benzine .. .. .	1,561	395	319	624	495
Bricks .. .. .	1,037	3,305	1,802	1,550	3,564
Butter .. .. .	865	1,064	995	830	910
Cement .. .. .	8,996	6,110	5,549	11,760	19,249
Charcoal .. .. .	10,941	14,731	15,713	12,753	14,593
Coffee .. .. .	4,014	2,792	2,829	2,464	1,665
Cotton—unginned .. .. .	65,909	44,713	49,270	37,205	51,627
Cotton—ginned .. .. .	179	200	92	119	11
Cotton—scarto .. .. .	200	228	202	112	264
Cotton—seed .. .. .	9,304	7,877	2,422	2,179	3,415
Dates .. .. .	13,805	12,203	17,365	18,090	14,431
Dom nuts.. .. .	2,195	4,332	2,393	623	2,624
Dukhn and dura .. .. .	83,938	159,112	135,493	60,188	57,788
Empties, benzine, kersene or oil	1,155	1,307	1,482	961	751
Firewood .. .. .	33,457	45,564	42,219	21,709	29,543
Flour .. .. .	3,999	2,502	2,295	1,404	2,581
Forage .. .. .	1,852	1,291	1,131	730	2,079
Garad .. .. .	1,924	1,144	815	1,245	848
Groundnuts .. .. .	3,948	3,410	5,310	4,115	3,439
Gum Hashab .. .. .	11,793	13,885	9,752	8,992	9,311
Gum Talh .. .. .	109	172	341	44	59
Hides and Skins .. .. .	1,489	1,335	1,160	1,082	1,130
Household effects .. .. .	1,517	1,650	1,297	1,046	2,162
Iron, wrought or cast and steel	3,346	3,699	3,258	2,859	3,547
Joinery work .. .. .	4,825	812	584	470	638
Lime .. .. .	1,346	1,211	1,763	1,327	1,668
Machinery, agricultural, ginning and irrigation .. .. .	1,059	1,051	1,145	1,302	1,628
Maize .. .. .	6,982	6,941	804	636	4,257
Motor vehicles and parts, packed	431	478	762	639	378
Oil cake .. .. .	7,522	6,578	3,111	885	1,840
Oil, fuel and burning .. .. .	1,156	1,189	698	724	788
Oil, lubricating .. .. .	625	347	185	154	327
Oil, simsim .. .. .	4,894	4,001	4,787	4,151	5,732
Onions .. .. .	5,955	6,323	5,626	4,757	5,718
Perishables .. .. .	2,343	2,350	1,785	1,912	1,824
Potatoes .. .. .	744	721	155	164	89
Provisions.. .. .	2,207	1,980	1,722	1,311	711
Railway and tramway materials	902	973	1,749	1,138	1,924
Rice .. .. .	763	527	349	292	281
Ropes .. .. .	832	920	876	728	882
Sacks and sacking materials ..	4,503	3,565	3,054	1,880	1,907
Salt .. .. .	1,014	333	154	140	180
Sand, stone and rubble .. .. .	6,929	6,035	10,530	20,933	28,180
Simsim or sesame .. .. .	7,617	6,840	5,332	9,599	13,046
Soap .. .. .	2,532	2,334	1,323	1,235	1,300
Sugar .. .. .	11,954	7,003	6,640	8,549	1,965
Tea .. .. .	1,742	1,732	1,213	659	780
Telograph and telephone poles	450	478	1,211	1,163	439
Textile piece goods .. .. .	1,700	1,915	1,253	531	728
Timber, unwrought .. .. .	4,764	7,545	5,131	5,202	7,755
Tobacco, native .. .. .	1,449	1,495	1,677	533	463
Vegetables, dried .. .. .	1,990	1,278	1,317	847	1,202
Vehicles, assembled .. .. .	6,860	3,885	3,551	1,569	1,601
Wheat .. .. .	13,548	7,001	12,444	2,111	2,194
Various .. .. .	33,314	26,125	24,492	23,233	20,956
Total, excluding military stores	425,860	458,183	411,288	293,319	339,914
Military stores .. .. .	9,529	3,969	2,933	1,081	893
TOTAL .. .. .	435,389	462,152	414,221	294,400	340,807

N.B.—The above figures include imports via Juba.

STEAMERS.

253. The working results of the three branches of steamer services for 1949 are given below. Comparative figures for the previous year are also shown :—

	Revenue		Working expenses		Net loss		Ratio of expenditure to earnings	
	1948	1949	1948	1949	1948	1949	1948	1949
	£E.	£E.	£E.	£E.	£E.	£E.	%	%
Southern Reaches	221,457	254,132	417,678	428,866	196,221	174,734	188.6	168.7
Halfa — Shellal Reach	98,592	98,037	103,750	107,770	5,158	9,733	105.2	109.9
Dongola Reach	31,674	37,863	47,054	53,017	15,380	15,154	148.6	140.0
	351,723	390,032	568,482	589,653	216,759	199,621	161.6	151.2

On the southern reaches the number of passengers carried in all classes increased from 26,273 in 1948 to 29,175 in 1949, the relative receipts amounted to £E. 23,742 and £E. 25,419 respectively. Goods transported, totalling 101,568 tons, showed an increase of 15,692 tons over the previous year, but the revenue therefrom amounted to £E. 151,572, or £E. 2,512 less than in 1948.

PORT SUDAN.

254. The number of ships calling at Port Sudan totalled 913, compared with 776 in 1948. Of these 875 were purely merchant ships, 16 naval vessels, 21 transports and one yacht, compared with 697, 33, 21 and 4 respectively with 22 other vessels in 1948.

255. The financial results of the port working for the past two years are as follows :—

			1948	1949
Revenue	...	...	£E. 450,053	£E. 534,367
Expenditure	...	...	£E. 284,632	£E. 300,592
Profit	...	...	£E. 165,421	£E. 233,775

Ratio of expenditure to earnings ... .. 63.2 per cent 56.3 per cent

256. The total tonnage handled, including military stores,

amounted to 799,714 tons, or 201,127 tons more than in 1948. Imports, at 487,689 tons, and exports, at 312,025 tons, showed increases of 162,670 tons and 38,457 tons respectively over the previous year. Inwards and outwards transshipment traffic totalled 2,485 tons in each case, representing a decrease of 2,961 tons as compared with 1948.

257. Comparative figures showing the tonnage handled per foot run are given below :—

	1948	1949
	—	—
Main quays	170.2	218.1
South quays —		
Berths 17 & 18	58.4	107.9
Berths 15 & 16	100.2	118.3

The increase at berths 17 and 18 was due to higher coal imports, while berths 15 and 16 dealt exclusively with bulk and packed petroleum. At the main quays the average tonnage handled per hatch hour increased from 12.2 in 1948 to 16.7 in 1949. The increase is partly accounted for by the inclusion in the unusually high import tonnage of several large homogeneous cargoes, which facilitated rapid handling.

258. All coastal and harbour lights were inspected and maintained during the year.

#### CATERING SERVICES.

259. The gross revenue of the catering services fell from £E. 205,557 in 1948 to £E. 186,031 in 1949. Expenditure amounted to £E. 210,059, compared with £E. 215,251 in the previous year.

#### TOKAR-TRINKITAT LIGHT RAILWAY.

260. The income from the Tokar-Trinkitat light railway amounted to £E. 2,737 as against £E. 4,937 in 1948.

#### GOODS AND CATTLE TRAFFIC.

261. Exports totalled 311,602 tons, or 11,526 tons more than in 1948. Imports, at 325,833 tons, were 86,331 tons higher than in the previous year. These figures exclude military stores. 61,552 tons of ginned cotton and 101,407 tons of cotton seed were forwarded to Port Sudan during the year. These figures represent increases over the 1948 forwardings of 11,310 tons and 15,734 tons respectively. There was also a substantial increase in the export of livestock; cattle from 23,691 in 1948 to 38,157 in 1949, and sheep from 64,716 to 88,247.

## PASSENGER TRAFFIC.

262. There was an increase of 171,696 in the number of passengers carried by rail, as compared with the previous year, and receipts increased by £E. 61,034. This was largely due to the running of additional services between Khartoum and El Obeid and to the fact that, in contrast to 1948, the year was virtually free from railway strikes. The number of passengers carried on the steamers also advanced by 1,606 and the receipts by £E. 5,863 over the 1948 figures.

## PERMANENT WAY.

263. The Suakin line was washed out in November, and was closed to traffic for 32 days. The resleeping programme included 86.80 kilometres of main line track with new wood sleepers and 20.50 kilometres with second-hand steel sleepers. Two kilometres were also resleepered with hardwood sleepers and elastic spikes without bearing plates.

## LOCOMOTIVE RUNNING.

264. Traffic demands were met, although there was the usual difficulty in providing for peak periods in the busy season. Mechanical failures were reduced from 63 in 1948 to 58 in 1949, in spite of the fact that the gross productive ton kilometrage hauled in 1949 was the highest on record. Mechanical delays were also reduced.

## ACCIDENTS.

265. There was a regrettable increase in the number of accidents involving death or personal injury during the year. 47 persons were killed and 378 injured, as compared with 25 and 286 respectively in 1948. The most serious accident occurred on the Halfa reach on the 14th July, when the steamer "Tanjor" was caught in a whirlpool, capsized, and sank; eight passengers and two members of the crew were drowned.

## LABOUR.

266. Apart from a one-day strike in March, there were no serious labour troubles during the year. The post of labour officer was created, and the Workers' Affairs Association contacted him on a variety of subjects during the year.

## STAFF.

267. Sudanese officials were promoted to nine posts previously filled by non-Sudanese during the year, two of Division I and seven

of Division II status. At the end of 1949 twenty students were in the United Kingdom under training, six having returned during the year on the completion of their courses. Towards the end of the year a comprehensive review was commenced of the rates and scales of pay and the conditions of service of unclassified staff.

## AVIATION

### AIRCRAFT MOVEMENTS.

268. There was a decrease of 2,804 aircraft movements during 1949 in comparison with the 1948 figures. There were 1,162 fewer aircraft movements of British Overseas Airways Corporation, and 1,642 fewer aircraft movements of other civil operators. During the years 1947, 1948 and 1949 the aircraft movements figures of British Overseas Airways Corporation have decreased progressively from 6,754 in 1947, to 3,526 in 1948 and 2,364 in 1949, largely the result of the introduction of larger aircraft. The decrease of 1,642 aircraft movements of other civil operators is accounted for by the curtailment of private charter companies, many of whom have gone out of business. The total number of aircraft movements was 12,136, to which figure should be added 4,599 the number of movements of Royal Air Force and other military aircraft, giving a grand total of 16,735. Details are as follows:—

Aerodrome	B.O.A.C.	Other Civil	Military	R.A.F.	Total
Wadi Halfa .. ..	142	1,448	404	471	2,465
Atbara .. ..	—	68	24	28	120
Khartoum .. ..	632	4,318	170	2,156	7,276
Kosti .. ..	—	62	—	—	62
Malakal .. ..	6	1,080	116	122	1,324
Bor .. ..	—	8	—	—	8
Juba .. ..	8	1,266	246	222	1,742
Port Sudan .. ..	362	558	104	112	1,136
Kassala .. ..	—	242	16	14	272
El Obeid .. ..	—	292	46	40	378
El Fasher .. ..	—	244	148	134	526
Geneina .. ..	8	178	14	12	212
	1,158	9,764	1,288	3,311	15,521
Flying Boats ..	1,206	8	—	—	1,214
TOTAL .. ..	2,364	9,772	1,288	3,311	16,735

SCHEDULED SERVICES.

269.

- (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 scheduled services through the Sudan :—
  - (i) Three services weekly from the United Kingdom to South Africa, using "Solent" flying boats.
  - (ii) Three services weekly from the United Kingdom to East Africa (Lake Naivasha) using "Solent" flying boats.
  - (iii) One service weekly from the United Kingdom to Dar-es-Salaam using "Solent" flying boats.
  - (iv) A weekly freight service from the United Kingdom to South Africa was discontinued during the year.
  - (v) A weekly service from Egypt to Aden using "Dakota" aircraft.
  - (vi) A weekly service from Egypt to East Africa (Nairobi) using "Dakota" 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 (Nairobi) using "Cloudmaster" aircraft.
- (g) At the end of the year the Egyptian airline Misr Airlines commenced a weekly service from Egypt to Eritrea, operating through Khartoum, and using "Viking" aircraft.

AERODROMES.

270.

(a) *Malakal.*

The surface of the main runway at this aerodrome deteriorated and it became clear that extensive repair work would be required. As an interim measure, pending a decision on whether the volume of traffic justified large expenditure, the aerodrome was closed to all aircraft of an all-up weight of 20,000 lbs. or over. Six hundred yards of the runway were declared permanently unserviceable, reducing the effective length to 1,200 yards.

(b) *Kosti.*

The aerodrome had been continuously unserviceable during the rains, and new construction started in July, two miles south of the old aerodrome, where a bed of gravel had been found. Whilst it is not expected that the new aerodrome will be all-weather, it is hoped that it will be serviceable a few hours after rain.

(c) *Yirol.*

The runways at this landing ground were extended to 1,200 yards each, to permit safer operations by Sudan Airways "Dove" aircraft, and by small communication aircraft of the Royal Air Force.

(d) *Kareima.*

This landing ground was abandoned. A new landing ground was made at Merowe and came into use as a scheduled stop by Sudan Airways.

(e) *Dongola.*

A new landing ground was made at Dongola and was used regularly by Sudan Airways.

FIRE FIGHTING, RESCUE AND SAFETY SERVICES.

271. Good progress was made during the year in the organisation of these services. Existing equipment was overhauled and a training programme started to familiarise the crash tender crews with their vehicles. Training was also given in fire-fighting and the rescue of persons trapped in burning aircraft. An airfield crash tender, believed to be one of the biggest in the world, was designed by the fire officer and built in the workshops of the Mechanical



Transport Department. Development was necessarily slow but plans were in hand for the construction of additional similar vehicles. Fast rescue vehicles were purchased and their crews specially trained to deal with the initial outbreak of fire in a crashed aircraft and the rescue of the occupants.

272. There were three air accidents in the Sudan during the year, with no loss of life. On 6th June, a Sudan Airways "Dove" landed at Kassala with the wheels in the retracted position, due to error of judgment. No injury was sustained by crew or passengers, and damage to the aircraft was slight. On 16th October, a Westland-Sikorsky helicopter owned by Messrs. Pest Control Limited was wrecked at Fawer Block whilst engaged in spraying cotton for the Kassala Cotton Company. The accident was caused by the ground engineer starting the engine, in the absence of the pilot, with rotors engaged. The helicopter rose slightly and then crashed on to its side, and was completely destroyed. On 22nd. October, a "Dakota" aircraft owned by a French company, Société Transatlantique, ran off the runway when landing at Malakal. The aircraft tipped on to its nose and was slightly damaged. The pilot and one passenger sustained superficial cuts only.

273. The first Regional Meeting of the African-Indian Ocean Region of the International Civil Aviation Organisation was held in London in March and April. Although not members of the International Civil Aviation Organisation, the Sudan was asked to send a delegation to act as advisers to the British and Egyptian delegations.

#### SUDAN AIRWAYS.

274. In April, 1948, the Air Advisory Board recommended the establishment of Sudan Airways as a separate department, for an experimental period of one year, under the joint managership of superintendent (traffic) and superintendent (flying and maintenance) responsible to the financial secretary. This experiment worked smoothly and was an improvement on the previous organisation.

275. By the end of the year it was seen that there would be a saving of approximately 23 per cent in the excess expenditure over income which was provided for in 1949 budget estimates.

276. The re-introduction of the Khartoum-Port Sudan service, and the inauguration of services to Wau, Merowe, Dongola and Wadi Halfa, increased the route mileage during the year from 1,922 to 3,137. The load factor on the service to Merowe, Dongola

and Wadi Halfa proved disappointing. The service to the west (El Obeid, Fasher and Geneina) proved popular. On the twice weekly service to Malakal and Juba the demand for seats was such that saturation point had been reached in so far as "Dove" operation was concerned. Tentative enquiries were made during the year as to the possibility of hiring a "Viking" aircraft, for operating a weekly service to Malakal and Juba, to test the potential for larger aircraft on internal services.

277. During the year free publicity flights, carrying approximately ten passengers each trip, were arranged at all principal airports. Designs for posters were also completed and placed in the hands of the printers.

278. Progress was made with the internal air parcel post scheme and it was hoped to make this available to the public early in 1950. Director, Posts and Telegraphs, also investigated the possibility of inaugurating a scheme for the carriage of internal second class air mail.

279. Rapid expansion continued throughout the whole of the year, and the manner in which the internal carriage of traffic by air was gradually developing was most satisfactory.

280. On the technical side the year was satisfactory, all primary aims having been achieved. The budget estimate of productive flying was exceeded, and it was possible to meet extra flight requirements as needed. The four established aircrews were thus, for the first time, fully employed. Flying hours showed an increase of 34 per cent on 1948, and the 1949 utilisation figure for the four aircraft was 746 hours per aircraft. The latter half of the year showed an increased utilisation to a rate of over 800 hours per annum, which is the rate achieved by other Dove operators who have the advantage of a much larger fleet.

281. The aircraft were operated with greater ease, and maintenance troubles much reduced. The engines underwent several major modifications and appeared to give improved reliability as shown in the decrease of non-revenue flying hours from 6.5 per cent to 4.5 per cent. The period of life between complete overhauls stood at 500 hours, but at the end of the year extensions to 600 hours were being considered. There were two engine failures during the year, neither of which caused serious concern. There was one case of airframe damage. Overhauls were carried out at Khartoum on airframe, engines, propellers and electrical accessories.

SUDAN AIRWAYS.

Summary of Statistics — 1949

	1949	1948
<b>AIRCRAFT FLYING HOURS :</b>		
Revenue .. .. . hours	2,850	2,072
Non-Revenue .. .. . "	135	144
Total .. .. . "	2,985	2,216
<b>FLIGHTS (REVENUE).</b>		
Regular Services .. .. . No.	342	264
Charters .. .. . "	39	21
Miscellaneous .. .. . "	2	13
Total .. .. . "	383	298
AIRCRAFT MILES (REVENUE) .. .. . miles	473,562	320,183
PASSENGERS (REVENUE) .. .. . No.	3,945	2,761
PASSENGER MILES (REVENUE) .. .. .	1,923,141	1,293,190
Freight .. .. . kilogs	37,390	30,870
Mail .. .. . "	8,772	11,748
<b>TON MILES :</b>		
Passengers .. .. .	138,691	} 121,148
Free luggage .. .. .	32,951	
Excess luggage .. .. .	4,924	
Mail .. .. .	5,207	4,461
Freight .. .. .	21,539	15,458
Total .. .. .	203,312	141,067
<b>REVENUE (SUDAN AIRWAYS SERVICES) APPROXIMATE</b>		
Regular Services .. .. . ££.	65,406	43,320
Charters .. .. . "	6,968	4,205
Miscellaneous flights .. .. . "	298	954
Total .. .. . "	72,762	48,479
<b>REVENUE (HANDLING CHARGES OTHER OPERATORS) :</b>		
Net Revenue .. .. . ££.	19,242	16,748
REVENUE (COMMISSION) APPROXIMATE .. .. . ££.	1,342	732
TOTAL GROSS REVENUE APPROXIMATE .. .. . ££.	93,346	65,959
<b>LOAD FACTORS :</b>		
All regular services .. .. . percent.	64	64
<b>DEDUCED STATISTICS :</b>		
Average length of passenger journey .. .. . Miles	487	473
Receipts per ton mile .. .. . mms.	358	344
Receipts per capacity ton mile (regular services) .. .. . mms.	212	200
Receipts per revenue aircraft mile .. .. . mms	154	151
<b>ANALYSIS OF PAYLOADS :</b>		
Passengers and luggage .. .. . percent	87	86
Mail .. .. . percent	3	3
Freight .. .. . percent	10	11

## POSTS AND TELEGRAPHS

### GENERAL.

282. The revenue of the department increased from £E. 597,000 to £E. 611,000, and expenditure from £E. 700,000 to £E. 725,000. The extra £E. 25,000 in expenditure was caused by an increase of £E. 40,000 in staffing costs and £E. 10,000 in capital (other than development) expenditure, partially offset by economies of £E. 25,000 in other running costs. Charges to the public were kept at as low a figure as possible, and rates for postal and telegraph services were only about fifty per cent. above the pre-war figure. But in spite of all efforts to increase the volume of traffic and at the same time to decrease running costs further increases in charges to the public appeared inevitable.

283. There was a serious and largely unforeseen drop in telegraph earnings, a common experience amongst telegraph administrations at the present time, caused apparently partly by a settling down of world economic conditions, and partly by competition from improved telephone trunk services, and speedier and more frequent air mail services. Plans for reducing the working costs of the telegraph service by the introduction of mechanisation and also for attracting additional telegraph traffic came under consideration.

284. On 1st. January, 1949, a house to house postal delivery service was introduced in Khartoum, Khartoum North and Omdurman, and the substitution of a metered rate for the previous flat rental for all telephone subscribers connected to the Khartoum — Omdurman exchange. The principal effect of the latter was to stimulate a demand for new telephone installations: unfortunately difficulties of supply (and particularly shortage of underground cables) prevented this demand from being fully satisfied. Telephone services between Khartoum and Atbara and Wad Medani were vastly improved by the provision of additional trunks rendered possible by the installation of twelve-channel carrier systems. During 1949 there was an overall increase of nearly fifty per cent. in the number of postal agencies.

285. There was further improvement in the postal and telegraph manipulative staff position, and it appeared likely that by the middle of 1951 the strength of the Department would be fully up to establishment. Towards the close of the year all posts and telegraphs officers and employees (with the exception of the meteorological observers and the mechanical transport drivers) formed the Posts and Telegraphs Officials and Employees Trade Union, and applied for registration. The formation of this union

was welcomed by the department as a step towards the rationalisation of staff relations and negotiations on working conditions. The meteorological observers formed an independent union, and the mechanical transport drivers joined the Sudan Government Mechanical Transport Drivers Union.

ESTABLISHMENTS.

286. The authorised establishment of classified posts at the end of the year was 1,180 as compared with 1,148 in 1948. The number of unclassified employees was 1,801 as compared with 1,660 in 1948. Seven officials were sent to the United Kingdom for training.

REVENUE AND EXPENDITURE.

287. Details are given in the tables below:—

From	Total Revenue				Increase or decrease	
	1948	% of total	1949	% of total	£E.	%
	£E.		£E.		£E.	%
Public .. .. .	424,889	71.0	434,302	71.0	+ 9,413	+ 2.2
Government Units ..	171,828	29.0	177,159	29.0	+ 5,331	+ 3.1
TOTAL .. .. .	596,717		611,461		+ 14,744	+ 2.4

REVENUE BY SERVICES.

	1948		1949		Increase or Decrease	
	£E.	% of total	£E.	% of Total	£E.	%
Postal .. .. .	219,084	37.0	218,422	36.0	— 664	— 0.5
Telegraph .. .. .	218,486	37.0	190,127	31.0	— 28,359	— 14.5
Telephone .. .. .	113,158	19.0	165,780	27.0	+ 52,622	+ 46.0
Meteorological and Aeradio ..	39,083	6.0	28,224	4.5	— 10,859	— 28.0
Miscellaneous ..	6,906	1.0	8,908	1.5	+ 2,002	+ 29.0
TOTAL .. .. .	596,717		611,461		+ 14,744	+ 2.4

Of the £E. 52,000 increase in telephone revenue, about £E. 12,000 was due to an increase in trunk call charges (amounting, on an average, to 50 per cent) which was brought into effect on 1st. January. The remainder represents traffic on new plant brought into service, and growth of traffic on existing plant.

TOTAL EXPENDITURE.

	1948		1949		Increase or Decrease	
	£E.	% of total	£E.	% of total	£E.	%
Salaries, wages and allowances ..	444,737	64.5	485,915	67.0	+ 41,178	+ 9.0
Transport .. ..	71,141	10.0	81,547	11.0	+ 10,406	+ 14.0
Stores and Materials	99,154	14.0	63,619	9.0	— 35,535	— 35.5
Miscellaneous services	43,960	6.0	38,202	5.0	— 5,758	— 13.0
Plant renewals ..	26,179	3.5	31,523	4.5	+ 5,344	+ 20.5
Plant extensions ..	15,035	2.0	24,690	3.5	+ 9,655	+ 64.0
<b>TOTAL ..</b>	<b>700,206</b>		<b>725,497</b>		<b>+ 25,291</b>	<b>+ 11.0</b>

COMPARISON WITH BUDGET ESTIMATES.

	Budget Estimates	Out turn
	£E.	£E.
Expenditure .. .. .	766,565	725,497
Revenue .. .. .	657,221	611,461
Excess of expenditure over revenue .. .. .	109,344	114,036

In addition to the expenditure within the framework of the main budget shown above, capital expenditure amounting to £E. 119,392 was incurred, chargeable to the special Post War Development Budget. This compares with £E. 169,892 spent in 1948. The cash turnover in posts and telegraph offices (excluding transactions with Government treasuries) was £E. 12,059,583 as against £E. 11,633,171 in 1948.

POSTS AND TELEGRAPHS OFFICES AND AGENCIES.

288. Summary of Offices.

	1948	1949
Permanent P. & T. Offices	71	71
Seasonal P. & T. Offices	2	2
Travelling P. & T. Offices	3	3
Branch P. & T. Offices	7	7
Post & Telegraph Agencies	41	61
Travelling Post Offices	14	14
Seasonal Travelling Post Offices	3	1
Coast Radio Stations	1	1
Aeradio Stations	8	8

Agencies were opened at the following places:— Abu Gubeiha, Amentego, Debeira, El Ghabsha, 'Idd el Ghanam, Maqal, Wad 'Ashana, Aba Island, Abu Deleiq, Abu Higar, Abu Zabad, Manaqil, Ferreig, Gaibat, Halfayat el Muluk, Karkoj, Mafaza, Mahmiya, Raga, Seir, Umm Berembeita and Wad Ban Naqa. The Agencies at Beika and Umm Keddada were closed.

POSTAL SERVICES.

289. Summary of Postal Traffic.

	1948	1949
Ordinary items of correspondence posted and delivered ... ..	26,537,000	28,397,000
Surcharged air mail correspondence ...	2,988,500	3,827,000
Air letters ... ..	211,237	248,680
Undelivered items ... ..	38,068	34,300
	29,774,805	32,506,980

290. The value of the stamps sold during the year through the philatelic section amounted to £E. 11,153.

291. A weekly air mail service was introduced between the Sudan and French Somaliland, a twice-weekly service to Holland, and a daily service to the United States of America. Improved air services made it possible to provide a more frequent internal air mail service to a number of places. Air mail to Geneina was despatched weekly instead of fortnightly. The service to Malakal was increased from twice to three times a week, and a fortnightly instead of a monthly service operates to Wau. The Khartoum — Port Sudan service also increased from once to twice weekly.

292. There was an increase of 21 per cent in the number of inland parcels handled during the year. The number of parcels to Egypt increased by 25 per cent and this was attributed to a growing demand for Sudan curios and articles of native handiwork. Parcels from Egypt showed a further slight decrease of 3 per cent. The majority of the parcels received contained cotton piece goods. There was a 16 per cent decrease in the number of parcels to Great Britain, and a 38 per cent increase in parcels from Great Britain. Parcels to and from other countries increased by 33 per cent.

#### REMITTANCE SERVICES.

293. The value of inland money order remittances was 14 per cent higher than in 1948 and 287 per cent higher than in 1938. Inland postal order business increased by 16 per cent and is largely attributable to the increased number of postal agencies — all of which transact this class of business. Remittances by money order to Egypt decreased by 6 per cent and from Egypt by 9 per cent compared with 1948. Egyptian postal orders paid in the Sudan showed a decrease of 14 per cent. Money and postal order services to and from all other countries were still suspended.

#### SAVINGS BANK.

294. The total amount in deposit was £E. 1,360,841 at the end of 1949 as compared with £E. 1,274,940 at the end of 1948. The increase was due chiefly to deposits by Local Administrations and Municipal Councils. The number of accounts increased from 38,159, to 40,195. Deposits and withdrawals amounted to £E. 557,104 and £E. 471,052 respectively as compared with £E. 536,388 and £E. 471,458 in 1948; the total number of transactions was 111,644 as compared with 106,622 in the previous year. Deposits under the deductions at source savings scheme increased by £E. 5,357 in 1949. Most of these deposits were made by employees of the Sudan Railways.

#### TELEGRAPH SERVICES.

295. The total number of telegrams handled during the year decreased by 4.15 per cent. Public telegrams showed a drop of nearly 3.7 per cent from 1,229,000 to 1,184,000. Air navigation telegrams increased by 11.6 per cent but meteorological telegrams decreased by 24 per cent. The latter variation probably resulted from the introduction, during 1948, of meteorological broadcasts. There was very little difference in the number of telegrams sent on behalf of Sudan Government departments but there was a welcome reduction of 10 per cent in the number sent on Posts and Telegraphs services.



296. The number of reported errors in telegrams, for which the Sudan Service was responsible amounted to one in every 9,000 telegrams handled. Censorship restrictions imposed by the Egyptian authorities in May, 1948, on all telegrams routed to and through Egypt, remained in force during the whole of 1949. International Aeradio Limited continued to maintain and to provide operational staff at the Juba, Wadi Halfa and Malakal Aeradio stations. Two additional circuits were introduced, namely Khartoum — Port Sudan and Juba — Nairobi, and the Khartoum — Aden circuit was discontinued.

#### TELEPHONE SERVICES.

297. 1949 was a year of considerable expansion of the telephone system. As post-war orders and plans matured, and new equipment came into service, many additional subscribers were connected, and improved and extended trunk facilities offered. A number of waiting lists accumulated through the war years was cleared. Installations to enable the remainder to be cleared made good progress. In Khartoum, Khartoum North and Omdurman, however, the demand was so great that a waiting list seemed likely to re-appear in the near future, but new equipment to cope with this situation was already on order. There was no slackening in the demand for telephones, particularly in the larger towns, and for rural call boxes. New public exchanges linked to the main trunk network were opened at El Ghabsha, Rahad, Tendelti, Umm Ruwaba and Wad 'Ashana. Extensions were made to exchanges in El Obeid, Gedaref, Juba, Kassala, Khartoum, Singa, Suki, Turabi, Tokar and Wadi Halfa. Improved quality of speech and additional and extended channels stimulated use of the inland trunk system and this, coupled with a general re-grading of trunk fees (involving an average increase of about 50 per cent) produced a revenue of £E. 67,500 as compared with £E. 33,994 in 1948. A total of 742,000 trunk calls were made during the year. The total number of international trunk calls made was 37,500. The revenue from these was £E. 15,000 — an increase of £E. 1,825 over 1948. The bulk of this traffic, as in previous years, was between the Sudan and Egypt.

#### ENGINEERING SERVICES (Lines).

298. The Yambio — Li Rangu — Nzara route was completed and brought into service early in the year. This was the first route to be built to modern standards in the Southern Sudan. On the new 183 kilometre route between Rumbek, Yirol and Shambe only fifty kilometres remained uncompleted by the end of the year; the section between Rumbek and Yirol was brought into service in

November. The new 98 kilometre route between Wau and Tonj was started in August and despite the heavy going imposed by thick undergrowth, rapid progress was made. It was expected that this route, which forms part of the general plan to link the province headquarters at Wau with the river port of Shambe, would be completed by February, 1950. A new route, 240 kilometres in length, to provide Roseires with direct telephone communication facilities with Sennar and thence to the whole of the northern Sudan was under construction. The Atbara — Wadi Halfa main trunk route was completely overhauled.

299. The Port Sudan — Tokar trunk route was rebuilt and all iron wires replaced by copper pairs. A re-arrangement of the lines provided Tokar with direct communication with the Port Sudan and thence to any exchange in the northern Sudan. A single-channel carrier-telephony system was installed between Khartoum and Wadi Halfa and provided, for the first time, a direct high-grade trunk between the two towns. Two twelve-channel carrier-telephony systems, one connecting Khartoum with Atbara, and the other Khartoum with Wad Medani, were also brought into service during the year.

#### ENGINEERING SERVICES (Wireless).

300. The short-wave radio-telephony experiments which were conducted in various parts of the Sudan during the past years were concluded. In the course of these experiments many different types of radio-telephone equipment were tested under field conditions. The set now standardised for use as a short range general service instrument is the Type G49 50-watt set manufactured by Redifon Limited. Radio links employing the equipment were set up on a permanent basis between Malakal and Fangak, and Malakal and Bentiu. A further seven of these newly standardised sets were installed on river steamers plying in the southern reaches of the Nile and were conspicuously successful. A new medium-power short-wave radio transmitter was installed at Juba for use on general services. Following the installation of the high-power short-wave broadcaster (type Marconi SWB 11 E Major) at the beginning of the year, the Sudan Broadcast Service programmes were radiated simultaneously in the 524, 49 and 30 metre wavebands. A scheme to provide eight communal listening radio receivers in selected towns and villages between Kosti and El Obeid was started in November.

#### METEOROLOGICAL SERVICE.

301. The number of technical staff employed remained below the approved establishment but the essential needs of aviation were

met and some progress was made in putting climatological and equipment sections on a sound basis. Arrangements were made for the preparation of complete climatological summaries for all stations in the Sudan and by the end of the year summaries for 1948 were ready for publication. Preliminary work was done for the publication of full rainfall statistics and progress was made in preparing for the publication of pentade (five-day) summaries and statistics. The utilisation of punched-card methods of computation was initiated during the year and some rainfall and upper-wind data were punched. When all data have been punched it should be possible easily to prepare a wide range of presentations and to carry out useful investigation projects.

#### MECHANICAL TRANSPORT DEPARTMENT

302. During the year the balance of the building development plan for Khartoum North workshops was all but completed. Three large workshops, designed and placed so as to make the best of old buildings, were erected, and the site levelled and made into hard-standing. An additional office block to house the accounts section and including a strong-room and workers' pay office was completed, and also the trade school.

303. The Government fleet numbered approximately 1,400 vehicles in service, with a further 150 normally undergoing a refit. Maintenance of the fleet is effected by first, second and third-line repairs carried out in twelve outstation workshops spread over the country, with the main workshops at Khartoum North. Additions and replacements to the fleet were effected with vehicles of a considerably improved type, both in suitability and equipment of the chassis and also in bodywork. On all except light chassis bodies were made in Khartoum North workshops.

304. The improvement in the spares position generally was satisfactory. Some 12,000 indents were dealt with during the year, the majority including up to eight separate items.

305. At the beginning of the year the trade school was still only in project form. In temporary premises the training of driver-mechanics continued, with courses of 21 students at a time. Owing to the number of applications received an intake was accepted every six weeks. In early September the new premises were ready. This section is in three parts, drivers' school, trade testing and upgrading school, and a miniature outstation workshop where selected artisans have the opportunity of adding to the scope of their knowledge and increasing their skill as individual tradesmen.

### CHAPTER XIII — SURVEYS.

306. The gradual expansion of the department continued to keep in line with the training facilities available, the technical staff rising from 142 in 1948 to 158 in 1949. These include 51 surveyors and draughtsmen under training.

307. Much material is available for standard series map revision but the decision has been taken to proceed with the compilation from air photos of the new series on scale 1/100,000, in those areas where there is a particular demand for them, leaving the revision of the smaller scales to follow. An arrangement was made with the Director of Military Surveys in England to print revised editions of the international 1/1,000,000 series showing air information from material prepared in England.

#### TECHNICAL TRAINING.

308. The survey school at Shendi started the year with ten students, four from secondary and six from elementary schools. In April these successfully passed the examinations and were absorbed by the department. The school reopened in May with 18 candidates of whom four only were from secondary schools. The remaining 14 were later reduced to nine, of whom one was a head chainman from the southern Sudan. Two parties of ten students from the Ministry of Agriculture and one student from the Archaeological section of the Ministry of Education were given courses lasting five weeks.

#### PRINCIPAL SURVEYS.

309. Full observations were made for latitude, longitude and azimuth at both ends of each of the two bases, Sabaloka and Husheib, in the Khartoum-Kassala chain of geodetic triangulation. The continuation of the 30th arc of meridian triangulation, which had closed down in January, 1940, was then undertaken. By the end of the year 11 stations had been occupied and the mean triangular misclosure of 21 triangles was "0.41 with a maximum — "0.95.

310. The reconnaissance and beacon-building of the Abu Homed — Sabaloka second order triangulation was completed in the first half of the year and angular measures progressed during the last three months. 25 of the 44 stations of the chain were occupied and the mean triangular misclosure of 51 triangles was "0.78 with a maximum of + "0.40. A beginning was also made with the reconnaissance of the eastern part of the second order

triangulation designed to pass through the rainland belt of country south of the Gedaref — El Obeid railway line and controlled at each end by existing geodetic triangulation.

311. Steady progress was again made with the precise levelling link between Wadi Halfa and Khartoum along the river. The levelling reached Ambikol (latitude  $18^{\circ}04' N.$ ), an advance of 298 km. during the year. The preparation of bench marks was kept well ahead and reached El Bellal, 20 km. upstream of Merowe, where the work joins the existing survey of the 4th. cataract. 56 bench marks were established along this reach. Computation and checking kept pace with the survey and values were issued for all bench marks as far as Sheikh Sherif, 8 km. south of Dongola.

312. The survey party attached to the Jonglei Investigation Team continued with the contour levelling of the Aliab valley but found progress slow. In the swamp areas piles had to be driven to support the instrument and the levelling staves at each set-up, while dense forest was encountered elsewhere. 20 bench marks were established and 80 km. of levelling completed. The party proceeded to examine the Machar swamps and in particular the Khor Adar, which is the main exit and enters the White Nile near Melut.

313. An interesting survey, incidental to other work, was the establishment of permanent marks on the edge of the high flood of 1946 at intervals of between five and fifteen km. on one side of the river between Wadi Halfa and Khartoum, the marks being tied to the precise levelling, thus enabling a longitudinal profile of this flood to be drawn.

314. Work on the re-settlement of the north-western Gezira extension started late in 1948, and continued throughout 1949, and some 65,000 feddans were dealt with.

#### TOPOGRAPHICAL SECTION.

315. The policy instituted in 1948, of answering specific requests rather than improving the standard map series, was continued. Air survey and helping others to use aerial photographs continued to be an important feature of the section's work. 16 sheets of the new standard series, scale 1/100,000, were published, covering the White Nile from the Sobat mouth to Melut and the Sobat up to the Ethiopian boundary. Revised editions of two sheets of the 1/250,000 series and one of the 1/1,000,000 series were also published. Special maps included 15 provisional sheets, scale 1/50,000, of the Zande area; two strip maps on 1/1,000,000 for Sudan Airways; and four maps of different sizes and scales showing drainage systems compiled from air photographs.

316. The experimental compilation in the United States of America, from the trimetrogon air photographs, of the area between latitudes  $12^{\circ} 00'$  to  $13^{\circ} 20'$  N. and longitudes  $30^{\circ}$  to  $36^{\circ}$  E., on scale  $1/80,000$  and based on control points supplied by the department, was completed and the results were shipped in June, but had not arrived by the end of the year.

#### CADASTRAL AND TOWNS SECTIONS.

317. There was no material change of incidence in the various types of survey work carried out. On the cadastral side pump scheme surveys continued to be the main problem. A slight but noticeable reduction in petitions resulted from the increase in survey fees. The town surveyor was in great demand for the provision of alternative accommodation in town replanning schemes and to help local authorities to keep planning ahead of development. The number of plot boundaries surveyed or pointed out in all classes of town land was 10,471 as compared with 8,157 in 1948. The total number of surveys made for new pump schemes and extensions to old schemes was 91, covering an area of 42,631 feddans, as compared with 128 schemes covering 30,000 feddans in 1948. The number of petitions and disputes dealt with in the three riverain provinces which required field survey rose slightly to 1,235.

318. An interesting compilation was made of the areas of the registered sagia and rain lands of the main Nile valley in Khartoum and Northern Provinces. The task involved the examination of 3,500 plans and revealed that in Northern Province there were 265,509 and 41,019 feddans respectively of registered sagia and rain lands, while in Khartoum Province the respective figures were 29,249 and 24,599 feddans. An additional 21,000 feddans of sagia land in Northern Province were mapped but not registered.

319. The weekly meetings of the standing committee relieved the central town planning board of much routine work and enabled it, at its four meetings, to deal with matters of principle. The major plan initiated was a slum clearance and town replanning scheme, for which a sum of £E. 20,000 was approved for distribution on the board's recommendations. Nine townships and four municipalities benefitted under the scheme. Principles of compensation for the guidance of local authorities submitting replanning schemes were discussed and agreed upon.

#### PHOTOGRAPHIC AND PRINTING SECTION.

320. Steady expansion continued both in equipment and staff and this was reflected in increased output. The new equipment installed during the year was designed either to increase efficiency

and cut down wastage or to improve the services rendered. The output of maps rose from 23,461 in 1948 to 45,820, and over six times as much work of all kinds passed through the machines, the number of colour impressions increasing from 206,443 to 1,367,475. The printing, folding and stitching of booklets, etc., showed a heavy increase with a total of 123,515 booklets averaging 48 pages per copy printed in two colours.

### CHAPTER XIV — PUBLIC HEALTH

#### GENERAL.

321. The state of public health was satisfactory and no major epidemics occurred. The rains were poor and the only parts of the country in which rains and crops were good were in the southern provinces and the southern Fung area of Blue Nile Province. In the Beja District of Kassala Province there was a definite shortage of grain and grazing. The scanty rainfall of the previous three years had resulted in a loss of animals, milking and otherwise, thus affecting the main source of wealth in that area and one of the important foods. Conditions of shortage also existed in the Gedaref area of Kassala Province and in parts of Kordofan. Relief measures were undertaken by the government until the new crops were available.

#### HEALTH OF OFFICIALS.

322. Statistics for 1949 are given below :—

	Number of Officials employed	Total		Average days sick		Died	Invalided.
		Placed on sick list	Number of days sick	For all officials	For those sick		
Sudanese ..	5,492	1,295	13,612	2.48	10.51	9	11
British ..	925	174	1,336	1.44	7.68	2	—
Egyptian ..	243	78	726	3.39	9.30	1	2

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

	1948	1949
Sudanese	2.36	2.48
British	1.77	1.44
Egyptian	1.96	3.39

SUDAN DEFENCE FORCE.

323. The health of the force was satisfactory throughout the year.

PROGRESS OF WORK.

CURATIVE MEDICINE.

324. Figures for admissions, outpatient attendances and operations performed during the last ten years are as follows:—

Year	Admissions	Attendances	Operations
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
1949	151,011	10,186,668	21,327

PREVENTIVE MEDICINE.

325. The general use of D.D.T. as a larvicide in anti-malarial work proved successful and economical. Spraying with residual insecticides of houses was extended in malarial areas. In four blocks in the Gezira irrigated area all buildings were sprayed with wettable powder. In the three southern provinces free issues of prognaril or mepacrine were made available to all government staff but it is too early to assess the results. Dusting with gammexane proved of value in fly control, especially in pit latrines and refuse heaps. Public health propaganda continued and demonstrations on these lines proved popular and effective at agricultural shows and gatherings, and exhibits from the Graphic Museum were sent out to augment the local exhibits. Training of public health officers and sanitary overseers continued and allowed of expansion in public health services.

MATERNITY AND CHILD WELFARE.

326. This work is developing slowly; there was still a lack of understanding amongst the people why it should be necessary to bring a healthy child to a clinic. Attendances at maternity and child and ante-natal clinics operated by the Ministry of Health in various parts of the country were 27,075 in the Khartoum area, with 8,273 home visits; 1,046 in El Obeid with 3,622 home visits,



and 3,918 in Wad Medani. The infant mortality in Khartoum per 1,000 live births was 63.8 compared with 86.5 in 1948 and 73 in 1947.

OPHTHALMOLOGY.

327. The following figures show the work carried out in the last five years in the Khartoum Eye Hospital :—

	1945	1946	1947	1948	1949
In-patients	1,232	1,199	1,372	1,071	1,191
Outpatient attendances	84,930	88,436	97,352	90,659	77,798
New cases	2,678	17,678	22,276	23,700	29,759
Operations performed	2,462	1,886	2,421	2,048	2,786

EPIDEMIC DISEASES.

CEREBROSPINAL MENINGITIS.

328. While the number of cases diagnosed showed some increase over the figures for 1948, the overall incidence of this disease remained low. Five cases were found in West African pilgrims under observation at Asunga, near Geneina on the western boundary of the Sudan. The incidence during the last ten years has been :—

Year	No. of cases	No. of deaths
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
1949	353	102

The distribution by provinces in 1949 was :—

Province	No. of cases	No. of deaths
Blue Nile	42	7
Darfur	12	4
Equatoria	121	37
Kassala	12	9
Khartoum	19	11
Kordofan	15	5
Northern	5	3
Upper Nile	—	—
Bahr el Ghazal	127	26
	—	—
	353	102
	—	—

DIPHTHERIA.

329. The slight decrease in the number of cases as compared with 1948 is of no epidemiological importance. The incidence during the last ten years has been :—

Year	No. of cases	No. of deaths
1940	114	8
1941	186	38
1942	207	33
1943	309	45
1944	270	61
1945	389	54
1946	390	61
1947	319	37
1948	326	27
1949	264	36

The distribution by provinces in 1949 was :—

Province	No. of cases	No. of deaths
Blue Nile	62	13
Darfur	5	2
Equatoria	1	1
Kassala	34	7
Khartoum	109	5
Kordofan	27	3
Northern	26	5
Upper Nile	—	—
Bahr el Ghazal	—	—
	—	—
	264	36
	—	—

RELAPSING FEVER.

330. Use of D.D.T. powder continued with effect and the incidence of this disease remained at a reasonable level. The incidence during the last ten years has been :—

Year	No. of cases	No. of deaths
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	237	8
1949	376	3

The distribution by provinces in 1949 was :—

Province	No. of cases	No. of deaths
Blue Nile	128	1
Darfur	173	—
Equatoria	—	—
Kassala	56	2
Khartoum	3	—
Kordofan	16	—
Northern	—	—
Upper Nile	—	—
Bahr el Ghazal	—	—
	<hr/> 376	<hr/> 3

SMALLPOX.

331. There was a flare-up of the disease in Darfur, which coincided with the arrival of West African pilgrims at Geneina on the western boundary of the Sudan. Quarantine measures were taken and the temporary quarantine post at Asunga near Geneina dealt with 12,618 West Africans, of whom eight were found to be infected with smallpox. A permanent quarantine near Geneina is proposed. As a result of the stringent measures taken, which included an extensive vaccination campaign, the number of cases over the whole country was small. 524,693 vaccinations were carried out.

The distribution by provinces in 1949 was :—

Province	No. of cases	No. of deaths
Blue Nile	41	5
Darfur	132	8
Equatoria	—	—
Kassala	—	—
Khartoum	1	—
Kordofan	25	—
Northern	—	—
Upper Nile	38	—
Bahr el Ghazal	9	—
	<hr/> 246	<hr/> 13

TYPHUS AND YELLOW FEVER.

332. No cases were reported. It is worthy of record that the aedic index in Port Sudan remained 'nil' for the whole year.

CHOLERA.

333. No cases were reported.

ENDEMIC DISEASES.

ANKYLOSTOMIASIS.

334. There was no significant change in the general incidence of this disease, although a survey carried out in Urbi district of Dongola revealed a high infection rate. The village sanitation experiment in Equatoria Province continued and amongst the Zande in their resettled areas near Yambio each homestead is making its own latrine.

BLACKWATER FEVER.

335. There was no significant change in the incidence of this disease. It is of interest to note that one of the cases was in a child aged five who was taking prophylactic paludrine at the time she developed Blackwater Fever. The incidence during the last six years has been :—

Year	No. of cases	No. of deaths
1944	11	4
1945	14	2
1946	14	3
1947	4	—
1948	12	5
1949	3	—

DYSENTERIES.

336. No new features emerged. The diagnosis in many cases is clinical, when cases are admitted to dispensaries. 4,266 cases were admitted during the year compared with 3,941 cases in 1948.

ENTERIC FEVER.

337. This disease continued to increase. 311 cases were reported, with 24 deaths, compared with 202 cases and 15 deaths in 1948. Distribution by provinces in 1949 was :—

Province	No. of cases	No. of deaths
Blue Nile	107	6
Darfur	19	1
Equatoria	25	2
Kassala	22	3
Khartoum	65	5
Kordofan	4	2
Northern	50	4
Upper Nile	19	1
Bahr el Ghazal	—	—
	311	24

DRACONTIASIS.

338. There was no marked change in the incidence of this disease. Measures to ensure a cleaner water supply in rural areas continued, and have had a marked effect on incidence in the Gedaref area of Kassala Province.

HYDATID DISEASE.

339. Fifty cases were admitted to Kapoeta hospital, with two deaths.

LEISHMANIASIS.

340. 523 cases were reported, with 84 deaths, compared with 460 cases and 62 deaths in 1948. Use of pentostam continued, but the mortality still remained high. Incidence in the last ten years has been :—

Year	Cases	Year	Cases
1940	460	1945	192
1941	494	1946	246
1942	432	1947	327
1943	225	1948	460
1944	205	1949	523

LEPROSY.

341. 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 .. ..	222	145	—	32
Blue Nile .. ..	191	45	—	31
Darfur .. ..	79	69	—	21
Equatoria .. ..	6,907	794	132	452
Kassala .. ..	54	31	—	12
Khartoum .. ..	51	—	8	13
Kordofan .. ..	2,103	104	—	16
Northern .. ..	7	1	—	5
Upper Nile .. ..	38	—	26	19
<b>TOTAL .. ..</b>	<b>9,652</b>	<b>1,189</b>	<b>166</b>	<b>601</b>

MALARIA.

342. 14,360 cases were admitted, with 210 deaths, compared with 12,546 cases and 196 deaths in 1948. Owing to scanty rains and a consequent decrease in the incidence of malaria in the Gezira, the investigations into the use of D.D.T. residual spraying in rural areas as a malaria control measure were inconclusive.

**RABIES.**

343. 1,313 persons received preventive treatment, in many cases as a precautionary measure as it was not possible to determine if the biting animal was or was not rabid. Ten persons died from rabies in spite of having received inoculations.

**RHEUMATISM, ACUTE.**

344. 460 cases were admitted, with one death, compared with 203 cases and one death in 1948.

**SLEEPING SICKNESS.**

345. 34 new cases were reported in Equatoria Province, compared with 75 cases in 1948. 283,500 palpations were carried out during the year and 3,953 gland punctures were performed. Owing to resettlement schemes many of the old methods of control were reorganised, and control methods consequently changed.

The incidence during the last ten years has been :—

Year	Yubu	Yambio	Yei	Kajo-Kaji	Meridi	Imported	Other localities
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	—	—	—	—
1949 ..	5	12	17	—	—	—	—

**SCHISTOSOMIASIS.**

346. This disease remains one of the major health problems. Figures so far obtained from the survey of part of the Gezira irrigated area reveal a higher incidence than was expected. The following figures are derived from data available up to June, 1949 :—

	Number examined	Mansoni No. infected	Haematobium No. infected
Adults	49,829	2,390	2,676
Children	31,198	4,720	4,503
Total	81,027	7,110	7,179

In males the age group 5 — 15 years showed the highest infection rate for both *Mansoni* and *Haematobium* infections. A pilot control scheme is now operating in this part of the Gezira, and is based on the assumption that a survey of the people, followed by treatment of those infected, followed by sulphation of canals near to the villages where the survey and treatment have been carried out, should help to break the cycle. After varying periods a re-survey is carried out and any infected persons treated. In one group, out of 745 people who had been treated, 80 were found to be positive at an average period of five months later. On present knowledge it would appear that this method of control is one that is reasonably effective. In other parts of the country there was no real evidence of reduction in the incidence of this disease.

TUBERCULOSIS.

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

	1945		1946		1947		1948		1949	
	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.	Pul.	Non Pul.
Northern Sudan	845	508	781	538	682	469	768	466	935	499
Southern Sudan	112	135	107	75	152	87	190	105	207	126
West Africans					43	43	61	33	34	25

The following table shows admissions to hospitals for pulmonary and non-pulmonary forms separately :—

Year	Pulmonary	Non-pulmonary	Total
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
1949	1,176	650	1,826

UNDULANT FEVER.

348. 52 cases, with one death, were reported, as compared with 51 cases and one death in 1948.

SUAKIN QUARANTINE.

349. The number of pilgrims passing through Suakin was considerably less than in 1948. Comparative figures are given below for the last ten years :—

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
1944/45	6,999	1949/50	5,091

All pilgrims were vaccinated against smallpox and cholera before leaving, with vaccine prepared in the Stack medical research laboratories. As the pilgrimage had been declared 'clean' returning pilgrims were at first detained for only 24 hours at Suakin. When it was found that some members of the first returning batches had developed smallpox on their arrival home, and that smallpox was occurring in Jeddah, a 14-day period of quarantine was imposed. No cases of smallpox occurred in the quarantine. As in previous years a medical mission consisting of two Sudanese doctors and subordinate staff with a small tented hospital accompanied the Sudanese pilgrims and provided facilities for their treatment and for the treatment of any other sick who wished to attend. The tented hospital was set up near Jeddah and treatment centres at Mecca and Medina. The following table shows the number of patients dealt with by the mission during 1949.

PLACE	Total Attendances				Admissions			Deaths		
	Suda- nese	West Afr.	Other	Total	Sud.	West Afr.	Total	Sud.	West Afr.	Total
Jeddah	1,679	—	2,308	3,987	20	—	20	5	—	5
Mecca	1,346	—	840	2,186	4	—	4	4	—	4
Muna	224	54	68	346	—	—	—	1	—	1
Medina	770	—	409	1,179	12	—	12	4	—	4
	4,019	54	3,625	7,698	36	—	36	14	—	14

PORT SUDAN QUARANTINE.

350. 932 ships entered Post Sudan, compared with 765 in 1948. No cases of quarantinable diseases occurred during the year. 446 sambuks entered Flamingo Bay, compared with 707 in 1948. 42 ships arriving at Port Sudan within six days from ports in the yellow fever endemic area were quarantined.



WADI HALFA QUARANTINE.

351. All passengers by river craft except those in the first and second class, as well as those entering the Sudan by land, were examined. 1,864 were admitted to the quarantine, of whom 205 were found to be suffering from bilharzia.

GENEINA QUARANTINE.

352. A temporary quarantine was established at Asunga near Geneina when cases of smallpox were discovered among pilgrims entering from French Equatorial Africa. Eight cases were detected during routine examination, but a sharp outbreak of smallpox occurred before the quarantine measures became effective.

KITCHENER SCHOOL OF MEDICINE.

353. Twenty-seven students were in residence, 12 being pre-clinical, 11 junior clinical and four senior clinical.

354. In the professional examinations 12 candidates were examined in organic chemistry, of whom nine passed and three failed, and were referred for three months. The examiners were Messrs. J. H. Pyle and S. Thorburn. Eleven candidates were examined in pharmacology and all passed. The examiner was Dr. J. S. Aldridge, M.R.C.S., L.R.C.P.

355. In the referred professional examinations two candidates sat for the examination in anatomy and both passed. The examiner was Dr. N. Slade, M.B., Ch.B. In physiology two candidates sat and both passed. The examiner was Dr. J. S. Aldridge, M.R.C.S., L.R.C.P. One candidate sat for the examination in public health and passed. The examiner was Dr. H. M. Elliott, M.B., B.Ch., D.P.H. In organic chemistry three candidates sat and all passed. The examiners were Messrs. J. H. Pyle and S. Thorburn.

356. In the final professional examinations for 1949 (which were held in January, 1950) four candidates were examined in medicine, surgery, obstetrics and gynaecology, and special subjects, and all were successful. The examiners were :—

in medicine — Dr. W. F. Townsend-Coles, M.D., B.S., M.R.C.P.,  
D.C.H.

in surgery — Mr. Abdel Hamid Bayoumi, F.R.C.S.Ed., F.R.F.P.S.  
Glasg.

in obstetrics & gynaecology — Dr. N. Slade, M.B., Ch.B.

357. The Visitor from the Royal College of Physicians of London and the Royal College of Surgeons of England was Mr. Phillip H. Mitchiner., C.B., C.B.E., T.D., F.R.C.S., M.S., M.D.,

D.Ch., and he supervised the final professional examinations held in January, 1950.

#### GRAPHIC MUSEUM.

358. The museum continued to provide excellent facilities for teaching purposes, and more use was made of it than in former years by pupils from secondary and elementary schools. The general public also showed increased interest and 6,398 persons visited the museum, compared with 5,968 in 1948. Translation into Arabic of all written matter in the museum was begun. Material for exhibition at the agricultural shows was prepared and in some cases set up by the museum staff.

#### SCHOOL OF HYGIENE, KHARTOUM.

##### *Public Health Officers.*

359. Two candidates passed the final examination and were awarded the certificate of the Royal Sanitary Institute. Fourteen public health officers were under training.

##### *School of Hygiene, Juba.*

360. Three trainees passed the sanitary overseers' examinations in January; one was posted to Equatoria, one to Bahr el Ghazal and one to Upper Nile Province. Two other trainees passed the sanitary overseers' examination at the end of December. Four candidates for training were admitted to the school in July.

#### NURSES' TRAINING SCHOOL.

361. There were 46 nurses under training. 26 probationers were admitted to the school. 13 were discharged as unsuitable. Two probationers passed the final examination.

#### MIDWIVES' TRAINING SCHOOL, OMDURMAN.

362. 34 midwives trained in the school passed the qualifying examination and were awarded certificates. 578 midwives have been trained since the school opened in 1921. Six trained midwives attended refresher courses.

#### MIDWIVES' TRAINING SCHOOL, EL OBEID.

363. This school was opened in 1949 and four midwives were trained during the year. At the end of the course they were examined by the province medical inspector and principal of the Omdurman midwives' training school, and all passed and were awarded certificates.

364. In all there were 422 midwives in active practice, distributed as follows :—

*Provinces :*

Khartoum	113
Blue Nile	94
Northern	98
Kassala	36
Kordofan	54
Darfur	21
Upper Nile	6

DISPENSERS.

365. Seven were under training during the year.

LABORATORY ASSISTANTS.

366. One laboratory assistant was trained at the Stack laboratories, and at Juba there were four first year trainees under training.

MEDICAL ASSISTANTS.

367. Ten trainees passed their qualifying examination from Omdurman civil hospital, while at Juba training school there were 28 trainees under training, six in third year, eight in second year, and eight in first year. Six trainees passed their final examinations.

STACK MEDICAL RESEARCH LABORATORIES.

368. Investigations continued on onchocerciasis and bilharzia. Extensive taxonomic studies on phlebotonus were undertaken and attempts made to cultivate the virus of rabies. Investigations were made into the effects of phenol on vaccine lymph, and a form of broncho pneumonia of unknown etiology occurring in newly born infants was studied. A team from the United States naval medical research unit investigated malarial and other parasites of birds and mammals in the southern Sudan, based on Torit. The total number of examinations carried out in the Stack laboratories was 25,949 as compared with 26,695 in 1948. Kahn tests were carried out in more outstation hospital laboratories and relieved the pressure on the Stack laboratories. The following quantities of vaccine made in the laboratories were issued during the year :—

Rabies vaccine	124,200 c.c.
Vaccine lymph	698,400 doses
T.A.B. vaccine	15,000 c.c.
Cholera vaccine	17,000 c.c.

Investigations were continued on *simulium damnosum* in the southern Sudan. Professor P.A. Buxton, C.M.G., F.R.S., from the London School of Tropical Medicine and Hygiene spent some weeks in Equatoria Province studying the tsetse fly.

WELLCOME CHEMICAL LABORATORIES.

369. In spite of the dislocation caused by moving to another building, essential work was carried on. 763 analyses were performed as compared with 667 in 1948 and 776 in 1947. About one third of the samples were directly or indirectly of a medical nature. The new laboratories provide greatly improved accommodation and an excellent library. Research was continued into the toxic principles of *courbonia virgata* and of *capparis tomentosa*. The penetrability of preparations of D.D.T. and Gammexane into mud-walls was investigated and found to be much greater than was expected.

MISSIONS.

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

	In-patients	Outpatient attendances	Operations
Church Missionary Society :			
Omdurman (Khartoum Province)	1,596	36,609	230
Salara } (Kordofan Province)	225	27,609	—
Katcha } (Kordofan Province)	576	10,632	—
Ler (Upper Nile Province)	282	20,049	—
Lui (Equatoria Province)	835	139,615	592
American Mission :			
Nasir } (Upper Nile Province)	107	42,299	—
Doleib Hill } (Upper Nile Province)	73	24,050	—
Wanglel }	—	5,019	—
Sudan United Mission :			
Abri } (Kordofan Province)	204	16,064	—
Moru } (Kordofan Province)	605	2,779	—
Heiban } (Kordofan Province)	356	18,249	—
Kauda }	—	7,909	—
Sudan Interior Mission :			
Abaiyath } (Upper Nile Province)	—	4,280	—
Doro } (Upper Nile Province)	—	1,089	—
Banjang }	—	2,805	—

## CHAPTER XV — EDUCATION

## NORTHERN SUDAN : GENERAL.

371. The appointment at the end of 1948 of a first Minister, and the development of the Department of Education into a Ministry, brought considerable changes in the headquarters organisation, but these were carried through smoothly in spite of a shortage of senior staff.

372. Most of the first half of the year was occupied with the preparation of the revised plan for education in the northern provinces to cover the years 1949-1956. This was presented to, and approved by, the Executive Council in May, and debated, and passed unanimously, by the Legislative Assembly in November. In May and June the Minister and Director undertook a long tour in the southern provinces preparatory to the formulation of proposals for the improvement and expansion of education in that area, which should be presented to the Executive Council in May, 1950.

373. A plan for technical education was approved by the Executive Council in March, technical personnel were recruited from abroad and towards the end of the year approval was received to place orders for machinery and equipment.

374. Work on building the new secondary school at Khor Taggat, near El Obeid, continued throughout the year, and it was ready for occupation in January, 1950, by eight classes, to be moved there from Wadi Seidna and Hantub. A senior Sudanese member of the Ministry was selected to be its first headmaster.

375. It is hoped that the problem of obtaining an adequate supply of Sudanese teachers for intermediate schools has been solved by the opening in August of a two-year training course for ex-secondary school boys at the Institute of Education, designed to turn out 45 teachers yearly, which should enable the Ministry's expansion plans to be carried out. At the same time, the absorption of this number of young and inexperienced teachers into the cadre naturally raised problems in the schools, and arrangements were accordingly made at the end of the year for more regular inspection of intermediate schools than had recently been possible.

376. There was unfortunately a recrudescence of strikes in secondary and intermediate schools and at the Institute of Education. The cause of the trouble was the desire of pupils to form a union, the direction of which would have been largely in the hands of the students of the Gordon Memorial College. Refusal to permit the formation of this union led to strikes towards the end of the first

term, and to further difficulties when schools re-opened in August. The year ended, however, in a better atmosphere than for some time past.

377. The numbers in government schools during 1948 and 1949 were as follows :—

	1948		1949	
	Number of		Number of	
	Schools	Pupils	Schools	Pupils
Secondary schools .. ..	2	801	2	1,015
Junior Secondary Schools .. ..	2	191	2	193
Intermediate Schools .. ..	14	2,255	16	2,344
Elementary Schools .. ..	160	26,074	166	27,674
Teacher Training College .. ..	1	217	1	223
Sub-grade Schools .. ..	321	25,640	422	33,632
Subsidised Khalwas .. ..	147	7,328	117	6,589
Technical Schools .. ..	2	295	3	264
Girls' Training College .. ..	1	130	1	156
Girls' Secondary Schools .. ..	1	37	1	67
Girls' Intermediate Schools .. ..	3	313	3	321
Girls' Elementary Schools .. ..	89	9,539	96	10,934
<b>TOTALS .. ..</b>	<b>743</b>	<b>72,820</b>	<b>830</b>	<b>83,412</b>

378. The following table shows the numbers of non-government schools and pupils in 1949 :—

	Egyptian Govt.		Ahlia		Mission		Com-unity		Total	
	s.	p.	s.	p.	s.	p.	s.	p.	s.	p.
Boys' secondary ..	1	371	3	315	3	282	2	236	9	1,204
Boys' intermediate	—	—	21	4,332	5	646	12	2,140	38	7,118
Boys' elementary	3	335	9	1,540	13	752	16	1,202	41	3,829
Boys' kindergarten	1	21	3	76	9	455	7	207	20	759
Girls' secondary ..	—	—	—	—	6	217	1	71	7	288
Girls' intermediate	—	—	1	66	8	588	11	306	20	960
Girls' elementary	2	68	1	6	14	950	12	462	29	1,486
Girls' kindergarten	1	18	3	60	10	512	6	182	20	772
<b>TOTALS ..</b>	<b>8</b>	<b>813</b>	<b>41</b>	<b>6,395</b>	<b>68</b>	<b>4,402</b>	<b>67</b>	<b>4,806</b>	<b>184</b>	<b>16,416</b>

These schools continued to serve a useful purpose in meeting the demand for educational facilities particularly in the intermediate and secondary stages. To help the Ahlia intermediate schools in training their teaching staff, 15 places were offered to their teachers in the new two-year training school at Bakht er Ruda which opened

in July, 1949. Nine Ahlia school teachers availed themselves of this offer. Until the staff of these schools are properly trained, no outstanding academic performance can be expected of them, though some of them compared favourably with government intermediate schools in the 4th year intermediate final examination for the year. Two new Ahlia secondary streams were started on 1st. January, one at Omdurman Ahlia secondary school and the other at the Ahfad secondary school, both schools following the government secondary schools' syllabus and aiming at preparing boys for the Cambridge school certificate.

#### SUB-GRADE SCHOOLS AND SUBSIDISED KHALWAS.

379. Below the elementary school there are sub-grade schools and subsidised khalwas, or Koran schools, both under the control, wherever possible, of local government authorities, but supervised by the province education officers. The sub-grade schools are as popular as ever and until the supply of higher grade school teachers and suitable school buildings is adequate, these schools will continue to hold a useful and important place in the educational system of the country. A tendency, among both parents and local authorities, to regard the sub-grade school as a stepping stone to a higher grade of school, rather as something complete in itself, is regrettable, especially as the standard of some sub-grade schools is already comparable with that of elementary schools.

In Darfur the expansion of sub-grade education continued and six new schools were opened in backward areas in Dar Masalit and northern Darfur. In the Beja District of Kassala Province, where a large expansion scheme was begun in 1948, good progress was made, and six new schools were opened.

#### ELEMENTARY SCHOOLS.

380. The expansion programme continued to make headway, and six new schools were opened in 1949, making a total of 166 schools attended by 27,674 boys. Two main difficulties are necessarily attendant upon so ambitious a development scheme; firstly, the speedy provision of buildings; and secondly, the supply of trained staff without which expansion must mean a general lowering of standard. The former presents the more serious obstacle, and the problem of erecting some 50 schools (boys' and girls'), annually, is a formidable one. It is hoped that the use of pre-fabricated structures may provide a solution.

#### INTERMEDIATE SCHOOLS.

381. There were in 1949 sixteen intermediate schools including two attached to the Institute of Education, Bakht er Ruda, and

one attached to the subsidiary teacher training centre at Dilling. Total attendance was upwards of 2,500 boys, of whom rather more than one quarter were boarders.

As mentioned above, the problem of staffing intermediate schools has now largely been solved by the institution of the two year training scheme, but the schools will for some years have the disadvantage of an ill-balanced cadre with newly-appointed teachers predominating. Shortage of staff qualified to teach science led to the temporary disappearance of that important subject from the curriculum, and similarly lack of experienced staff made it necessary to drop school societies for the time being.

Pressure on intermediate schools continued to be heavy, but this should be relieved by the expansion programme, designed to double the existing number of schools by 1956, on which the Ministry has embarked.

#### JUNIOR SECONDARY SCHOOLS.

382. In the Omdurman junior secondary school, the number of boys increased to 121 of whom 65 were in the first year and 56 in second year. Of these 40 were day boys and 81 boarders. Fifty-four were the sons of merchants, 41 of government employees and 26 of farmers. The 44 boys who left the school at the end of 1948 all found employment either in government establishments or in commercial firms, while 30 of the 38 boys who took the Civil Service Examination passed. The output for 1949 was 54 boys of whom 52 took the Civil Service Examination, while two went into business with their fathers.

The tendency of boys from intermediate schools in Khartoum, Khartoum North and Omdurman to proceed to non-government secondary schools meant that many of the newcomers were boarders who had come from a distance. This, and the allocation of five rooms to the secretarial training school, rendered existing boarding accommodation inadequate, and private houses in Omdurman had to be rented.

383. At the Dueim rural junior secondary school 24 boys were accepted into the new fifth year in January, bringing the total to 73 of whom 49 were in fifth and 24 in sixth year. Since the object of this school is to fit boys for an agricultural life concern was felt at the small number of vacancies in the Ministry of Agriculture and in the Sudan Veterinary Service. At the beginning of 1949 therefore the conditions for entry to the school were modified in favour of those boys whose future on leaving school lay in employment on the land of their families. Of the 17 boys who completed



the course in March, four were employed by the Surveys Department as trainee surveyors, two by other departments as book-keepers and four by private concerns, while the remaining seven were to be employed by the Ministry of Agriculture.

#### SECONDARY SCHOOLS.

384. At Hantub school in 1949 there were 497 boys including eight foreigners in the school, divided into 17 forms. Two of the first year classes were destined for transfer to the new secondary school at Khor Taggat at the beginning of 1950. There were no major changes in the academic or social life of the school. Sixty-two boys sat for the 1949 Cambridge school certificate examination, and 37 passed. Of other activities the farming society was a very popular and active body and school plays were successful and well performed. In games, in addition to the ever-popular football and netball, boys took part in athletic sports, cross country running, swimming and sailing. Tennis was taken up by some of the senior boys. The health of the school was outstandingly good.

385. At Wadi Seidna school the increase in numbers by 98 to a total of 518 boys divided into 19 classes necessitated the temporary use of converted ex-military buildings. In January, 1950, however, two first year classes are to be transferred to the new secondary school at Khor Taggat. An innovation in the curriculum was a system of seminars designed to bring more reality to classroom work. The original programme proved too ambitious and was modified in the second term. Results of the Cambridge school certificate were less satisfactory than in previous years, 44 boys gaining certificates out of a total of 73, while 12 gained matriculation exemption. Previous standards in all subjects were well maintained except in English language, in which the percentage of passes was markedly lower. The school football team had a particularly successful season, losing only four matches. Athletics too were of a high standard although not sufficiently good to defeat the rival school, Hantub. Other games and activities had a successful year. The boxing club was revived and the annual cadet corps camp showed a very satisfactory standard.

#### INSTITUTE OF EDUCATION.

386. The production of new books and syllabuses expanded during year; 19 new books and booklets were produced while nine other books were revised, and reprinting undertaken. Nine books were in production at the end of the year. In addition the publications bureau increased the circulation of its fortnightly news magazine to 17,000. Eleven new booklets were produced and nine

others were reprinted in editions of from 8,000 to 20,000. 105 elementary schools and 15 intermediate schools were inspected. Eighty-seven new elementary teachers completed their training at Bakht er Ruda. Eighty-four teachers attended refresher courses. Six Gordon College students completed a four months' course. Forty government and non-government trainee teachers attended an 18 months' course at the intermediate teachers' training centre. Fifty-seven masters had short courses. After some initial difficulties this new training centre had a successful first term and it is hoped that it will produce an average of 60 teachers every year. The adult education team started work successfully in the Gezira and was seconded to Blue Nile Province. A number of literacy campaigns were carried out, the most successful being in the southern Gezira. Follow-up work and discussion group work also continued in the Gezira, at Dueim and Um Gerr. Four new boys' clubs were to be opened at the beginning of 1950 and a course was held for new leaders. A committee to review and direct the reform of intermediate education met at regular intervals. The building of the intermediate teachers' training college and the enlargement of the elementary schools were completed. The Dilling teacher training centre completed its second year and its first batch of students completed their training in December.

#### GORDON MEMORIAL COLLEGE.

387. Admissions to the college during 1949 (excluding serving government officials admitted to the course in public administration) were as under :—

Science (Biology Section)	53
Science (Mathematics Section)	23
Arts	60
Design	5
	<hr/>
	141
	<hr/>

With these new entries the year began with a total of 320 students (compared with 271 at the beginning of 1948), but as usual the population dwindled during the course of the session and at the end of November the number still on the rolls was 285. The principal factors in the decline were the departure of 18 preliminary year students to universities in Egypt and the completion of their courses by eight final year students. The distribution between faculties at the end of the year was as follows :—

Faculty	No. of students
Agriculture	6
Arts	112
Design	15
Engineering	12
Law	13
Public Administration	14
Science	100
Veterinary Science	13

388. In all 262 students (including five external candidates in the final diploma examination in Arts) were examined, and of these 212 are to be regarded as having passed. As one of the less satisfactory features of this result it should be recorded, first of all, that 21 of the candidates who passed did so only after re-examination (or 'reference') in one or more subjects and thus belong to the category of marginal students who may be expected to have difficulty at the next level. The number of failures in the preliminary examination (28 out of 103), although not excessive, certainly did not warrant any great satisfaction with the standard of entry, especially since only 32 of the candidates passed with credit and so qualified for admission to degree courses. The fact remains, however, that just over 80 per cent of the candidates examined did pass, a remarkably high ratio of success to failure. The comments of the London examiners on the standard of teaching in the College as revealed by the examinations were very favourable.

389. During the year arrangements were concluded (except for a few details and formal approvals) for the external LL.B. degree of the University of London to be taken under the special relationship scheme and a number of students were admitted to the course during the current term. The standard London syllabus was modified to include the Criminal Law and Criminal and Civil Procedure of the Sudan together with a special Sharia course (replacing Roman Law), the treatment of Constitutional Law and Administrative Law to be such as to allow these subjects to be studied with special reference to the Sudan. Thus while retaining all the essential features, from an academic point of view, the course should give a good general background for a career as a judge or advocate in the Sudan.

390. The introduction of a degree course in agriculture was brought a stage nearer by the visit in April of Mr. Dunstan Skilbeck, Principal of Wye College. Meanwhile, however, some uncertainty exists as to the scope and nature of the degree course, and until this is clarified, preparations can only be made on the assumption rather

than the certainty, that the University will admit students now in the School to a special Part I examination in December, 1950,

391. In the field of Arts and Science the special relationship scheme continued to operate smoothly and procedure for the conduct of the preliminary and intermediate examinations were well established. In December, 1950, the College should present its first candidates for the general B.A. and B.Sc. examinations.

392. The 1949 session saw the introduction of a revised course in public administration aiming at combining academic instruction with training on the work. The students admitted to the course spent one term in College studying the principles and methods of government in the Sudan and were then posted to districts as officials on probation, to return later to the College for further training in the theory of government with special emphasis on its economic and social aspects. The class admitted to the course in 1949 included five students from the southern provinces.

393. In the School of Arts it was decided that the curriculum in the final two years of the diploma course should consist of three main subjects, instead of two main subjects and one subsidiary. The aim is not so much to increase the content of the course as to widen its scope, and this reflects a belief that what students of the diploma type need is an education in which the emphasis is on range rather than on depth. A similar view prevailed in the School of Science, where the diploma course now consists of three main subjects from the intermediate (or second) year onwards. In both Schools the 1949 session saw the last of the old three-year course and students will henceforth be required to complete four years before qualifying for the diploma.

394. In the School of Engineering students were admitted for the first time after completing the intermediate stage (i.e. — two years) in the School of Science. This initial step towards the introduction of a degree course was followed, after the visit and with the advice of Professor S.J. Davies of London, by the rearrangement of the curriculum bringing it very closely into line with that leading to the London external degree of B. Sc. Eng. The course now consists of two parts, each of two years' duration, and it should be remarked that a measure of specialisation in either civil or mechanical engineering will now be possible in the fourth year. It is hoped that the experience gained under the new arrangement will pave the way for the adoption of a degree course in 1952, when all or most of the necessary machinery and equipment should be installed.

395. The number of books accessioned in the Newbold library during the year was 3,153, bringing the total of volumes in the

library to about 22,500, of which 5,000 are in Arabic. Over 4,000 titles were re-catalogued, and it is expected that the library will have been wholly recatalogued by the end of 1950, a year sooner than originally estimated.

396. The building activity which began in 1948 went on unabated throughout 1949, and on the whole progress was good. In the Engineering School the new hydraulics and heat engines laboratory, together with its boiler room and workshop annexes, was completed, and work began on the installation of machinery and equipment. In the main grounds work proceeded more slowly on the two new hostels. Plans were completed for a new biology block and science lecture theatre. Owing to the rise in building costs, however, no further major reconstruction can be undertaken until after July, 1951, and plans for the third and fourth new hostels which it was intended to put up before that date therefore remain in the provisional stage. Meanwhile the government agreed that Kitchener House and its annexes (occupied by the Ministry of Education) should be handed over to the College as soon as alternative accommodation could be found for the Ministry. In the School of Agriculture a start was made on the new chemistry department.

397. In general the equipment position continued to show steady improvement, although there were some delays in the delivery of orders. Among many interesting developments mention might be made of the rapid expansion of the film library in the School of Science, which now has 67 teaching films; the establishment of an exchange system whereby the Zoology Department obtains slides and similar material from other academic institutions, notably the University of Leeds; the marked improvement, both in quantity and range, of the teaching material in the Botany Department; and the greater emphasis which it has been possible to give to practical laboratory work in the Veterinary School as a result of more and better equipment and the establishment of a pharmacy.

398. After an interval of two years a successful study camp was held at Erkowit during the first fortnight of April. The subject studied by the 35 Sudanese and British members of the party was "The Individual and Society", which was sub-divided for group discussion under the following heads: the growth of the community; the mind of the community; and community and economic opportunity; and the community and political organisation. During the summer the School of Agriculture conducted a month's course in practical agriculture for six junior officials from the Ministry of Agriculture, and two further short courses were held in May and June for some thirty sheikhs and samads from Blue Nile Province. Increasing use was also made extramurally of the School's facilities

through demonstrations and exhibits at local agricultural shows and in dealing with enquiries from the public on such matters as land valuation, the feeding of dairy cows, the nutritive value of industrial bye-products, artificial fertilisers, insect pest control and the identification of seed samples. The sale of produce from the School farm during the year yielded £E. 1,726, of which £E. 1,576 was earned by the dairy herd.

399. It was found necessary to close the College a few days before the appointed end of first term following a strike by the students in protest against the decision of the Minister of Education not to allow the formation of a students' congress. For a time there was a certain amount of tension when the College re-assembled for second term, but eventually the atmosphere improved. For the rest, the extra-curricular activities of the College went on as usual. Football continued to lead the field in games, but the netball club (which joined the Sudan Netball Association and had over 30 active playing members) made good progress, as did the relatively new volley-ball and hockey clubs, and the number of students taking regular exercise was increasing. The Cadet Corps enrolled 74 recruits, bringing its total strength to 109, 60 of whom attended the tenth annual camp at Jebel Milakit in December.

#### TECHNICAL EDUCATION.

400. The number of boys in the Omdurman technical school in 1949 varied from 94 to 168. Boarders ranged from 60 to 117 in number and day boys from 33 to 51. 1949 saw the introduction of the first year of the new type junior technical or technical intermediate school. Work in this new section was based on temporary syllabuses, and on the whole it made a good start as a separate section while at the same time making use of the established traditions of the main school. At Atbara technical school 57 boys were under training. At the El Obeid junior technical school there were 55 boys. The number of applicants rose from 85 in 1948 to 136 in 1949, of whom 29 were accepted, compared with 26 in 1948. The secretarial training school was opened in January, 1947, its purpose being to improve the general clerical standard of clerks by full time courses and to provide evening classes in commercial subjects. During 1949 three full-time courses in office practice, touch-typing, book-keeping, government regulations, and English, were conducted for 71 government officials and 24 others. In addition, a special Arabic shorthand-typing course which was held during the summer months was attended by 25 trainees, and was conducted by the chief reporter of the Egyptian Parliament. The total of full time students was therefore 120, an increase of 25 on 1948. In October, 1949, it was decided to double the intake into the school and to leng-

then the course to four months. Evening classes in commercial subjects and English were continued in Khartoum and Omdurman, the most popular being touch-typing (66 students), book-keeping (38) and Arabic shorthand (36). English certificate examinations and shorthand proficiency tests were conducted by the supervisor for about 300 candidates.

#### GIRLS' EDUCATION.

401. There were 96 elementary schools working in 1949 and additional classes were added to nine schools. Standards were rising in urban centres but much remained to be done to improve the attendance at country schools. The desire for post-elementary education continued to increase. At the entrance examinations held in March for admission to the training college, and in August for admission to the intermediate school, there were 679 candidates. The examination for the 1950 intake was held in December, to give more time to sift results, and at this there were 737 candidates.

402. Work of consolidation continued in the intermediate schools. The secondary section left the Omdurman intermediate school and went into separate quarters, permitting undivided attention to be given to the improvement of the curricula, syllabuses and methods in intermediate schools. At Wad Medani a training section was opened for 15 students and the El Obeid school became complete, with four classes.

403. The secondary school opened in September, with 67 pupils of whom 27 were in first year. Nine girls took their school certificate examination in December.

404. There were 156 students in the training college, of whom 56 were in their final year. One Gordon Memorial College diplomate was trained, and 29 students with intermediate school education were taking the course. Four girls from Aden were under training for service in their own country. A two weeks' refresher course was held in August for elementary school teachers and another for intermediate school teachers. Social welfare work in the Gezira was extended to include the Wad Namaan, Remeitab and Hosh blocks. Night school work in Omdurman continued at seven centres.

405. In December there were 347 mistresses on the establishment and 18 posts vacant in elementary schools and elsewhere. The out-turn of 71 students in 1950 should relieve the situation. A new and interesting development was the formation by the mistresses of an association for social and cultural purposes. The Girl Guide movement gained ground in the elementary schools and a large number of Sudanese women asked to be allowed to become affiliated.

406. Excellent buildings have been provided for the girls' secondary school. The elementary school building programme was behind schedule, but headway was made in all provinces. Preparations were made for the opening of a girls' elementary school at Tonj and the headmistress took up her post.

#### ANTIQUITIES SERVICE.

407. The Archaeological and Museums Board met twice, in April and November. Mr. A. J. Arkell, archaeological adviser, returned to the Sudan in January and carried out excavations at the neolithic site at Shaheinab, north of Omdurman. The excavations at Amara West, begun in the previous December, continued during January and February, and again for the final phase in December, 1949. A preliminary survey was carried out of antiquities in the area of the fourth cataract which would be flooded if a dam were to be constructed there. Inspection tours were made during which all the major monuments of the northern provinces were visited. In addition, an exploration was carried out by camel in the Butana, in the course of which many new sites were discovered. Two visits were paid to sites in the Gezira, an area not visited for many years. Two visits were also paid to Suakin. Conservation work was carried out at Buhen and at Jebel Barkal by the antiquities mason. Arrangement and labelling of the exhibits in the museum continued. Many new objects were catalogued, and those in store were re-arranged so as to be more easily accessible. The museum at Merowe was cleaned and re-arranged. During the course of the year Mr. Arkell's report on his excavations at Khartoum was published in book form, and also a pamphlet on the old stone age in the Sudan, designed to be the first of a series of occasional papers issued by the antiquities service.

#### SOUTHERN PROVINCES.

408. The decision of the Legislative Assembly that Arabic should ultimately become the common language of the Sudan focussed public attention on the problem of southern education, and a development plan to cover the years 1951-56 came under preparation.

409. Much good work was done by the first full time education officers for Upper Nile Province and the Yambio-Yei area of Equatoria Province. Two Church Missionary Society teachers returned after completing courses, and the staff of Mundri training college was brought up to full strength.

410. 15,360 pupils attended village schools. Separate figures for boys and girls are not available, but about 12 per cent of the pupils at Church Missionary Society schools were girls. The number of schools with boarding houses increased.



411. Primary and elementary schools were attended by 5,796 boys — an increase of nearly 800 since 1948. No new schools were opened in 1949, as the year's new teachers from the training colleges were absorbed by existing schools, where their influence already began to improve standards; three schools, however, were expanded to primary status with a six-year course.

412. Intermediate schools flourished, especially the American Brothers' school at Okaru. Arabic was taught in two of the three mission schools, and was also introduced as a major subject in all five classes of the government school at Atar. There were 390 boys in the three mission schools (an increase of 31), and 150 at Atar. Two students from the south entered the Gordon Memorial College.

413. Practical work, in which great help was given by the research division of the Ministry of Agriculture, was again the main feature of the year's work at the Yambio agricultural training school. Arabic was added to the syllabus for the senior boys.

414. Rumbek secondary school, with 52 boys, completed a full year's work in spite of a late start and incomplete buildings, and good progress was made in all subjects including Arabic. Nine of the ten boys attending secondary schools in Uganda completed their course.

415. There were no innovations in technical schools, which were attended by 166 boys as against 120 in 1948.

416. Most encouraging progress was made in girls' schools, in which numbers rose by nearly 500 to 1,584 (excluding girls attending village schools). More Dinka girls attended, more girls come forward for teacher training, and the standard of handwork and needlework was high. The buildings of the new school at Tonj were begun.

417. After the appointment of its new principal at the end of 1948 the Juba Training Centre established itself well in 1949. In the improved clerks' training school all 12 students in the senior class passed their final examinations (which included Arabic). Medical trainees were given additional general education and a special English class was held for volunteers.

418. The publications bureau, set up at the end of 1948, completed a full first year's work. A variety of book and booklets in Arabic, English and the vernaculars were either reprinted or prepared for publication. A very successful quarterly in English was started, with a circulation of 600. Much work was also done in preparing textbooks for teaching Arabic. The bureau operated a

library, circulated film-strips, and ran a mobile cinema. Standards rose appreciably in the village teacher training centres, where there were 306 teachers under training.

## CHAPTER XVI — PUBLIC RELATIONS

419. The work of the Public Relations Branch in 1949 became more clear cut, when the Legislative Assembly replaced the Sudan press as the responsible outlet of public opinion for the whole country and by question and answer, in debate or through tabled statements succeeded in its first session in obtaining much official information from the ministries and departments of the government. This development meant that the Public Relations Branch could concentrate on the better and wider dissemination of the plentiful material now placed at its disposal. At the same time the Public Relations Branch benefited greatly during 1949 from the vastly increased popularity of the Sudan Broadcasting Service which after struggling for the first eight years of its existence against inadequate transmission now, thanks to its new short-wave transmitter, enjoyed full audibility over the whole Sudan.

A useful development was the increased interest taken by the public and expressed through the members of the Assembly in the Public Relations Branch. From the debate on a motion that the Branch should be converted into a Department for Social Affairs it was clear that the present functions of the Branch were not generally understood. The motion proposed that the Branch should be expanded to the pattern of the Ministry of Social Affairs in Egypt with control over adult education, mass literacy, village welfare, sports, social life and co-operative activity. An amendment to the motion was accepted that the Executive Council should study the possibility of the conversion of the Public Relations Branch into a Department charged with the encouragement of social life.

420. For the Sudan Broadcasting Service, the Posts and Telegraphs Department continued to provide the transmission services. Three frequencies were used, 9746 kcs = 30.78 metres (6.5 KW), 5975 kcs = 50.20 metres ( $\frac{1}{4}$  KW) and 572.5 kcs = 524 metres ( $\frac{1}{4}$  KW). Reports from various areas inside the country confirmed that the new Marconi 6.5 KW. transmitter was giving far better reception than anything previously achieved. This was also borne out by the number of reception reports received from outside the Sudan which increased noticeably, particularly from Sweden from where over 200 reports were received during the year.

421. There was no increase in the regular Arabic broadcasting time of 20 hours a week, together with an hour's additional programme on special occasions or public holidays. An additional half

hour programme during the period of Ramadan from 1630 to 1700 hours local time was well received. The Requests Programme of Sudanese gramophone records at 1600 hours on Fridays more than justified itself. Over 1,400 individual requests for local songs were received during the year. The Listeners' Letter Box programme proved most popular: medical, religious, historical, social and general questions were answered by experts. The summary of Legislative Assembly proceedings was a feature which was greatly appreciated. It consisted of broadcasting a comprehensive ten minutes' summary of each day's proceedings during the Legislative Assembly sittings. Local News was extremely popular. Every effort was made to meet this growing demand by using not only the output of the Public Relations Branch and its correspondents, but also the local news agencies, Sudanese News Service and Sudanese Press Agency. The English half-hour on Fridays was continued and was improved by the regular inclusion of talks on local subjects in addition to the summary of local news.

422. Government departments as a whole showed greater awareness of the value of radio services. When any organisation wished information conveyed quickly to a wide circle of people, the Sudan Broadcasting Service was often asked to broadcast it. During 1949 the Posts and Telegraphs Department installed communal listening sets at a number of small towns along the Kosti-El Obeid line, and undertook responsibility for their operation and maintenance. Fourteen communal listening sets were bought by the Public Relations Branch during 1949 to replace the sets originally distributed to large towns in 1940 and installation began at the end of the year. With the object of popularising the Service's singers and of bringing in revenue, two songs by two first class singers were sent to the Decca Company for processing and 500 copies of each were received.

423. Many of the vernacular newspapers were in financial difficulties during the year: "El Ashigga" ceased production for several months, and the oldest daily, "El Nil", went out of production in November although this was for other reasons. "Es Sudan el Gedid" was also in financial straits for a while after a reduction in rates paid for official notices. These financial troubles turned the attention of the press to the advantages of commercial advertising. In spite of the difficulties of the dailies there were many applications for new licences, mostly for weekly papers. On the advice of the Press Board the deposits payable on new licences were raised. The Branch's services to the local press included the issue of 26 communiques and 596 bulletins in Arabic and English. It also continued to arrange for the publication of corrections to

inaccurate statements, which the press accepted co-operatively. The weekly Local Press Review was produced regularly in 160 copies. Twelve feature articles were attached to the Sudan Weekly News-Letter, intended for external press, and much of the material in this was reproduced. The circulation of the News-Letter rose from 105 to 163.

424. The official Arabic weekly, "El Sudan Fil Usbu", continued to be distributed throughout the Sudan and its circulation reached 7,000. On numerous occasions points made in its leading article were remarked by the vernacular press and elsewhere. The "Southern Sudan News-Letter", started in 1948, was distributed monthly. Several letters of appreciation were received from Southern readers, and a request for a copy even came from Kenya. The "Sudan Almanac" was again edited and revised for the Branch.

425. By the end of 1949 six mobile cinemas of the Films Section were in operation in various parts of the Sudan, in addition to the cinema working on the railways. An estimated total of 265,000 people attended 186 shows, excluding Khartoum, Omdurman and Khartoum North. In these three towns 221 shows were given to 40,458 people. Total audiences for the year were 305,458, and the total number of shows was 407. The programmes shown appeared to the popular, each one containing films of an educational or instructive nature accompanied by up-to-date news-reels with Arabic commentaries. Generally however there was a natural and growing demand for local films. More breakdowns occurred than in 1948, but not more than was to be expected. The vehicles, generators and equipment received severe punishment from rough travel, sand and handling. The Zande unit, centred on Yambio, left Khartoum in June and made a good start with a Zande in charge.

426. Calls on the 16 mm. film library increased as more schools and institutions obtained projectors, and the demand was met satisfactorily. A fixed circuit was developed for the south so that a batch of 10 or 12 films is in circulation between six units who show films. The first local film was made in Kordofan Province on the subject of mechanical haffir digging. This was processed, cut and edited in England. The demand for film strips was not so great as in 1948 though there were still 12 projectors out on loan. It appears that when audiences have seen moving films, the interest in strips tends to die. The demand for still photographs continued to grow from departments, visitors and foreign journalists, and was to a great extent satisfied. The new premises of the Films Section

proved more commodious than the old, the longer frontage allowing more photographs to be displayed.

## CHAPTER XVII — GAME PRESERVATION

427. Revenue of the branch was £E. 13,638 and expenditure £E. 19,073. The excess of expenditure over revenue was in the main attributable to currency difficulties for foreign hunters. The number of game animals killed by five visiting sportsmen in 1949 was 50, including five buffalo and a variety of 14 other species, while in all 1,015 game animals were killed by 189 resident licence holders, including 59 elephant, 79 buffalo and a variety of 26 other species. 4,520 kgs. of hippopotamus hide were exported during the year, compared with 3,331 in 1948, and 4,756 kgs. of ivory were exported compared with 4,996 in 1948.

428. 73,000 persons paid to enter the zoological gardens in Khartoum and receipts totalled £E. 1,253, compared with 100,446 persons and receipts of £E. 1,258 in 1948. There was no serious outbreak of contagious disease among the Zoo animals during the year except a few cases of enteritis in baby animals. From January until mid-March simulium gresecollis caused trouble to birds and animals. A number of valuable birds, including shoebills, secretary birds and cranes, were lost. Two consignments of animals were exported to Egypt, including giraffe, shoebills and various vultures and cranes. Another consignment valued at £E. 1,000 was exported by sea to Antwerp and included giraffe, shoebills and cranes. A fourth consignment of six leopard cubs was also sent by sea to Belgium. All these consignments arrived safely at their destinations. The two white rhinoceros captured in April near Shambe by Mr. Carr Hartly were on view at the end of October. Later they were sold to the Antwerp Zoological Garden. The only other pair of white rhinos on exhibition in a public zoo is at Pretoria.

429. Reports from all parts of the country indicated that with very few exceptions game was holding its own and even increasing in some areas. There were no further definite identifications of black rhino on the west bank of the Nile, but it is clear that white rhino exist in greater numbers than was previously supposed. Control of elephants in areas where they menace crops was attended by an increasing degree of success. Buffalo control was undertaken as required, chiefly in Yei District of Equatoria Province, and about 150 were destroyed. Lion control was also carried out in Juba District on a limited scale resulting in a few being shot in protection of cattle.

430. During 1949 a road through the Dinder park was opened from railhead at Dinder Station. Game is on the increase throughout the park. In the southern park in Equatoria and Bahr el Ghazal Provinces the chief development was the cutting of a new road from Gomuko to the Sue River at Moroko and the construction of a car ferry of two tons capacity at the latter place. This extension provides a through road from the northern entrance of the park some 30 miles south of Tonj, to a point on the Wau-Tembura road some 20 miles south of the Bo River.

431. For the conservation of protected species in suitable areas three new reserves were declared, at Nimule, Bangengai and Mbarizunga. In the Nimule reserve practically every visitor has seen white rhino, elephant and buffalo at close quarters. This brought the total number of reserves in Equatoria and Bahr el Ghazal Provinces to twelve, providing for the conservation of every species found within the area.

432. The first two post-war safaris to visit the Sudan were very successful. Count Charles Seilern Aspang spent three weeks in February and March in Equatoria and Bahr el Ghazal Provinces in order to secure trophies of the giant eland, Mrs. Grey and Situtunga. His giant eland head of 41½ inches is the second Sudan record. Mr. Berry Brooks spent April on the east bank of the Nile in Equatoria Province and May on the west bank in Equatoria and Bahr el Ghazal Provinces collecting specimens of the fauna of the country for the Memphis Natural History Museum. He secured a wide range of trophies including some near-record heads.

## CHAPTER XVIII — STORES AND ORDNANCE

433. The termination of the financial agreement with the British Government in 1948 continued to influence the direct activities of the department throughout 1949: although financial adjustment of inventories, plant and buildings had been largely cleared there remained outstanding the major problem of the re-equipment of the Sudan Defence Force to its post-war establishment and the standardisation of weapons and warlike stores. As a consequence there was intensive activity in the procurement of stores both from military depots in the middle east and from commercial sources in the United Kingdom. Coupled with the stress of the military re-organisation there was a heavy load in connection with the rapidly mounting requirements of Sudan Government units. For the first time since the war years the acute difficulties that existed in the procurement of almost all stores items eased and it

was possible once more to revert to selective purchase in the interests both of quality and of standardisation. Despite the easing of supply difficulties, the high prices in almost the whole range of items imported by the department continued to cause concern. In particular this applied to textiles and to most manufactured metallic products, including ammunition, commodities in connection with which it is particularly difficult to enforce economies. As a result of high prices the total value of stores held at the end of the year was approximately £E. 910,000.

434. Expenditure during the year amounted to £E. 770,000 including expenditure in connection with dura and sacks, while the cost of free issues was £E. 355,600. Services on repayment totalled £E. 431,300; details of this, with the corresponding figures for 1948, are as follows:—

	1948	1949
	£E.	£E.
Grain and flour	271,292*	177,182
Grain sacks, new	54,481	39,434
Grain sacks, part worn	14,228	3,696
Other stores	87,234	147,055
Printing	54,231	54,225
Departmental expenses	6,550	9,754
	488,016	431,346

\* This figure includes proceeds of sale to the public of 15,000 tons of grain.

435. Sales in the saleroom increased from £E. 4,609 in 1948 to £E. 5,263: there was a steady demand for essential camp furniture.

436. Activity in the main supply depot was considerable and 17,385 tons of grain were issued. Of this approximately 7,500 tons were despatched for direct famine relief measures, whilst 585 tons represented issues to the Sudan Defence Force:

437. The value of production of the general workshops showed a sharp increase to £E. 302,000 as against £E. 200,000 in 1948. This reflected in part rising labour costs but also the abandonment of uneconomical repair work, whilst the general re-organisation to a peace-time basis permitted the enforcement of improved standards of factory management.

438. The process of weapon standardisation of the Sudan Defence Force coupled with that of general re-equipment resulted in a continued reduction in the demands placed upon the arms workshops. Nevertheless the general condition of weapons in use by the Sudan Defence Force and the police showed a marked improvement, since, for the first time since 1939, it was possible to carry out a comprehensive inspection programme covering all weapons in the country.

439. Labour relations throughout the year remained satisfactory and no disputes occurred within the department.

440. The volume of work handled by the printing section again increased and orders to the value of £E. 93,300 were placed as against £E. 84,600 in 1948.

441. Five additional magazine licences, six additional store and sale licences and two licences for the temporary storage of explosives were granted during the year, also 11 new licences for the storage of petroleum.

442. Further operations involving the use of gelignite for the destruction of weaver birds in their roosting sites were carried out in conjunction with the bird control officer during the early part of the year and yielded excellent results. 25 tons of gelignite were used, the largest single explosion consisting of seven and a half tons.

443. Three accidents occurred in connection with explosives during the course of the year. The first was at Singa prison in June and resulted in five deaths and extensive damage to the prison buildings. No cause could be ascertained. In July a fire occurred in a batch of about 180 lbs. of gelignite in the Egyptian Irrigation Department magazine at Jebel Aulia. This was probably due to the spontaneous ignition of over-age gelignite: a further batch of 250 lbs. of gelignite, stored in the same magazine, failed either to explode or ignite. The third accident occurred at the end of December when two schoolboys were injured as a result of handling the fuse of a blind bomb.

## CHAPTER XIX — LABOUR

444. In early 1949 the enforcement of trade union and trade disputes laws were opposed by workers' associations and deadlock appeared inevitable. A conference was held in April and agreement was reached on all points. Several amendments on the laws were accepted and afterwards passed into law.



445. A Port Sudan dock labour committee was set up, comprising representatives of the government, stevedoring firms and workers. Its first decision was to increase shift wages, a step which resulted in an increase in production for the whole year and the establishment of new records for loading and unloading ships. Measures to give more stability of employment were next discussed, and the introduction of registration for regular workers explored.

446. After criticism of the Trade Union Ordinance had been answered workers' groups began the laborious task of preparing rules and applying for registration. A model set of rules was prepared which complied with the legal requirements. By the end of the year five trade unions had obtained registration and 12 others had deposited their rules with the registrar and had entered the waiting period, during which other bodies might raise objections to final registration.

447. It was stated before the Legislative Assembly in February that during 1949 consideration would be given to the setting up of joint negotiating machinery for the civil service and government industrial establishments. Discussions proceeded throughout the year on the most appropriate form for this machinery, having regard to local conditions.

448. The Employers and Employed Persons Ordinance, 1948, came into force in early 1949, providing minimum standards for annual holidays, payment during sickness, overtime pay, notice of discharge and gratuities for long service. Educative inspections were carried out in 70 firms in Khartoum province and a simple system of records was devised to assist employers. The Workmen's Compensation Ordinance, 1948, came into force in September, 1949, providing compensation for sufferers from industrial accidents, all disputes being settled by the normal civil courts. The Workshops and Factories Ordinance, 1949, became law in December. It provided for the registration of all existing and proposed factories and gave the Commissioner of Labour, with the consent of the Executive Council, power to make regulations for the safety, health and welfare of persons employed in workshops and factories.

449. During the year the labour branch intervened in three major disputes concerning the government as employer, and as a result of strike of workers in the largest Khartoum printing press, the labour branch initiated joint meetings between workers and management.

## CHAPTER XX — PROVINCES

### NORTHERN PROVINCE.

450. The year was happily free from the various disturbances which occurred in 1948. Sectarian rivalry led to incidents in Atbara and elsewhere, but there was no serious breach of the peace. Labour leaders concentrated for the moment on consolidating the position of their unions under the new legislation, and although fresh demands were presented by the railway workers there was much greater readiness to discuss them in a reasonable atmosphere rather than to try to enforce them by violent methods.

451. The local government bodies, which received their warrants and started work with a nominated membership in 1948, were reconstituted as a result of direct elections held in June, 1949. These elections went off smoothly and effectively. The councils themselves did good work. They dealt with a variety of subjects including several, such as the provision of agricultural credits and the establishment of local services (e.g. — water and electricity), which need careful investigation and guidance. Dr. Marshall's report of course aroused great interest and was discussed by all local government councils as well as by the province council.

452. The material condition of the people varied in different parts of the province, but everywhere the price of grain remained high. Famine threatened the nomads of Shendi district, who lost numbers of animals during the preceding three years' drought, and relief had to be given in the form of government grain, issued free or at a reduced price. This was supplemented by private contributions and by help from the Egyptian Government. Many families also from the Beja District of Kassala Province emigrated to the riverain towns, notably Atbara and Berber, and for them also relief was provided. The situation was eased by rains at the beginning of August, when the grazing west of the river greatly improved; but on the east bank again no rain fell and the grass remained brown and dry. Nomads moved towards the Butana and the upper Atbara River for grazing; but even by the end of the year it was apparent that grass and water were beginning to get short in those areas. The Wadi Hawad flooded well and a large area of grain was sown, but the failure of the September rains destroyed all hopes of a good harvest there. At the other end of the province the date crop failed in the Sukkot and Mahas areas (where this crop is the principal item in the local economy) and partial remissions of date tax were required. Otherwise, however, the riverain cultivators had a good average year. The river did not rise very high but the peak held up well into September and the islands and

seluka lands were well saturated. Seifi cultivation on the Merowe-Dongola reach was good and though the date crop there was also below average this was partly compensated by higher values. In the Merowe-Karima area, where the average annual rainfall over the previous 18 years had been 14 mm., there were extraordinary falls on 8th August, when the Karima gauge recorded 30 mm., and on the 23rd when 51 mm. fell in a few hours. The total for the month was 83.9 mm. and the highest ever recorded. Much damage was done to trees and houses by the rain and the accompanying high winds, and on 9th August the Wadi Abu Dom came down in spate for the first time since 1937. Only heroic efforts by the district staff prevented the water from invading Merowe town, and in Abu Dom village much damage was done. At Wadi Halfa too there was a most exceptional storm of rain near the airport on 10th May which caused Khor Musa to flow.

453. The continued high price of grain had its effects all over the province. Most spare cash was required to buy essential food, and as a result retail trade in other commodities was nearly at a standstill. In Shendi particularly, restrictions on export of pulses (the aftermath of the Palestine war) led to a drop in prices and consequent shortage of cash. Shopkeepers found themselves with large stocks of goods which they were unable to sell. In the animal markets prices were low during the first half of the year, but improved when the rains provided better grazing.

454. By February the preliminary survey, carried out by the Egyptian State Railways, was completed on both banks of the Nile between Halfa and Shellal for the proposed new railway to link up the Egyptian and Sudan systems. Surveys of the second cataract area were also made with a view to the possible building of a new dam by the Egyptian Government. A large number of Sudanese were repatriated from Egypt through Wadi Halfa during the year. Of the total of 2,763 about 1,000 were from Northern Province, 1,100 from the west and 430 from Khartoum. The total of repatriations in 1948 was 2,467 of which 1,819 were from Northern Province.

455. There was a marked improvement in general public security during 1949 as compared with 1948 and labour troubles were few. The establishment of the Legislative Assembly as a working body led to an easing of political tension and no cases of violence occurred. In other respects public security was normal. Good work by the police led to the capture in Berber District of a gang of train thieves who worked by boarding a train en route, throwing out goods from wagons, and then picking them up on a

taxi which followed the train. Five persons were sentenced to terms of imprisonment varying from one to five years. Another somewhat unusual case was the discovery of 7,775 grammes of hashish in the possession of an itinerant Shaigi at Atbara. He admitted purchasing it in the Manasir country. In Shendi District economic hardship led to a number of cases of theft, trespass, etc., and in general isolated crimes of violence throughout the province increased. The number of major courts rose from 11 in 1948 to 21 in 1949 — ten were cases of homicide (two accused were acquitted) and three of attempted homicide: three were for unnatural offences. There was no reason, however, to suppose that this increase was other than temporary.

456. The newly constituted local councils spent the year in organising themselves and settling down. After the elections in June at least half of the members on each new district council and four-fifths on each town council were directly elected, most of the remainder being town notables or important tribal representatives, precluded by the council warrants from standing for election. There was still a difficulty in finding suitable executive officers — Merowe and Shendi being exceptions — and secondment of officials to councils led, on occasions, to some inconvenience and confusion of functions. Council offices were also a problem.

457. Dr. Marshall's report on local government was one of the main topics of general interest during the year, and was discussed by all local councils and finally by the province council in October; various suggestions and comments made at these meetings were forwarded. An earlier meeting of the province council was also held at the end of March at Merowe. The council had been re-constituted to obtain better representation of local government bodies, and many subjects came up for discussion, ranging from public health and cotton growing to co-operative societies, farm boards and trade unions. The older local councils in Merowe and Dongola continued to be active, though Dongola was still in the anomalous position of depending on its vice-president for the executive enforcement of much of its policy. Each council resolved to set aside a sum of £E. 7,000' from its reserve fund for the purchase of a power-driven ferry, and they began jointly to consider a project for establishing a workshop at Debba to provide maintenance and repair facilities for private pump schemes on the reach. The town committees of Argo, Dongola and Karima did useful work. Atbara municipal council had, on the whole, a satisfactory year. Attendances at council and committee meetings were good and interest keen. Road improvements were carried out and a site cleared for a public garden. Revenue came in well but here

the council's record was marred by the misappropriation on the part of the accountant of £E. 412 from licence fees.

458. Legal work still continued to be heavy. Civil suits instituted during the year number 1,255 as against 1,032 in 1948 and an annual average of about 830 over the previous four years. On the criminal side there was an increase both in major and minor courts, the figures being 21 and 16 respectively compared with 11 and 7 in 1948. Criminal appeals were less, 126 as against 168 in 1948. Non-summary magistrates' cases numbered 163 as against 165 in 1948, and summary trials 268 as against 363 in 1948. Benches of Magistrates in Wadi Halfa, Atbara, Berber and Shendi saw 2,733 cases. The local courts of the province saw 2,779 criminal and 2,286 civil cases during the year, as against 3,522 and 2,291 respectively in 1948.

459. Province and local government revenue amounted to £E. 256,420 and expenditure to £E. 341,760. Direct taxes produced £E. 96,072 as against £E. 93,783 in 1948 and contributions to the central government by local government units amounted to £E. 52,406 as against £E. 51,272. In Shendi District again the indifferent rains and the poor prices realised for pulse crops led to a shortage of cash. The 1949 taxes from the nomads were remitted. In Wadi Halfa district the bad date crop in the southern areas necessitated the remission of 50 per cent of the date tax due from the Mahas people and of 33 1/3 per cent of that due from Sukkot; but in the northern gism date tax rose from £E. 4,248 to £E. 5,315 owing to the quinquennial census of date trees which disclosed an increase in number of about 25 per cent. Remittances arriving through the post office in Halfa District decreased from £E. 212,331 to £E. 167,418 (of which £E. 69,443 came from Egypt): on the Dongola reach the figure again rose from £E. 627,306 in 1948 to £E. 634,480 in 1949.

460. The higher price of dura again dominated the economic scene — it varied in general from 16 P.T. to 20 P.T. the ruba (about £E. 26 to £E. 32 per ton). Trade on the whole was far from brisk, and only Merowe-Dongola District had a prosperous year. In that area the date crop was only some 60 per cent of the 1948 figure but about 13,000 tons were exported as against 15,000 tons in 1948. The smaller crop kept prices high and at the end of the year Barakawi dates were fetching about £E. 30 a ton compared with about £E. 22 in 1948. Export of pulses from the reach totalled 4,225 tons or nearly double that of 1948: 784 tons of wheat were exported but the demand for maize was small. Export of dates to Egypt (the greater part from Halfa District) amounted

in 1949 to 4,242 tons, as against 8,466 tons in 1948 and 5,813 tons in 1947. Most of this was from the 1948 crop, which was exceptionally good, whereas that of 1949 was very poor. Abu Hamad date factory continued to produce cellophane-wrapped packets of soft dates at 2 P.T. per packet. In the 1948/49 season 42,327 packets were produced, compared with 29,560 in 1947/48 and 41,482 in 1946/47.

Animal prices were considerably lower at Ed Damer than in 1948 and numbers entered for sale at the market were fewer: in October (an average month) sheep prices were 118 P.T. a head as against 150 P.T. in 1948, and cattle were £E. 5.900 mms as against £E. 6.850 mms. In Shendi cattle prices dropped but sheep cost more than in 1948.

The new cement factory at Akkad, two miles south of Atbara, at last came into full production and by the end of the year was turning out some 115 tons of cement a day.

461. The crops produced in the province during 1949 were up to the average in most places. The Nile was late in rising, but held up well at its peak during the first half of September, which enabled the island and "seluka" lands to be well soaked. Sagias continued to recover from their disastrous losses in 1946 and in Merowe-Dongola District numbers rose to 5,113, as compared with the last pre-flood figure in 1946 of 5,541. In 1947, after the big flood, the number dropped to 3,821; the recovery has therefore been remarkable. In Berber District too the numbers of sagias again reached the pre-flood level of about 1,800 and the whole province has now 8,535 as against 9,060 in early 1946.

462. Pump schemes, too, showed a further increase. In Halfa District the first co-operative scheme in the district, at Tumbus, began to work with two 8-inch pumps in November, and by the end of the year two 12-inch pumps were being installed at Abri. In Merowe-Dongola the licenced areas of pump schemes increased by 10,000 feddans during the year.

463. An agricultural training centre at Borgeig, near Kerma, was opened in April. 24 pupils, who had completed their elementary schooling, were selected for a year's course in methods of agriculture (with special reference to local crops) and in animal husbandry. The pupils were all from private pump schemes and it was hoped that on their return home they would help to improve the general standard of agricultural knowledge and practice.

464. Efforts were made to induce the older agricultural co-operative societies on the Dongola reach to register under the Co-

operative Societies Ordinance, 1948, but without much success. The profit motive was still strong and the shareholders, in particular those living in Egypt, showed themselves unwilling to accept the principle of restricted dividends, an essential part of true co-operation. The total number of co-operative schemes approved in the Northern Province is 52, of which over 40 are actually working.

465. A full-scale agricultural show was held at Merowe in February and attracted some 3,000 spectators. Tractors, pumps and other agricultural machinery were shown by the Khartoum commercial firms and some tractors were actually sold on the spot to local cultivators. Exhibits were staged by the veterinary department, the pest control section, the pomological section and others, and there was a good show of local agricultural produce. Shows were also held at Bouga, where the ploughing competitions, as always, aroused great local interest, and at Wadi Halfa, where there were the usual excellent exhibits of flowers, vegetables, dates and local handcrafts.

466. All government pump schemes continued to operate successfully, and to form the backbone of the economic life of their areas. They are the centres of agricultural progress in the province and their educative value can hardly be over-estimated. Average crops per feddan on the schemes in Merowe-Dongola District were five ardebs of wheat, four ardebs of dura and 5.7 ardebs of beans. Discussions continued about the formation of a Northern Province pump schemes board to control all government schemes through management committees, but the precise financial and legal position of such a board was undecided.

467. The demand for private pump schemes continued, and in April a further allocation of water to cover existing and fore-seen commitments in the Northern, Blue Nile and Khartoum Provinces was approved by the Executive Council. As, however, new applications continued to arrive, a standstill order had to be imposed in the province in September. Economies and reductions cleared the way for the consideration of a number of new schemes. Private schemes (individual and co-operative) working at the end of the year numbered 198 (as against 176 in 1948) and 99 more were approved, a further 87 remaining under consideration. The appointment of a permanent pump licencing staff under a senior registrar relieved province, district and agricultural offices of a great deal of detailed clerical work.

468. The 1949 peak level of the river was slightly below that of 1948 at Shendi but a little above it at Merowe. But as the peak was maintained for much longer than in 1948 the basin area irrigated

was correspondingly higher — in the southern area some 28,000 feddans as against 21,000 in 1948, and in the northern area 30,000 as against 29,000. Argo basin was completely closed in 1949 as most of the area was required for pump schemes; the largest basin, Kerma, had just over 25,000 feddans flooded, as against 22,700 in 1948, 35,000 in 1947 and over 52,000 in the record flood of 1946.

469. Heavy rains fell in early August and a number of wadis came down in flood in Shendi and Berber Districts. Crops of dura were at once sown, especially in the basin of the Wadi Hawad, but unfortunately there were practically no late rains and only in the area sown in the very bed of the wadi were good crops produced. Elsewhere the crops dried up before they had a chance to mature.

470. The province headquarters of the pomology section were moved from Merowe to Shendi, and the old forage farm there was taken over for experimental pomology work. No further transfer of date shoots from northern areas for government pump schemes was undertaken, as it was not possible to give them adequate irrigation during the first few years after transplanting. But the propagation and distribution of citrus and mango trees continued and the pomology section concentrated on helping private pump scheme owners to plant up fruit gardens, and on laying out communal plots on government schemes. Trees provided from the section at Shendi during the year included 1,078 mangoes, 5,635 oranges and 1,886 grapefruit.

471. Locusts appeared briefly in Shendi District in June but did no serious harm. Dura stemborer continued to take its toll. Fruit trees at Shendi and also at Gadawab near Berber were attacked by a species of fruit fly which caused the nearly ripe fruit to decay and drop to the ground. Measures were taken to deal with it.

472. There was very little disease amongst livestock in the province during the year. Five outbreaks of cattle plague were dealt with on the Dongola reach, involving 834 head. 22 cattle died, 165 were serumised and 660 vaccinated. The biggest outbreak, at Kulud pump scheme, occurred amongst cattle whose owners had managed to evade the 1948 vaccination campaign and had not brought their animals to be immunised. Nearly 8,000 head were vaccinated against cattle plague not connected with outbreaks of the disease. Vaccination of all cattle coming to animal markets at Shendi, Damer, Tangassi Suk and Debba was carried out together with immunisation of all cattle on government pump schemes. There was still a certain number of cattle coming from Kordofan to the river which evaded the quarantine posts at Debba and Tangassi,



and several small outbreaks of rinderpest were traced to them. Arrivals of Kordofan cattle at Dongola and Argo were 1,623, of which only 1,060 passed through the Debba quarantine. Only one case of bovine pleuropneumonia occurred in the province.

473. Rabies was prevalent in the Shendi area — six cases were positively diagnosed (one camel, one ewe, three dogs and a cat) and there were other suspected cases. Numbers of dogs followed the nomad Arabs to the river and were a menace to the riverain villages. Steps were taken to deal with them by the use of guns and poison.

474. Livestock exports to Egypt through Wadi Halfa were 19,586 head of cattle (against 20,163 in 1948) and 38,228 sheep (against 31,544 in 1948). 4,550 camels were sent to Egypt by road from Ed Damer, as against 2,363 in 1948. 950 sheep from Shendi were exported to Jeddah via Port Sudan. 2,382 sheep and 1,191 cattle were imported into the province from elsewhere in the Sudan.

475. Work on town lands continued: the Berber deposited plan was finally passed by the provincial board of public health and submitted to the central town planning board for approval. In Atbara the new Dakhla layout was approved and plans were under discussion for a new suburb of the town south of the Atbara river and east of the railway. A deposited plan for Atbara cantonment area was also worked out. The building of schools according to the 10-year education programme continued all over the province. In the north of Halfa District rebuilding of new villages on a greatly improved plan was nearly completed, and the widespread destruction caused by the 1946 flood was almost entirely made good. Offices for the Wadi Halfa town and district councils were completed and form an impressive block of buildings; and new offices for the Merowe rural district council executive officer and accountant were built at Tangassi. In Atbara a new post office was completed in October, east of the railway line, and a new water tower, an impressive reinforced concrete erection to hold 100,000 gallons, was finished by the end of the year. Work on the £E. 19,000 protection embankments along the Nile and the Atbara was also completed and even a flood like that of 1946 would now not endanger the town.

476. A motor road from the west bank of the Nile opposite the cement factory running direct across the loop of the river to Tangassi and then to Merowe was cleared and brought into use in September. The distance from river to river is about 170 miles and the journey takes some eight hours, the crossing at the eastern end being made by the cement works motor-propelled ferry. The

motor road from Ganetti, on the southern bend of the Nile downstream of Merowe, direct to Omdurman, was extensively used during the year by convoys of lorries carrying goods and passengers. It is estimated that some 500 tons of dates and 150 tons of hides are exported annually from the Dongola reach by this route and about 500 passengers travel by it in both directions every month. Work began in November on the carriageways to be built on either side of the Atbara river railway bridge. Most of the steelwork on the bridge itself had been erected by the end of the year, but the building of the ramps and approach roads was still incomplete.

477. A new landing ground at Merowe was completed in February and Sudan Airways began a weekly service between Khartoum, Merowe, Dongola and Wadi Halfa in June. Though unfortunately the local people did not make full use of it, yet for carrying mails and small articles such as pump spare parts, from Khartoum to Dongola, the service proved of great value. Wadi Halfa airport provided a 24-hour service for aircraft, though the number of landings there has decreased. Civil aircraft landings numbered 736 as against 1,012 in 1948 and service aircraft landings 514 as against 535.

478. The health of the province was on the whole good. There were no serious epidemics. In Merowe-Dongola District recorded cases of malaria numbered 3,747 as against 5,410 in 1948. The problem of bilharzia still remained to be solved. In Shendi District there were a few cases of chicken pox, and two cases of leprosy. Atbara had a small epidemic of malaria at the end of the year, the source of infection being Fadlab pump scheme.

479. There was no lessening in the demand for the provision of more schools at all levels, from sub-grade to intermediate. Progress continued in accordance with the 10-year plan in all districts. Local government sponsored sub-grade boys' schools numbered 48 (including four run by the Sudan Railways in Atbara and shortly to be taken over by the municipality) attended by nearly 5,500 boys. Three of these have boarding houses, accommodating altogether about 100 boarders. There are also four privately run sub-grade boys' schools with 662 pupils and a private girls' sub-grade school with 90 pupils. Sub-grade masters were again given refresher courses at three centres, Halfa, Merowe and Shendi, for six weeks during the summer holidays. Dongola and Merowe rural district councils shared the services of a local inspector of sub-grade schools in their joint area, and Berber and Shendi district councils proposed to appoint a retired headmaster for similar work in their area in 1950. In addition to these sub-grade schools there were also 75

subsidised village schools, teaching religion and the three R's. Two new boys' elementary schools were opened, at Argine and at Saras in Halfa District, and two girls' elementary schools in the same district, at Abri and Delgo, began working in September. The total number of boys' elementary schools was 33 with over 6,000 pupils and of girls' elementary schools 20 with 1,870 pupils.

480. In Wadi Halfa town the Coptic school was enlarged and upgraded to the Egyptian primary school standard, with some 300 pupils. In Atbara the Roman Catholic and American Missions continued to provide education at all levels to nearly 1,000 children of both sexes and all nationalities. The Roman Catholic Mission school contained 420 boys (of whom 296 were Sudanese) and 265 girls (over half of whom were Egyptian). The American Mission catered mainly for the Copts, but also included 37 Sudanese girls and 11 Sudanese boys. There was not, unfortunately, the same support given to girls' education in out-districts as to boys'. The top two classes in girls' schools were always too low in numbers, and parents took little interest in their daughters' completing the school course.

481. A new government intermediate school was opened, temporarily housed at Shendi, but to be transferred to Merowe. Four other government intermediate schools provided education for 634 boys (including 257 boarders), and five non-government schools took 778 boys. Goled ahlia intermediate school was being subsidised by the central government to enable its boarding fees to be kept down to the level of those of a government intermediate school, and it also had a headmaster seconded from the Ministry of Education. The school had a successful year and 19 fourth year boys passed into secondary schools. Discipline in the schools generally improved, though there is still a lamentable tendency on the part of the boys to "strike" if they were not pleased with some action on the part of the school authorities. The repercussions on the schools of political unrest, so marked in 1948, were fortunately not one of the problems which had to be faced in 1949.

482. The most important aspect of the labour situation was the final acceptance of the new trade union legislation by workers' organisations, and the steady progress towards official recognition of such bodies under the ordinance.

#### KHARTOUM PROVINCE.

483. In general the year was one of substantial progress on all fronts. Conditions were once again hard for some sections of the community but on the whole they were cheerfully and sensibly borne. The comparative absence of political tension and its attendant threat

to public tranquillity enabled those engaged on administration in both the central and local government spheres to concentrate, in marked contrast to the three preceding years, on their primary task of planning and working for the civic and material advancement of the people.

484. The price of grain remained high causing some hardship and a certain amount of labour unrest. The nascent trade unions, however, though just beginning to feel their power and finding a ready-made opportunity in economic difficulty, showed on the whole a sense of restraint. In the rural district the effects of high prices were accentuated by the complete failure of rain grown dura in the Batahin and Gereyat areas. Additional pressure was put on the inadequate grazing areas by an invasion of nomads with their herds from Northern Province. Numbers of animals died and there was considerable hardship. Rumours of lavish relief measures in the eastern Sudan soon reached the ears of the Khartoum nomads who were not slow to demand their share. Some 400 tons of grain were issued, mostly at cost plus cost of transport. This did much to relieve the more genuine distress, but it soon became evident that such assistance had a pauperising effect on certain tribal elements and the Gereyat in particular. Conditions improved in the Wadi Mugaddam area in August after heavy rain had fallen, though it was not enough to flood the Gereyat cultivation areas. On the right bank the Ahamda and Batahin came down to the riverain areas in greater number than usual in search of grazing on the pump schemes for their herds. A large mixed encampment of nomads consisting of Gereyat, Kababish, Gummoyia and Hassania settled on the edge of Omdurman town and were swiftly being pauperised by the misdirected generosity of political parties and others until they were moved back some distance from the town whence they could still profit from casual labour in the urban area.

485. The three municipal councils had another busy year, occupied for the most part with finance and town planning, but distinguished by debates on the report by Dr. Marshall on the development of local government in the Sudan. The councils expressed general agreement with the conclusions of the report. They evinced a natural desire to be free of the trammels of central control in order to run their own affairs and to this end they endorsed the recommendations for the creation of a separate local government service, the use of Arabic as the official language, the allocation of elementary education to the responsibility of councils, the abolition of house tax and the substitution of a general property tax to be expressed as a percentage of rateable value and payable only to councils.

486. The Khartoum council was much occupied with the development of the new areas in the Mogren and south of the railway line. A new council chamber was built at a cost of £E. 4,000 and opened in August. The rates were raised in the second half of the year with the aim of increasing revenue by £E. 10,000. A determined effort undertaken in co-operation with the district authorities to enforce municipal regulations achieved a considerable improvement in the standard of tidiness and sanitary efficiency. The Khartoum municipal council was the first local authority to take advantage of the new system of loans from the central government and a proposal for a twelve-year loan to finance the building of a market in Khartoum South was submitted.

487. In Omdurman much unobtrusive work was done in the sphere of town-planning. Schemes were initiated for several constructional projects such as the building of municipal meat and vegetable shops in the Banat market, a market for the auctioning of cattle, shops for leasing to craftsmen in the light industrial area and the provision of six health centres to be built with the aid of funds set aside from the Abdel Moneim estate. A proposal for converting the wood market at the southern entrance of the town into a garden was approved and planning of the project for a civic centre reached an advanced stage.

488. In Khartoum North an important development took place when the municipal council for the first time elected its president from among its own members and thus came into line with its two sister councils. The most interesting of the works taken in hand by the council was the construction of the new civic centre.

489. The rural district council developed a stage further with the setting up of separate committees for finance, general purposes, health and education and with the separation of its clerical work from that of the Khartoum North municipal council. A practical and popular innovation was introduced whereby the meetings of the council were held at various rural centres in turn, thus advertising the work of the council to the people and at the same time bringing home their responsibilities to the councillors themselves. The most important item considered by the council was the poor state of tax collection after the third bad rain season in succession. The province nomads had suffered severe losses and tribal responsibility had been weakened by the pauperising effect of famine relief. Alternative sources of revenue were considered and land tax on small pump schemes was doubled.

490. The rural district council did not altogether share the municipalities' approval of Dr. Marshall's report. Members felt

that more caution should be shown. They deprecated the adoption of direct elections in the rural areas for the present and also drew attention to the continuing value of district commissioners and nazirs which they felt had received scant recognition in the report.

491. After the tension and disorders of 1948 the comparative peace of 1949 came as a welcome relief to the police who were able not only to devote themselves to their primary duties of prevention and detection of crime but also to carry out a programme of re-organisation and training. One result of this was the satisfactory decrease in offences against property in Khartoum and house-breaking in Omdurman; and this in spite of the stimulus to the thief and the burglar provided by the high cost of living.

492. The year, however, was not entirely free from political tension and the police, especially in Omdurman, were required to remain constantly on the alert. The increasing activities of youth organisations gave cause for particular concern. Parade formations had to be dispersed on one occasion in June, and in November an imminent clash between Umma party supporters and an illegal demonstration emanating from the Sudan Schools Club in Omdurman was only averted by the timely intervention of the police.

493. In January a four-day strike of taxi drivers in protest against payment of traders' licences was followed by a partial two-day strike in May on the same grounds. On 15th March there was a general strike of workers in Khartoum, Khartoum North and Omdurman in opposition to the Trade Unions Ordinance. All three passed off without incident apart from a demonstration by boys of the Omdurman Technical School.

494. Students of the secondary and Maahad schools observed a twenty-four hour strike in April in support of their demand to be allowed to join a students' federation. The schools were closed early on this account and the resulting influx of students caused the Omdurman police some trouble in early May. The secondary schools went on strike again for the same cause in September and staged three demonstrations which resulted in the prosecution and conviction of their leaders. The strike received the support neither of the Gordon Memorial College nor of the general public and soon faded out.

495. There was a total increase of 29 per cent in reported offences in the Khartoum police district but offences against property decreased by 27 per cent. The general increase was primarily due to greater activity by the police in reporting offences against

municipal and traffic regulations and in rounding up vagrants. Much time was wasted by complaints of petty 'assaults' not being supported in court by the appearance of the complainant. Of 2,529 cases reported 71 per cent were disposed of by compounding, by the complainants' failure to appear or by lack of evidence. In Omdurman there was a total increase of 20 per cent in reported offences for the same reasons as in Khartoum. The annual figures for the various categories of crime show little variation from 1948. A noticeable feature in cases of murder and homicide was that more than half were committed under the influence of liquor though cases of ordinary drunkenness decreased. The steady rise in housebreaking which had been noticeable during the previous few years was satisfactorily checked but there was a small increase in thefts which was probably due to the influx of outside labour resulting from the boom in the building trade.

496. Further attention was given to the problem of juvenile delinquency, though the courts continued to be faced with the problem of the juvenile offender who has not qualified for admission to the reformatory but whose social background gives him every encouragement to crime. The probation officer dealt with 150 cases of which 106 were comparatively serious, the majority being thefts.

497. Although there was no serious strike comparable to the three weeks railway strike of the previous year, was only natural that the promulgation of an entirely new and unfamiliar corpus of labour legislation should bring the workers and their problems more to the forefront throughout the year. The opposition of the Workers Affairs Association to the Trade Unions Ordinance was demonstrated in March by a one-day token strike which was remarkably effective in the Khartoum area. A further and longer protest strike was avoided by the Association accepting the ordinance subject to certain minor modifications. Thereafter there was marked enthusiasm to form unions and at the end of the year four of the five unions which had already received certificates of registration had set up their headquarters in the province and another 19 local groups had either applied for registration or were preparing to do so. The longest strike of the year was staged by the taxi drivers who came out for four days in January and again for two days in May in protest against the collection of a trader's licence (costing £E. 4.) from the owners of taxis in addition to the traffic licence fees collected on each vehicle. Printers, government telegraph messengers and dairy workers also struck for periods varying from one to three days.

498. Though the supply of labour was adequate in the towns throughout the year, continued building activity ensured that none

but the work-shy needed to find himself unemployed. Wages were lowest in Omdurman and highest in Khartoum North, and overall were higher than in 1948. In the rural area the high daily rates, due largely to the disinclination of villagers to hire their services, encouraged pump owners to farm by tenancy agreements rather than by direct labour. The labour supply was adequate for seasonal demands at seed time and harvest, but at high rates.

499. January and February, November and December were colder than normal. Apart from one very warm spell when the maximum rose to 113.4 the cool weather was unusually prolonged into April. For the third year in succession there was no adequate rain within the province borders though there were freak showers in May and October. The season of dust storms thus started earlier and lasted later than usual and was correspondingly unpleasant.

500. Twenty-six pump schemes were licensed in 1949 and the total working by the end of the year was 134. This included 47 government pumps. The cultivated area under pump irrigation was nearly doubled. The most important of the new schemes were the Kodab Agricultural Co-operative Society with an 8-inch pump, the Tuti Island Development Company with a 12-inch pump and the Gereif East Agricultural Company with an 8-inch pump. The only limiting factor to an even more rapid increase in the number of pump schemes was the shortage of Nile water. Although the province took up all the water economised by a close overhaul of existing schemes, there was still insufficient water available to meet the demand. All private development had therefore to be halted and only the requirements of co-operative livelihood schemes could be considered.

501. The co-operative idea has caught the imagination and interest of the countryman to a remarkable degree. The examples of Wad Ramli and Kodab led to an almost embarrassing spate of applications during the year, and by the end of it a third society had been formed at Wawissi and was ready to start operations while a further eight societies were in various stages of formation.

502. Cotton planted on the larger schemes was heavily infested by jassid and other pests and even under the high ruling prices did little more than cover the expense of cultivation. Wheat proved the most valuable cash crop with the price rising to over £E. 40 per ton. Over 2,000 feddans of dura and millet were planted as a *damira* crop and produced an additional supply of grain which undoubtedly helped the rural area to tide over the more difficult months. The only area where rain-grown grain reached maturity in significant quantity was in the Gummoyia country where the



tribesmen harvested 1,200 ardebs from their khor-flooded hinterland. Seluka planting produced an average yield though larger areas than usual were sown with safra millet on the White Nile flats. In the previous season chick peas had been the main crop.

503. A Rural Fellah Society was formed with the object of furthering and protecting the interests of the peasant farmer and made an unostentatious but promising start. The ten feddans of demonstration garden on the Wad Ramli co-operative farm made excellent progress. The opportunity offered to growers of citrus and mango fruit within range of the large markets of the Khartoum area has led to a much widened interest in this type of farming throughout the province. Bananas were also more extensively cultivated and paid good dividends.

504. In spite of careful watering and protection the village mesquite plantations were completely defeated by unsuitable soil conditions. The mesquite belt protecting Khartoum North received considerable attention and is fairly effective but here again the soil is not sufficiently sandy. Certain areas of the Gummoyia forest were cut; but this sunt forest of over 1,000 feddans remains unpopular with the local people and is ravaged by goats.

505. The Khartoum Horticultural Society held a successful flower and vegetable show in February. The gardens section not only maintained the large number of gardens on its charge but also created 20 gardens for new government houses in the Mogren area. Part of a comprehensive plan for the planting of trees in Khartoum South was carried out during the summer. In Khartoum North a number of trees were planted along the newly aligned Kassala road and in the recently developed residential areas.

506. There were again no serious outbreaks of contagious diseases during the year. One hundred and nine cases of acute infectious diseases were admitted to the Hamad el Nil isolation hospital. Of 19 cases of cerebrospinal meningitis admitted to hospital 11 died. Three cases of relapsing fever all had their origin in the Nuba Mountains. One case of smallpox was reported at Eilaoun in Blue Nile Province, the source of infection being probably the Hejaz. 8,000 persons were vaccinated and no further cases were reported.

507. Some 5,000 cases of dysentery were treated, of which 520 were admitted to hospital, and five died. Cases of typhoid were higher than expected. Intensive measures to combat fly breeding were undertaken in Omdurman where a number of pit latrines were found to be defective. Experiments were made in testing the efficacy of Gammexane in this connection.

508. The construction of a new and commodious two-storeyed hospital in Khartoum North was started in February and the shell was completed by the end of the year. In the new deims of Khartoum a welfare centre which was built near the existing dispensary proved a most welcome addition to the hitherto cramped accommodation. The premises of the welfare clinic in Omdurman were condemned on structural grounds and the staff was transferred to temporary quarters in the Midwives' Training School.

509. Health visitors supervised the work of the various ante-natal, maternity and child welfare clinics. Midwives attached to clinics carried out both general home visiting and special tuberculosis visiting and gave health talks in girls' schools. The idea that even a healthy child needs supervision is slow to grow and the child welfare clinics still tend to be regarded as institutions for the supply of free milk and the treatment of minor ailments.

510. Health in the prisons was generally satisfactory. In December all prisoners, warders and their families at the central prison were inoculated against an outbreak of typhoid in Kober village.

511. 111 cases of pulmonary and 17 cases of non-pulmonary tuberculosis were admitted to the Hamad el Nil isolation hospital. There were 50 deaths from pulmonary and 7 from non-pulmonary. Public interest in the tuberculosis service was most disappointing. Attendance in Khartoum was so poor that the dispensary had to be closed.

512. From September to December all trains from the south were stopped thirteen kilometres from Khartoum and sprayed with insecticide. There is no doubt that this measure does much to prevent mosquitoes from invading Khartoum. The Forestry Department thinned and cleared large areas of the Sunt Forest and thus greatly facilitated the control of mosquito breeding. Experimental methods of dealing with the gray "nimitti" (chironomidae) were unsuccessful. This plague has rapidly developed from a mere nuisance into a positive hindrance to work, particularly in the rural district along the main Nile. The black biting "nimitti" (*simulium griseicollis*) also made an unwelcome appearance in many areas.

513. There was slight but welcome diminution in the tendency to political activity among students at all levels. A strike was staged in the Gordon Memorial College in April but the authorities made it clear that they would not tolerate indiscipline and closed the College a week early. This action was widely supported and undoubtedly had a salutary effect on the students. A proposal for another strike in September was defeated.

514. The Unity High School for Girls celebrated its twenty first birthday in December by holding a successful fete and by other forms of entertainment designed to swell the school building fund.

515. Trouble broke out in the Wadi Seidna secondary school after the refusal of the Minister of Education to allow pupils at this level of education to join a projected students' union. The boys demonstrated and the school was closed a fortnight early. Education in the Coptic schools of Khartoum North was gravely interrupted by disputes within the Coptic community. Since only 10 per cent of the pupils are Copts the consequent dislocation was serious, but a settlement was eventually reached.

516. New elementary schools were completed and occupied during the year for boys at Geili, Kalakla, Gereif East and Halfayet el Muluk, and one for girls also at Halfayet el Muluk. Work began on the building of two more girls' schools in the third class area in Khartoum South and in the New Deims. A suitable site was reserved for another boys' in Khartoum North.

517. Inspection of draft animals continued and there was a steady improvement in their condition in spite of the reluctance of many owners to produce their animals at the right time and place. The Veterinary Inspector toured the western bank of the Nile during the first half of the year and discussed the possibility of mass vaccination against cattle plague. The rural district council approved this in principle but shortage of vaccine prevented the plan from being carried out. There were three outbreaks in the province during the year during which 174 cattle were serumised and 10 died. Immunisation was also carried out on 246 cattle, and 1,340 doses of vaccine were otherwise issued for use. The only positive case of rabies which came to light in the province was in a donkey.

518. The Zoo continued to provide one of Khartoum's most popular amenities throughout 1949. Two young white rhinoceroses arrived in October and were subsequently sold to the Antwerp Zoo. The local government authorities concerned approved a proposal for the establishment of a bird sanctuary between the Mogren Point and Gordon's Tree, including the area of the Sunt Forest and Umm Shugeira Island. In February the Game Warden visited Sabaloka area to observe the Barbary Sheep which were rapidly increasing in numbers and causing damage to cultivation. The nest of a rare Eagle Owl was found in a crevice in one of the hills north west of Omdurman in February and was kept under observation during the following month. Two of the young hatched out but were not seen later and it is feared that they came to an untimely end.

519. The important decision taken during the year that an additional premium could be charged at auctions of government land for the installation of essential services such as roads and drains ensured that new areas would in future have funds for development ready provided. It was also agreed that premia obtained in auctions since 1948 should be credited to a town development fund. A new tarmac road linking the Wad Medani road with Newbold Street through Khartoum South was built during the summer. In Omdurman little work could be done on the earth roads until the arrival of an "autopatrol" scraper towards the end of the year. Market roads were widened and resurfaced to provide drainage and existing main tarmac roads were widened to take the new buses. In Khartoum North a stretch of the new double carriageway road into the town was installed. The new alignment of the Kassala road was marked out and graded and mahogany trees planted alongside. A long stretch of the Shambat ferry road was macadamised and the remainder graded. The main Sharia el Tramway was widened to take the new buses. Normal maintenance work was done on the rural district roads.

520. The new fleet of twenty buses of the Sudan Light & Power Company proved most popular. Fifteen of them were operated to full capacity and three were kept in reserve. It was decided that the remaining two should be put into operation over the Burri bus route at the end of the year.

521. In Khartoum a bricked drain was constructed along 47th Avenue and an embankment south of the new deims as a protection from rain flooding. Piped water was extended to the new building area in the deims but this work was impeded by old pits illegally dug in the parts developed previously. In Omdurman several covered drains were built in the main market area. In Khartoum North piped water was extended to the industrial area and Kober village. Plans for the supply of water to gardens in the residential area and public spaces were also well advanced. In the rural district the proposed dam in the Jebel Fururi area in the Ahamda country north-east of Geili station was surveyed and found practicable. Its effect will be to open up a large grazing area. Funds were released for the digging of three hafirs, one in the Batahin country and two on the west bank of the Nile.

522. Towards the end of the year the rapid growth of the town areas, combined with the non-arrival of the new generating plant ordered long ago, caused difficulties in the supply of electricity. The load during the peak period rose to such an extent that new connections had to be refused. An appeal for economy met with

satisfactory response and the load quickly dropped, but by the end of the year it was still impossible to allow new connections.

523. Building continued on a large scale in the towns. In Khartoum itself the premises of the Ottoman Bank were built in six months, and the impressive new building of the National Bank of Egypt neared completion. The Public Works Department built a number of houses in the old residential area and in the new Mogren extension area. South of the railway line building was stimulated by the recovery of 51 plots owing to the failure of the tenants to fulfil their building obligations. Measures were taken to speed the removal of workshops from the centre of the city to the light industrial area and to prevent the sub-division of plots which threatened to convert the latter into yet another market area. In Omdurman private building continued in the Mulazimin and Hay el Arda quarters. Many good houses were built, but a large proportion of those in the Mulazimin quarter remained unlet. New meat and vegetable shops were built in the Banat market and a surrounding wall for the Abu Rof wood site. The completed Police Central Station was opened in October. In Khartoum North also many government and private buildings were erected and 23 factories and workshops went up in the industrial area. The main mosque and the hospital were nearly completed. A large pilgrim camp was built and was occupied for the period of the pilgrimage.

524. Government lands sold by public auction fetched much higher prices especially in Khartoum South. A number of plots auctioned in 1946 were re-taken through failure to comply with the building requirements and it is instructive to note that five first class plots sold for £E. 208 in 1946 fetched £E. 533 on resale in 1949 and 38 second class plots sold for £E. 578 in 1946 fetched £E. 1,399 on resale in 1949. The increase in the value of land in the new development areas of Khartoum was remarkable even during the course of the year. The average auction price in the light industrial area for example doubled between July and November, and the addition of a premium to cover the cost of essential services did not reduce the insistent demand.

525. The town planning authorities were kept busy throughout the year in preparing and approving the plans for new extensions, but the most important work undertaken was the first phase of the removal and resettlement of the vast area known as the old deims of Khartoum. These crowded quarters, consisting of some 5,000 undersized tenements built at the turn of the century to house the workers who rebuilt Khartoum, had for some time been under sentence of demolition partly on public health grounds and partly

because they lay athwart the line of expansion southwards of the city proper. The first step was the appointment in March of a deims resettlement officer whose initial task was to carry out a social survey of the first three deims scheduled for removal. The inhabitants were divided into various categories according to such criteria as length of occupation and 'ownership' of plots. It was decided to allot plots of 200 square metres in the new deims to all 'owner-occupiers' and also to all 'tenants' who had been residing in the old deims for the previous ten years provided they had their families with them and had permanent work in Khartoum. Special arrangements were made for those who could not afford to build elsewhere and for other deserving cases. Demolition of the old houses began in June and increased in intensity in each succeeding month. By the end of the year the whole Deim Salman was resettled and most of the Deims Gashasha and Telegraph. A total of 1,057 houses had been demolished leaving only 103 to be dealt with in January, 1950. Five hundred and eight plots were allotted in the new deims in September to residents of these three old deims. Six standard house plans were produced by the municipal engineer and the plot boundaries pegged out on the ground by the surveys department. Each tenant then chose the plan he preferred and on payment of fees for the plan and the survey, a total of 35 P.T., was allowed to proceed with building. A considerable number of houses had been finished by the end of 1949 and all residents had moved by mid-January, 1950.

526. The welcome reappearance of goods from abroad which had begun in 1948 continued throughout 1949 and traders began to realise with regret that a buyer's market had set in. Cloth merchants in particular found that the removal of export taxes in Egypt and India allowed the local market to be flooded with goods cheaper than those already in stock. The decontrol of greys in April was also welcomed by the general public. The high prices of local produce however meant that money was too scarce for the consumers to derive much advantage from the overstocked shops and trade seemed to enter a period of stagnation. By contrast, the general state of the cattle, hides and skins trade was an improvement on that of 1948. Again more sheep and cattle were sold in the Omdurman market than in the previous year, thus maintaining the characteristic tendency of the past five years. Prices also rose in the Omdurman market, and the average price of a sheep was higher by 105 m/ms., and of a bull by £E. 1.250 m/ms., than in 1948. A new development at the end of the year was the export of sheep to Jedá. Though good for trade this had the unfortunate local effect of raising the price of mutton by P.T. 2 an oke. The check on high meat

prices which had been achieved in 1948 by the allotment of stalls to selected butchers wove off in 1949 and prices reached a peak in July of P.T. 12 an oke for beef and P.T. 20 an oke for mutton. The enforcement of an order that every butcher must display his prices and not sell above them may well have helped to bring prices down by several piastres in the following month.

527. In an attempt to correct the high prices for vegetables charged by the middlemen and the low price paid by them to the producers, the municipal authorities tried an experiment of sale by auction, but had to abandon it partly because of its expected unpopularity with the middlemen was surprisingly shared by the producers and partly because it failed to have the desired effect on prices. The high price of grain continued throughout the year and reached its peak in December when the cheapest dura was fetching P.T. 16 a rubaa and the more expensive types were being sold for as much as P.T. 20. The price per rubaa never dropped below P.T. 12 and there can be little doubt that the hardship which undoubtedly existed in poorer households was attributable to the sustained high price of grain. The government however did not repeat the attempt to peg prices and so risk a dislocation of the normal trade channels. The justification of this policy was evidenced by the fact that there was never any shortage of supply.

528. Province revenue at the end of the year totalled £E. 77,676 which was a shortfall of £E. 6,266 on the 1949 budget estimates and £E. 10,234 on the 1948 outturn. The deficit was due to arrears of collection by the municipal authorities of house tax and hikir amounting to over £E. 6,000 and to non-payment of over £E. 3,000 contribution by the rural district council, but was offset to the extent of £E. 4,000, being increased revenue from motor vehicle licences. The £E. 10,000 drop on the overall outturn compared with the 1948 figures was accounted for by the payment into the central accounts in 1949 of premia from land auctions which had previously been credited to the province. Province expenditure on the other hand reached a new record of £E. 242,000. This figure was £E. 5,556 less than the budget estimates, but £E. 28,879 more than the total expenditure in 1948. Revotes transferred to the 1950 budget accounted for this under-expenditure and an increase in salaries and allowances generally for high budget estimate.

529. The excess of expenditure over revenue at the end of the year was £E. 164,324. This was only £E. 667 more than the budget estimate but the difference promised to be greater on the final closure of the 1949 accounts.

530. The total revenue collected by the three municipalities of the province in 1949 amounted to £E. 219,050, or £E. 1,260 less than the budget estimates, but £E. 43,814 more than was realised in 1948. This large increase was due largely to increased fees for traders' licences and licences issued under municipality regulations. Expenditure totalled £E. 197,835 which was £E. 1,586 less than the budget estimate. The balance of revenue over expenditure was £E. 21,215 compared with £E. 10,131 in 1948 and £E. 15,229 in 1947. Expenditure totalling £E. 42,664 was approved against the various reserve funds of the municipalities leaving a total balance of unallotted reserves amounting to £E. 53,265.

531. The rural district council budgeted for a revenue of £E. 24,407, a surplus of £E. 513 and a contribution to central government of £E. 8,491. The third bad rain year in succession however had a disastrous effect on the herds of the district and as a result of the arrears in collection of herd tax there was a shortage of £E. 5,267 on the estimated revenue, compared with arrears amounting to £E. 9,666 at the end of 1948. On the expenditure side figures showed an economy of £E. 6,244, due mainly to the failure of the council to pay in full the contribution to the central government and also to non-payment of remuneration for tax collections. The council's unallotted reserve stood at the end of the year at £E. 3,684.

#### BLUE NILE PROVINCE.

532. Frontier relations with Ethiopia improved considerably and visits between the Assosa (Ethiopia) and the Fung (Sudan) authorities were exchanged in December; friendly agreement was reached on all matters discussed. Internal security and communications improved in the Beni Shangul area and two new Ethiopian customs posts were set up near Kurmuk and Geissan, to the latter of which the Roseires customs post was moved experimentally in November.

533. The northern part of the province presented an economic paradox such as can rarely have been paralleled. The Gezira area, in spite of a diminished crop, produced even greater profits for the cultivator than in 1948, but just across the river in Rufa'a District famine measures were in progress; between June and October, 1,500 tons of grain were issued at a subsidised price, and £E. 2,500 worth of seed grain was underwritten by the government, at a total cost of about £E. 15,000; in addition some £E. 8,000 of government revenue was foregone in the form of herd tax. Grain prices remained high throughout the year, but the expected rise to P.T. 50 a keila did not occur and the price curve flattened out at about P.T. 38 during the rains. This was very close to the world price



and seemed to show that prices were adjusting themselves to external conditions.

534. Taking the province as a whole, conditions throughout the year were good and money was plentiful. The 1949 rains, however, were disappointing almost everywhere except in the southern Fung. This led to local shortages of grain and grazing in Rufa'a District, where conditions were bad for the third successive year, and in the north west of Dueim District. Elsewhere the people were likely to be self-supporting in grain, and in the Gezira well off, as the irrigated grain crop was good.

535. At the end of the year Gezira cultivators were reported to be buying up grain from outside the irrigated area and an indication of the amount of money loose in the Gezira was given when, in August, the premiums offered for eight flour mill sites amounted to £E. 135,000. In the towns conditions were difficult owing to the high cost of grain and other essentials. Introduction of assimilated scales did something to help lower paid government servants and dura allowances helped an even wider field, but the classified official who had to find his own housing found difficulty.

536. Politically the year was quiet, the only disturbing feature being a noticeable increase in the activities of youth movements. In Singa and Dueim District guarantees had to be taken for keeping the peace and activity in those areas decreased.

537. There was a local disturbance at Abu Guta by Husseinat who tried to use the death of Sayed el Hag Omer Habani as an opportunity to assert Husseinat independence. Even so, they were unable to agree on a leader and a Hassani wakil was appointed. The question of which District should administer the new north-west extension of the Gezira scheme caused some local excitement. Amicable settlement was reached, and a boundary defined, at a meeting in November. Payment of the second and final instalment of compensation for the Jebel Aulia dam proceeded throughout the year. Payments averaged just under £E. 1. per person. Exaggerated reports about the amount of Nile water available, or likely to be made so, augmented the natural pressure of the White Nile inhabitants for pump schemes, and caused much extra work to the administrative staff and disappointment to the local people.

538. In the Gezira area an important step towards the independence of local government was taken by the appointment of full-time executive officers to all five councils, and the collection of a nucleus clerical staff. Sites for council buildings were selected at Hosh, Medina, Messellemia, Meheriba and Kamlin. This marked an important step in the separation of local governments from the

district offices, which had become urgent owing to the necessity of getting local governments into their stride before the social development side of the new Gezira Board should become active. Still, it was apparant that, with one exception, there was no local person in the area capable of satisfactorily conducting a council meeting. Executive officers had not yet sufficient training to carry their councils along.

539. In Rufa'a sub-District the Shukria administration went to the polls for the first time and elected their own warranted council. In Dueim District the implications of Dr. Marshall's report as regards the place of native authorities were regarded with some apprehension. The Kosti town council was finally established by warrant after elections in May. The warranted Baggara rural council should hold elections early in 1950. In Sennar a rural council covering the whole district was appointed, and the first elections were held. In the Fung arrangements went forward for the formation of two provisional local government authorities for the Fung gism, and were greatly helped by the presence of the Mek's second son who was specially released from the Sudan Defence Force. The Wad Medani town council had a year of progress; mechanisation of the public health service was completed and the council increased its revenue from £E. 26,000 to £E. 39,000. The latter step was taken in the face of considerable local opposition and showed the extent of the council's authority. An alms house was opened, provision was made in 1950 for a probation officer and the council borrowed £E. 3,500 for the building of a football stadium in Medani town.

540. The tenants' representative body met five times and discussed a well-sinking programme and recommended grants for the Gezira intermediate school boarding house and the Medani ahlia school. The question whether the press should be admitted to their meetings was also discussed but no final decision was taken. Football in the Gezira area received considerable impetus from a meeting of interested parties in June, and the Medani town council decided to build a stadium. The co-operative movement progressed slowly, but two co-operative officers were appointed towards the end of the year, one for the Fung and one for the Gezira area. The work of the Legislative Assembly undoubtedly impressed members from the province and they returned to their districts with enhanced political and administrative sense. In the towns the general impression of the Assembly's work was favourable.

541. In general the state of public security throughout the province was good. In May the Husseinat tribe at Abu Guta thought that on the death of Sayed el Hag Omer Habani they might

assert their independence and made unruly demonstrations. In Rufa'a a crowd of 1,000 tried to lynch a Fellata conjurer on the ground that he was bewitching the rain. He was saved through the courage of his landlord. In December a fight, in which 30 people were injured, occurred near Turabi, during a meeting for the election of representatives to the electoral college of the tenants' representative body; an old feud was the cause.

542. Throughout the year the police showed their usual patience and endurance particularly in handling the frequent processions of youths in the towns. Outstanding performances were the tracking of an alleged killer for 60 miles on both sides of the river near Hassaheissa, and the tracking and arrest of camel thieves from Tabat to Jebel Dud, 110 miles away.

543. Preventable crime remained more or less steady; but serious offences against the person increased again. Homicides decreased. The chief statistical feature, however, was the continued steady rise in traffic accidents, which began to assume serious proportions.

544. Court work continued to be heavy and there was a noticeable increase over 1948 in the number of cases handled by the town benches of Wad Medani and Kosti. In the Gezira area offences against the human body increased, other types of crime remaining about the same. The number of prisoners in the province showed an increase. One hundred and fifty unlicensed rifles were found with the Ingessana and confiscated.

545. The effect of recent labour legislation was hardly felt, the vast bulk of the population being agricultural. At Medani and Hassaheissa, where industrial labour does exist on a small scale, private enterprise was more fortunate than departments in the matter of strikes. Throughout the greater part of the year Irrigation Department unclassified staff were uneasy over terms of service and this culminated in a two-day strike in November. This strike was remarkable for the lack of interest shown by the tenants, whose cotton crop was in jeopardy as a direct result. Labour for all agricultural schemes was abundant throughout the year owing to poor harvests in the non-irrigated area. Rates varied considerably and in fairly close relation to distance from the Gezira scheme.

546. A cold winter and a hot summer were confidently predicted as the forerunners of good rains. Once again the weather prophets were wrong. The rains throughout the province were late in starting, particularly in Rufa'a District, and spaced at too long intervals to bring the crops up. The only exception to this was in the southern Fung, where the rains were excellent.

547. The final yield of cotton in the Gezira scheme (Sudan Plantations Syndicate and Kassala Cotton Company) was 881,006 kantars, an average of 4.21 kantars per feddan. The increase in yield counterbalanced the slight falling off in price compared with 1948, and the average monetary yield on the cotton of a tenancy amounted to about £E. 215. The sowing of the 1949/50 crop was made difficult by lack of rain and the water demand was at its peak for longer than usual during August and September. The average yield of cotton on the alternative livelihood schemes in the Dueim District varied between 5.81 kantars at Wad Nimr and 3.9 at Dueim. The yield on private pump schemes showed a noticeable decrease in the case of the old schemes as compared with the three new schemes which produced 4.4, 5.6 and 5 kantars per feddan. Two of the older schemes, Abu Hindi and Hassan Allob produced less than two kantars. Exceptions to this generalisation were Rahawat with 6.9, Hassan Osman with 7, and Um Takkal, which is in its fourth season, with 7.2. Private pump schemes in Kosti District produced crops varying between 9 kantars per feddan on a 20 feddan plot at Hamariya and 2.4 at Fagerab. The two big schemes of Mellaha and Aba averaged 4.8 and 2.3 respectively. Average yield over the whole district was 4.06 on 22 schemes. Six new schemes, three of which were 10-inch, went into operation for the first time.

548. Dura in the irrigated area gave a good crop throughout, and in addition to the Hawasha grain a considerable area of dura grown on fringe land with irrigated water. Rain crop throughout the province were poor: it was estimated that Kosti and Dueim Districts might be self-supporting, Rufa'a District had little, the Fung might have a small exportable surplus owing bumper crops in the southern Fung, and Gezira districts should have a surplus which might or might not be exported. A good crop of maize was reported from Sennar reservoir cultivations, and a considerable maize crop was harvested from gerf lands in Fung District. Throughout the year there was a spate of applications for pump schemes in all districts. At Busata the first instalment of a 11,500 feddan schemes was put in by Sudanese engineers and the Sudan Mercantile Company and a good cotton crop was in prospect on 2,600 feddans.

549. Public health areas were adjusted at the beginning of the year so as to correspond as closely as possible with local government divisions in the Gezira area. This was the first step towards putting local public health under the local government authorities. The health of the province was on the whole satisfactory; the malarial incidence was low, partly owing to the efficiency of preventive measures, partly to light and unevenly spaced rains.

The most disquieting feature was bilharzia in the Gezira area, the eradication of which seemed likely to prove difficult and costly. On the White Nile bilharzia was also a major problem. There was an outbreak of smallpox after the return of pilgrims but it was checked at an early stage. Considerable improvement in the conservancy and refuse collection was achieved in Wad Medani by the mechanisation of the service. The town council showed itself to be fully alive to sanitation problems.

550. The urge for educational development continued throughout the province. Local government authorities in the southern Gezira worked out a programme for upgrading sub-grade schools at the rate of one a year and in the northern Gezira councils turned their attention to up-grading rather than building more sub-grade. Expansion of elementary schools in the Gezira districts has been slow compared with that of sub-grade schools. Elementary schools have increased from 19 to 28 only, of which 8 are on the east bank, whereas sub-grade schools have increased from 11 to 92, of which 14 are on the east bank. These sub-grade schools were provided with classified headmasters from the Ministry of Education. In Kosti District the Baggara boys' school and boarding house were approved at an austerity figure, to be supplemented by a grant from the local administration reserve.

551. The demand for girls' schools was maintained and the schools were built at Dueim, Um Gerr and Naima in Dueim District, at Aba (elementary) and Shawal (sub-grade) in Kosti District and at Abu Usher and Rufa'a in Northern Gezira District. Although the demand for new schools continued, some of the established schools found difficulty in maintaining their attendances. Both at Hosh and Messellemia attendances were so poor that warning of closure of some girls' schools had to be issued; at Suki attendances showed no improvement after several years and the school was closed and its staff transferred elsewhere. There were 12 girls' sub-grade schools in the province and 10 more due to open.

552. Intermediate education for boys was still below the demand; in Northern Gezira District, where there are three intermediate schools, 432 applied for 120 vacancies. It was decided the first Gezira intermediate school should be built at Abu Usher. Both the Medani and Kosti ahlia intermediate schools were in financial difficulties, largely owing to increased cost of living allowance to their staffs. As expenses increase it is difficult to see how these schools will make ends meet in a country where nobody is prepared to pay the full fees of his son's education. The Wad Medani town council refused to make a grant towards the Medani ahlia school on the ground that they did not think the school was receiving adequate fees.

553. The decision to start an intermediate school at Singa was welcomed enthusiastically in Fung District. Plans for the building were not complete but temporary accommodation was found to enable the school to start on 1st. January, 1950. At Wad Medani a teachers' training section was started at the girls' intermediate school. The secondary school at Hantoub had an uneventful year except for a short strike in September. The adult education experiment at Um Gerr was closed down and the staff was transferred to the Southern Gezira District, where they made a good start and did much to popularise that form of education. Apart from the courses in civics and local administration, etc., a literacy campaign was conducted in that area and met with considerable success.

554. Grazing conditions on the east bank of the Blue Nile were bad throughout the year, and there were many casualties among herds. A number of animals in the Kawahla Khut of Sennar District also died owing to poor grazing conditions. Claims that liver fluke was killing animals in Dueim District were not substantiated, though some losses undoubtedly occurred from this cause. Large scale vaccination of Ingessana herds was carried out in February in spite of some reluctance to produce the animals. A veterinary dispensary was built at Hassaheissa from local government funds.

555. A new road was cleared from Durraba to Roseires to open up the Dinder national park where game was plentiful and included elephant near Um Urug island. Fish of undertermined species were found in the hafir at Jebel Megeinis which was dug in March.

556. New roads were made through the Dinder national park and to connect Kosti with Megeinis hafir. In the Gezira area roads deteriorated under increased traffic; diesel lorries in use between the White Nile and Hassaheissa did considerable damage. The demand for ferries on the White Nile continued but prices were high and delivery times remote. Approval was given for the Messellemia and Shukria councils to buy a ferry for Hassaheissa out of their reserve funds and an order was placed in the United Kingdom.

557. At Kosti the new town water supply started in May with 260 subscribers. Water taken worked out at five gallons per day per head of the estimated population. Rufa'a town council devoted much time to working out a plan for a town water supply to be installed and managed by the council. A shortage of water at Tendelti was mainly due to animals using the town water supply. A deep bore well at Er Ruat in Kosti District failed owing to salinity of the water; 11 wells were dug in Dueim District. The Fangug

hafir at Jebel Moya filled and 300 houses were established near it. Dali filled but Mazmum did not, owing to faulty design of the feeder channel. A new hafir was dug at Megeinis which filled late. The Ingessana water supply again caused apprehension; a small scale plan for developing it was worked out during the year.

558. A new landing strip was cleared at Kosti on better soil than the old, and a possible site was found at Dueim, but owing to its proximity to the town safety arrangements will have to be made before it can be used.

559. In Wad Medani the Public Works Department was fully occupied building 26 houses for officials and starting an extension to the girls' intermediate school. At Dueim the old merkaz and Sudan Irrigation Department offices had to be abandoned in August and work on the new buildings to house them had reached an advanced stage by the end of the year. In Wad Medani town 96 out of 108 second class houses were completed; 160 plans were approved, compared with 155 in 1948. Merchants at Hosh and Wad Raiya improved their shops to second class building standard to get longer leases.

560. Sales of land in the Gezira amounted to 5,874 feddans, compared with 8,122 feddans in 1948. Of these, 5,552 were to government compared with 6,647 feddans in 1948. Sales outside the scheme amounted to 8,277 feddans, of which 90 were to government. Mortgages inside the scheme amounted to 133 feddans, all to government, and those outside the scheme to 1,575 feddans, none to government. Land sales in Rufa'a District increased owing to the shortage of grain and animals. Work on the settlement of the north-west extension of the Gezira scheme continued and by the end of the year 140,182 feddans in three registration sections had been registered. The reservoir on the West Bank at Sennar was settled.

561. Town plans were approved for Hassaheissa, Suki and Roseires, and Singa town plan was nearly completed. Various alterations were made in the Dueim town plan as a result of seepage, the aerodrome site, etc. Approval for town councils to collect on land disposed of under the town lands schemes an additional premium for essential works eased their development difficulties considerably. In Medani 65 plots in the light industrial area were disposed of, but of 38 plots in the first and second class areas offered in December only one was taken up. Funds were approved for starting slum clearances in the Medanin quarter, and a committee was formed and started work. The harems of Hosh and Medina were increased to include sites chosen for council buildings.

562. A curious feature of the economics of the province was the shortage of money amongst the merchants of Wad Medani, which was reflected in mortgages of property, the lack of bidders for better class building sites and unusual difficulty in collecting taxes. It is hard to say why this should have occurred in the richest area of the Sudan, but one explanation suggested is that the Gezira trade is concentrated mainly in the outside markets, whose connections are with Khartoum rather than with Wad Medani. The latter is confirmed by the high prices offered for sites in Tabat and Feteis and for flour mills in Northern Gezira District.

563. The devaluation of sterling produced slight rises in price of dabalán, aluminium goods, and cigarettes, but only in the case of coffee was there any large scale hoarding or permanent increase in price. The price of grain in the irrigated area continued high in spite of a good crop in 1948/49 and a better one in 1949/50. One explanation was that the tenants were in no need of selling grain and were in fact buying it from outside the area; another was that Sudan prices were approximating to world prices. The fixing of a maximum export price for gum caused a recovery in market prices for Hashab in the Fung. The 1949/50 crop was heavy and relieved distress in the Northern Fung District. Cattle sales at Kosti showed a steady decrease since 1947 with no increase in prices. At a registration of export cattle in January only 1,600 out of 10,000 animals were found to come from Kosti District. At Tendelti and Jebelein, where the markets are small, prices actually fell. Sheep sales showed a slight increase, but prices were only just above those of 1947 and below those of 1948. In the Dueim District profits were better in 1949 than in 1948. This reflected the prosperity of pump schemes in that area.

#### KASSALA PROVINCE.

564. The Eritrean frontier, in spite of internal troubles between the various Eritrean political parties remained stable and local relations between Sudan and Eritrean officials were good. Two incidents occurred near Kassala; one a bandit raid on a country shop and the other the theft of 33 camels from some Rashaida Arabs, all of which were recovered in Eritrea by co-operation with the Eritrean police. There was the usual crop of rumours about bandit threats to Sudan territory, and these usually centred round the name of the notorious brigand Hamid Idris Awati, but in every case they proved to be false. A successful meeting was held between the Eritrean and the Beja District authorities for settlement of alleged theft of Hadendowa cattle in 1948 by Eritrean Beni Amer and Baria. Cultivation disputes at Karora in Tokar District necessitated the clearer demarcation of the international boundary which was



satisfactorily carried out in conjunction with the District Officer from Nacfa.

565. On the Ethiopian frontier the only difficulty encountered was the continued smuggling during the first few months of the year of sesame out of the Sudan, believed to be destined for Eritrea. Prices were extremely high, and the limited mobile patrols available from Sudan mounted police were unable effectively to stop this illegal trade. Smuggling decreased during November and December owing to increased police precautions and the lower price of the new sesame crop. The standing frontier police patrol at Basunda exchanged their mules for camels at the beginning of the year, and successfully carried out the patrolling of the southern Ethiopian frontier. A few parties of Sudan poachers were arrested but there were no international incidents.

566. The general condition of the people showed marked contrasts between the rich producing areas of Gedaref and the Gash and Tokar deltas, and the semi-nomads northern areas of the province where both crops and grazing in the 1948-49 season were poor and where famine conditions began to appear early in the year and gradually extended to the more southern parts of the province. Conditions in Beja District were brought forcibly to public notice by a mischievous political campaign but conditions were in fact only a little more severe than in the northern Butana and parts of Kassala District. Relief measures had been prepared long before agitation started, and these were later augmented by additional supplies from the Egyptian Government and by local effort based on public subscription. Approximately 2,500 tons of free grain were distributed on the basis of the war-time ration lists during the months May to August in Beja District as well as 700 tons of grain and some cloth provided by the Egyptian Government. Public subscriptions were made on a generous scale and the local relief committees did much useful work. In the north of Gedaref District 687 tons of free grain were issued in the badly stricken areas and 538 tons on payment at subsidised prices in places not so hardly hit. Smaller quantities of free grain were issued to the Kassala District nomads, and the relief of indigent people who had drifted into the towns of Port Sudan and Kassala was effected by the local committees. Loans of seed grain were issued in all places where they were needed as soon as the rains started.

On taking stock of the position the conclusion was reached that the two causes of the famine were the failure of nomad grazing and the high price of grain which varied from 14 to 30 piastres a ruba (14) rotls at various times and in various parts of the province.

567. Animal stocks were greatly reduced and weakened, and in spite of good 1949 grain crops in the south of the province, and improved grazing over much of the north, it was becoming apparent by the end of the year that there was likely to be in 1950 at least a partial repetition of 1949 conditions, and measures for dealing with it were again prepared. The only permanent solution to the economic difficulties of the northern nomads and semi-nomads, is for them to move into the productive and largely uninhabited rain-belt further south, and plans were made for further settlement in 1950 of Beja and other northern tribes in Gedaref District.

568. In contrast to the previous year, 1949 was remarkably free from political disturbances and labour troubles. Opposition to the Legislative Assembly rapidly died down and it became increasingly accepted as part of the machinery of government even among those who had previously opposed it. At the same time there was a rapid growth of politico-religious activity throughout the province and processions, meetings and organised drilling increased to a wide extent. In the absence of conflicting interests in any strength there was little danger to public security and on only a few occasions was it necessary for the police to take action. Nevertheless considerable annoyance was occasioned to large sections of the public and the gradual decrease of this type of activity towards the end of the year was generally welcomed.

569. Interest in local government received a stimulus from the tours and investigations of Dr. Marshall and later from the publication of his report. It was especially gratifying to the Gedaref district council to receive high praise and to be singled out as the model on which the financial structure of rural local government authorities should be built.

570. Port Sudan municipal council, although local interest was sufficient only to provide contested elections in eight of the twelve elected seats, showed an increasing spirit of independence and initiative. Their financial position, in spite of unexpected additional expenditure, remained strong, but there was little doubt that the disproportionately heavy cost of public health was an excessive drain on the council's finances and that they would prefer to spend more of their money on other projects. The Kassala town council was resuscitated in July, when the new council buildings were opened, and elections were held successfully towards the end of the year. The political form of the new council follows that of the old, but under the guidance of a new executive officer and with more settled political conditions, there were signs that the council would develop into a normal local government body. The financial position was satisfactory and the reserve earmarked for road

improvements still remained to be spent, but the prospect of any large increases of revenue to finance the many projects in which the council was interested was slight. The new Gedaref town council showed a lack of self-confidence in its early days, but developed rapidly with growing experience and showed initiative and resource in so far as limited financial circumstances permitted. The council received a grant-in-aid from the central government to balance its small budget but showed an admirable desire to throw off its financial disabilities at the earliest possible moment.

571. The Gedaref district council for the first time in its history budgeted for a deficit and this led to a disagreement with the central government. The Council, after negotiations, increased its revenue to produce a balanced budget, but its reputation suffered by this lack of financial responsibility. The council's assessment of revenue definitely failed to increase proportionately with the increase in population and general prosperity over recent years and, favoured as it has been by the terms of its agreement with the central government, it showed insufficient interest in its revenue. Local rivalry between the Shukria and Bakr elements of the council culminated in a decision in principle to divide the council into two separate local authorities. The existing body had always been cumbersome and the technical reasons for this decision were sufficiently strong even if local rivalries had not forced the issue. By the end of the year preliminary enquiries into the details of the division were being made with a view to inauguration of the two new councils during the latter half of 1950, and it appeared likely that the southern and Bakr khuts would form one local authority and the Shukria and western khuts another, with the Batahin khut likely to be transferred to Khartoum Province. In Tokar some progress was made and civic sense gained by the district council but common sense and local experience were at times influenced by sectarian politics and there were too many ineffective members. The council showed reluctance to exercise its great financial scope in its powers of rating the valuable cotton crop, presumably because many of the councillors are also extensive cultivators. The finances of the council therefore were not nearly so buoyant as they should be.

572. Little progress was noticeable in the unwarranted advisory councils in the tribal area of Kassala and the Beja Districts, although the Beni Amer council of Tokar District showed promise. Unfortunately Dr. Marshall's report had no suggestions which could be constructively applied to the widely dispersed nomad populations of Kassala Province and it remained obscure what form local government should take in such tribes as the Rashaida, Amarrar-Bisharin and northern Hadendowa. Meanwhile local government

in these areas carried on by the time-honoured method of tribal gatherings at which any matter may be discussed by people, chiefs and authorities in open conclave, and decisions being based on general agreement.

573. Tribal politics showed less activity than in 1948. The Batahin of Abu Delieg made their final break with the Shukria; a territorial boundary was demarcated and the tribe stated their desire to join the Batahin of Khartoum Province either as part of the Khartoum North district council or as a separate local authority. The intrigues of certain sections of the Hadenowa against their Nazir diminished with the general decrease of sectarian tension, and the Tokar Beni Amer, freed from their feudal obligations to the Nabtab hierarchy, settled down as a normal administration with an orthodox tribal structure.

574. The state of public security along the frontiers was better than for many years. There were a few cases of brigandage and robbery in the Kassala area, a heavy incidence of smuggling of sesame from the Gedaref district and a reduced amount of smuggling from the Red Sea coast, but apart from these there were no serious breaches of the peace and tribal relations appeared to be peaceful in all the frontier areas.

575. The incidence of serious crimes triable by Major Courts showed a slight increase over the 1948 figure, but this could be ascribed largely to the policy in the Beja District of trying offences involving grievous hurt with a dangerous weapon by Major Court. In Port Sudan crimes of violence were few, there being only two murders and the number of house breakings and thefts fell from 655 to 524. Offences in the quays area were reduced by one-third of the 1948 number and credit is due to the province police for this result of their continued efforts to modernise and improve their security precautions in the harbour area. In Kassala District the number of crimes reported was much the same as in the previous year but on the average they were less serious, while in Gedaref the incidence of crimes of violence and offences against property though inevitably heavy owing to the great agricultural prosperity in that district and the heavy influx of immigrant westerners, showed only a slight increase over 1948.

576. In the Beja District, the intensification of police activities in the tribal areas and the transfer of serious affray cases to the state courts kept the incidence of affrays and fights with dangerous weapons down to a level which compares most favourably with the position several years ago. In the Gash area, animal trespass in the cotton cultivations by the hungry Handendowa cattle created a difficult situation during the summer which required all

the efforts of the Aroma police; several affrays occurred, in some of which the police had to use firearms. A somewhat similar state of affairs occurred in Tokar where the delta crops were exposed to petty theft and animal trespass, but offences were mainly trivial.

577. In general it was expected that the difficult economic situation over much of the province, with famine conditions in places, would lead to wide prevalence of animal theft and a general deterioration of public security, but the efforts of the police and tribal authorities, and the timely and generous measures of famine relief prevented this.

578. The High Court, after being established in Kassala for the past two years, was transferred back to its old headquarters at Port Sudan. Province headquarters suffers thereby from lack of close contact with the Judge of the High Court but this objection was outweighed by the technical reasons for siting the Court in Port Sudan where most of the civil work arises. All except one or two major courts were tried by the Judge of the High Court and the District Judge in Kassala helped with a great deal of the criminal work in Kassala and to a lesser extent in Gedaref. The bench of magistrates in Port Sudan tried over 1,500 cases and the Kassala town bench continued to do good work and maintained its reputation. The local courts continued to hear the bulk of the criminal, civil and personal cases in the rural areas. The number of cases heard, 7,687 criminal, 365 civil and 150 personal, was practically the same as in 1948 and the small number of 94 appeals, of which 48 were upheld, was a measure of the quality of the courts' work. Useful inspections were carried out by the Inspector of Native (Sharia) Courts, who was able also to give advice on procedure in criminal and civil cases.

579. The strength of the police force was kept up to the budgetary establishment, which after approved reductions was 1,025 other ranks. The officer strength, owing to transfers, absence on courses, etc., was often below strength. With the aid of instruction classes, 15 per cent of the force were fully literate, 26 per cent semi-literate, and a total of 132 men passed the proficiency pay examination. The morale of the force was good, but discipline less so, and the wastage from disciplinary causes was excessive. Canteen club premises were completed in Port Sudan, Tokar, Kassala and Gedaref, and proved a great boon to the men. A province crime branch was established at province headquarters with a subsidiary branch at Port Sudan. Several important cases were taken over by the crime branch and in a number of other cases advice and instruction were given to district investigation staffs. The passport offices at Kassala and Port Sudan were overhauled, and the Com-

mandant and Superintendent of Police were made responsible respectively for general supervision of the two offices. The police continued to be responsible for fire-fighting precautions and a total of 74 outbreaks were dealt with. The provision of improved equipment at Port Sudan and Gedaref was under consideration.

580. There were general advances in the reform of prison administration throughout the province. The completion of the new Kassala province prison to a functional design allowed of a degree of segregation of prisoners and the up-scaling of prisons officials' posts added to the efficiency and esprit-de-corps of the staff. The agricultural camp at Kassala developed rapidly in strength and organisation, and provision of water supply for a hard labour camp at Kassala went ahead. The completion of these two projects should relieve congestion in district prisons and facilitate further measures of segregation. Prison industries made great progress, and exhibits of work aroused general public interest. The importance was stressed of fostering industries which would be of real use to a prisoner on return to civil life, rather than those of a more spectacular nature.

581. The agricultural development of Gedaref District and the increased provision of water supplies resulted in a steady growth of immigrant settlers to that locality from all parts of the Sudan and from beyond its western borders. No statistics of immigration were available but especially noticeable were arrivals from the southern Sudan, from Northern Province, from Rufaa District and the Nuba Mountains, while a settlement of 300 Beja was successfully sponsored. Seasonal movement of labourers was on the usual large scale — during January and February labourers were known to be leaving Gedaref at the rate of 1,000 a week for the Gezira, the Gash and the forestry projects on the Blue Nile, while in April and May there was a comparable return to the rain cultivation of Gedaref. As a result of this fluidity there was never any real permanent shortage although there were the usual peak periods of temporary shortage with heavily inflated wage rates.

582. In Kassala casual labour was generally adequate at normal rates, while at Tokar the supply of Habab labour from Eritrea was more than sufficient at rather lower rates for all the demands. In the Gash a near record cotton crop was successfully picked without undue inflation of labour rates, largely as a result of subsidised travel facilities for Beja from the north of the district.

583. In Port Sudan, labour was plentiful throughout the year both in the port and elsewhere. Progress was made by the newly constituted Dock Labour Committee towards improving the conditions of casual dock labour. The Committee met twice during the year and its most important achievement was to raise the daily

rate from 10 to 16 piastres a day, an increase which resulted in an immediate rise in the handling rate which was maintained throughout the year. The committee proceeded towards stabilisation of the dock labour force and introduction of registration and hoped later to tackle the labourers' housing problems.

584. The new labour legislation had as yet impinged little on Kassala Province, with the possible exception of Kassala and Port Sudan. Arrangements were being made by the end of the year for enforcement by central and local government units of the Employers and Employed Persons Ordinance, 1948, and it was expected that a start would soon be made on preparation of contracts and records of service. In Gedaref the district agricultural committee recommended the introduction of a simple form of contract for agricultural labourers at present excluded from the provisions of the ordinance.

585. The pilgrimage was on a much smaller scale than in 1948. A total of 5,071 pilgrims passed through the Suakin quarantine as compared with 10,931 in 1948, and by the end of the year 4,855 pilgrims had returned, including 400 from 1948. They were mostly Sudanese from the Gezira, as West Africans had been greatly deterred by the cancellation of the specially reduced rates which applied to them in previous years. Pilgrimage arrangements worked reasonably smoothly, but there were delays in arrival of shipping at the beginning and congestion in the Suakin quarantine on return owing to an outbreak of smallpox at Jedda.

586. The climate was normal during the first half of the year except in Tokar where the winter rains in the delta and in the grazing areas to the south were well above average. Summer rains in general started late, were fairly heavy for a short period and stopped early, but there were substantial late rains in the southern half of Gedaref District. The Red Sea littoral from Suakin northwards had good average winter rains in November and December and Port Sudan had one very heavy storm in which four inches of rain fell in eight hours; but Tokar District had no winter rains during this period.

587. The final out-turn of the 1948-49 Gedaref grain crop was disappointing. Twenty-five thousand tons of grain came on to the market, only 3,000 tons more than in the bad 1947-48 season. The sesame crop for the same season, at 110,000 kantars, was better than expected. In 1949 after a bad start owing to patchy early rains a large crop was established and promised well until the rains began to fall off abnormally early. A late spurt of rain improved the prospects enormously and heavy crops of grain and simsim ripened in the south of the district; but harig cultivation was in

general poor, and the northern and western parts of the district by the end of the year were seen to be below average. With high prices, the crop came early on to the market and by the end of the year 11,000 tons of grain and 114,000 kantars of sesame had been sold.

588. The mechanical Crop Production Scheme was run entirely on a tenancy basis, the tenants sharing the work and the proceeds with the government on an agreed basis. In 1949 two additional village settlements were established, but unfortunately bad rains affected the crop adversely and the prospects at the end of the year were discouraging. In spite of this the scheme remained popular and demands for tenancies were heavy. Further experiments were made into the best forms of machinery for use, and progress was made towards the standardisation of machinery which should finally bring mechanical cultivation out of the experimental stage. Several private farms were cultivated by the farmers' own tractors with ploughs borrowed from the scheme, but the crop, which was at first extremely promising, suffered later from lack of rain.

589. Plans were worked out by the Gedaref district agricultural committee for the wide extension of mechanical farming both by government schemes in partnership with tenants, by private large-scale farmers and by sponsored village settlements. By the end of the year concrete proposals were submitted for the settlement and acquisition by the government of 150,000 feddans of land in five separate blocks in the assured rain belt for the above purposes, and there were signs that applications for tenancies in government schemes and for large private farms would be plentiful. Meanwhile development of the clay plains in the south-west of the district had been started, 160 kilometres of road had been cut by the Ministry of Agriculture to connect the plains of Sugura and Umm Bileel with the existing motor roads, and the mechanical excavation team of the soil conservation section, which had been digging a series of grazing hafirs in the Butana, was on its way to carry out an excavation programme in the new areas under development.

590. The final results of the 1948-49 cotton crop in the Tokar delta were disappointing, and a total of only 87,700 small kantars was picked. The price, however, was high, and was paid in two instalments, the second and smaller of which was issued in October. The grain crop in the flooded area was small but was luckily augmented by useful crops grown on the winter rains. The 1949 flood covered 46,250 feddans of which 41,570 feddans were well watered, and the new crop was satisfactorily established, but weather conditions in the early winter were unfavourable and the 1950 yield was not expected to be more 190,000 small kantars.



591. Some progress was made at the 1949 land allotment board with the policy of reducing large holdings and re-allotting them to deserving small cultivators. Strong opposition to this policy by the vested interests of the big land-holders was met. The delta land and its resources should be sufficient to provide a satisfactory livelihood for the whole district if the principle of allotting small tenancies to as large a number as possible of peasant cultivators were accepted.

592. In the Gash delta the 1948-49 cotton crop turned out a total of 103,911 large kantars, only about 2,000 kantars less than the heaviest recorded crop, though the flooded area was not extensive. The most serious pest was the local Beja cattle which lacked normal grazing outside the delta and it was estimated that 10,000 kantars were lost in this way. The 1949 flood, the second smallest recorded since 1928, provided only a small number of effective watering days, yet the surprisingly large area of 61,505 feddans was watered; 48,551 feddans were allotted to cotton and the rest to grain. Owing to the early falling off of the flood, grain cultivation was poor and only about 4,000 tons (half the average yield) was harvested. The cotton crop was in excellent condition and was expected to produce 90,000 kantars. The Gash Board's newly acquired heavy machinery was used for earth works and cleaning of well fields but it was not possible to make a start on the deep ploughing programme for elimination of perennial grasses.

593. The Kassala sagias had a poor year owing to the very low price of onions, yet the numbers showed an increase of about 50. Water-wheels driven by bulls were being slowly replaced by small pumps, but no progress was made with the project for experimental tube-wells to tap the deep water owing to difficulty in obtaining the required machinery. Continuous efforts were made to introduce co-operative credit and marketing machinery. The experimental banana plantation was closed down early in the year and part of the land was taken over by the prison agricultural camp.

594. A province forestry office was opened in Gedaref. The advantages of this arrangement over the previous system of remote control were already becoming apparent. The bulk of the work lies in Gedaref district which contains the central forest reserves on the River Rahad and the rainland forests in process of expropriation, but it should be possible also to give attention to the Gash forests around Kassala and the reafforestation projects in the Gash delta.

595. The 1949 gum crop in Gedaref District yielded 50,870 kantars of hashab and 16,855 kantars of talh as compared with 67,307 kantars of hashab and 19,527 kantars of talh in 1948. The

average price for hashab was a little lower and that of talh a little higher than in the previous year, the total value of the two crops being about £E. 60,000.

596. The activities of the Ministry of Health showed a general increase in every branch and this in spite of difficulties of staff, housing and transport. Admissions to the three hospitals of Port Sudan, Kassala and Gedaref, and attendances at out-patients and dispensaries all increased; and the hard conditions which threatened the whole of the northern parts of the province during the early summer involved medical staff in many additional activities. Lower standards of nutrition resulted in increased incidence of tuberculosis and diarrhoea and in lowered resistance to other diseases, and were met by medical relief as well as the basic famine relief distributed by the province authorities. High standards of public health were, as usual, maintained in Port Sudan and in the pilgrimage arrangements at Suakin, and marked advances in malaria control were effected at Kassala by treating the perimeter of the town with D.D.T. wettable powder and spraying houses with D.D.T. residual spray. Some progress was made with sanitation in Sinkat, Gebeit, Gedaref, and the bigger villages of the Gash and Gedaref District. Apart from a few cases of smallpox introduced by pilgrims from Arabia, which were successfully quarantined on arrival, this disease made no appearance in the province. Reported cases of venereal disease showed a general increase, and a great obstacle to its successful treatment continued to be the unwillingness of the women to ask for treatment. Bilharzia spread further in the Gedaref area and to a less extent in Kassala and has been introduced mainly by westerners and spread through the use of hafir water. Guinea worm on the River Rahad remained under effective control and kala azar in Gedaref District continued to be successfully treated in hospital.

597. The Kassala boys' intermediate school, of which the new buildings were ceremonially opened in February, had a successful year and showed great promise. Port Sudan intermediate school, which staged a demonstration in May against decisions regarding the students' conference, soon settled down again and continued to do steady good work. Elementary education kept up fairly well with the ten-year plan, but there were difficulties in keeping staff at full strength. Girls' education showed steady if not spectacular progress, and its slower rate of expansion in comparison with boys' education made it easier to keep the building programme up to date. The Beja tribes showed little interest in girls' education and with three only partially filled schools lagged far behind the standards of the rest of the province. The number of sub-grade schools in-

creased slightly and more stress was laid on building up an adequate inspectorate and in training of staff.

598. There were combined ahlia elementary and intermediate schools at Kassala, Port Sudan and Gedaref. Port Sudan intermediate school which for years suffered from staff difficulties showed great improvement under the leadership of a new headmaster seconded from the Ministry of Education, and the other two schools had a satisfactory year.

599. Grazing conditions varied from poor to bad over the whole of the province except the south of Tokar and Gedaref Districts during the first half of the year, resulting in hardship to the animal population. Milk supplies dwindled and in the more severely affected areas heavy losses of stock were suffered, causing a further reduction in standards of nutrition already experienced by the nomads as a result of the high price of grain. The 1949 rains, although poor in some of the northern areas, produced a fairly good crop of grass and the condition of the surviving animals soon returned to normal. The year was marked by an extremely low incidence of cattle plague and an entire absence of contagious bovine pleuro-pneumonia. Trypanosomiasis of camels, prevalent in the southerly parts of the province, continued to show resistance to antrypol and the results of experiments in the use of antrycide were eagerly awaited. Disease of sheep and goats was more prevalent than usual, owing in part to bad grazing conditions. Remounts for camel police and for official purposes were purchased at prices averaging £E. 21 each, and an Egyptian purchasing commission visited the Bisharin country on two occasions to buy camels.

600. The mounted police patrol at Basunda continued through the dry weather to operate against poachers moving into the Dinder national park from the north, and the district police, when available from their many other duties, co-operated with the game ranger of the park to check poaching on the River Rahad, where it is common, and a gradual reduction was clearly being achieved. Ariel migrating southward in the autumn again caused a good deal of damage to late cultivation in Gedaref District, and with the growing development of rain cultivation there, it may be necessary to introduce control measures in future years. Ibex were reported to be plentiful in the southern hills of Tokar District, but Kudu, wild asses and ariel seemed to be scarce.

601. The programme of maintenance and construction of town roads in Port Sudan and Kassala was again delayed owing to lack of machinery and supervisory staff. By the end of the year, however, both these problems were well on their way to be solved. The Gash road-bridge at Kassala was completed and formally opened

in July and the approaches were completed after the flood. Two road bridges over the Khor Abu Faragha in Gedaref town were under construction. In Gedaref District 160 kilometres of new road were opened and graded by the Ministry of Agriculture in the south west of the district and the link from Gedaref via Ghadambaliya to Ein el Lueiga on the River Rahad and thence to Wad Medani, was cleared and scraped. The promised survey of the Suakin-Tokar road was deferred owing to other more urgent demands on the engineering staff.

602. The mechanical excavation team of the soil conservation section started on a programme in Gedaref District at the end of the year, financed partly by central government funds and partly by the Gedaref district council. Work was completed on hafirs on the Mechanical Crop Production Scheme and in the grazing areas of the Butana, and the team was moving on to a series of cultivation hafirs in the south and south west of the district. Some smaller hafirs dug by hand as famine relief measures were completed in the Abu Deleig area.

603. The Geological Survey made progress towards completion of the approved programme of deep bores in Gedaref District, but little fresh water was found. While drilling at Wad Kabu traces of coal were found and it is proposed to continue exploratory drilling in that area in 1950. Work on hand dug wells in Gedaref and in Beja District went ahead. Following a report by the Geological Survey on conditions in the Butana, a programme of surface conservation works to improve the water supplies in the wells was approved, and bunding was carried out at five well centres. The Gedaref town wells maintained a good supply of water and this was attributable to the conservation work done in the surrounding hills in previous years. A series of dams to conserve water in the local well field at Agig in Tokar District was successfully constructed, but the barrage built on Khor Arbaat near Port Sudan to improve water-spreading over the delta was swept away. Reports received from districts showed that there were numerous sites where conservation works could improve local water supplies and provide irrigated agricultural land provided that technical staff could be made available to plan and supervise the execution of the work.

604. Work was started towards the end of the year on the installation by the Public Works Department of an electricity and piped water supply for Kassala Town. The Port Sudan power station found itself unable to meet the increasing demands for electricity for numerous houses being built. Plans were laid for a new installation, but in the meantime small private electricity schemes were installed in the larger premises. The Port Sudan water supply gave cause for anxiety throughout the year owing to

the low cycle of water levels in the Khor Arbaat catchment area and the recent shortage of rains. A drilling programme was started with a view to installing auxiliary pumping arrangements and to investigate the possibilities of underground storage. Gedaref town continued to make strong demands for electricity and piped water supplies.

605. Kassala landing ground was further improved by additional tarmac to the surface of the runway and plans were made for removing the Port Sudan landing ground from its existing site to an all-weather site near Asoteriba station.

606. The second instalment of the province prison at Kassala was completed by the Public Works Department using direct labour and the buildings were occupied towards the end of the year. At the same time the old prison buildings were converted into a block of offices, workshops and stores for use by the department. The new Kassala power-house was being completed to an impressive design, which with the almost completed new mosque, and the new town council buildings, both of which were supervised by the Public Works Department, provided a striking improvement to the appearance of the town. A small departmental programme of new official quarters and school buildings was also completed at Gedaref, and a good deal of work on new schools, masters' quarters and other minor projects was carried out by the district authorities.

607. There was much activity throughout the province in town planning and private building at all levels. Land of all classes was disposed of in Port Sudan and many houses of a surprisingly high standard of design and construction were being built. A start was made on the clearance of the mirghaniya quarter of Kassala town, and its rebuilding to improved standards of layout and construction. The rebuilding of the third class market area in Kassala and the development of new shop areas went forward remarkably fast. New native lodging areas were laid out and partially developed in Kassala town, while in Gedaref the clearance of first class building land was put in hand. In the small towns of Gebeit, Aroma and Wagar there was much new building, while in Sinkat a deposited plan began to take shape. It was clear that there was a great private building potential all over the province.

608. The high price of grain, the falling off in the animal trade owing to the severe shortage of grazing and the small cotton crop at Tokar resulted generally in depressed trade condition during the first half of the year, and the prices of cloth and many other imported commodities fell off during this period to a low level. Port Sudan, with increased movements of ships in the port, and increased trade in marine products, felt the depression less than the

rural areas, and the situation in the Gash delta was relieved by the heavy cotton crop for which large appreciations were paid out steadily throughout the year. With good 1949 rain crops in Gedaref, and high market prices for produce, a minor trade boom was setting in there by the end of the year with all the signs of local inflation, and at the same time there was a general restoration of activity in the animal trade. The invisible camel trade from Kassala Province to Egypt numbered over 23,000 beasts valued at nearly £E. 750,000, and the growing new export of sheep and cattle via Port Sudan, though derived largely from other provinces was a welcome addition to trade. Trans-frontier trade with Ethiopia suffered severely from export and currency restrictions and activity at the frontier market of Basunda was again on a much reduced scale, while the volume of trade with Eritrea could not be compared with the boom days of Italian occupation.

609. The general deterioration in economic conditions over most of the province already referred to, produced difficulties in the collection of revenue. Arrears of 1948 taxation in the more severely affected districts were carried over and remissions of 1949 direct taxation in Beja District, Kassala District and parts of Gedaref were approved, and at the same time collection of local rates had to be deferred to the end of the year. On the other hand the demand for new traders' licences, even at the increased rates remained as strong as ever, and the inflation observed in the crop-producing areas during the market season pointed to a fair margin of taxable capacity.

#### KORDOFAN PROVINCE.

610. The poor grain harvest of 1948 was followed by unevenly dispersed rainfall in 1949. In the southern part of the province crops were good, in the centre below average, and in the north-west exceptionally poor. Throughout the year grain prices were high. In October the price in El Obeid of P.T. 22 per ruba was the highest officially recorded during the year for any of the major markets in the Sudan. Although prices of other agricultural products were high, and consumer goods plentiful in the shops, there was some recession in trading activity.

611. The institution of the Legislative Assembly at the end of 1948 was followed by a year less disturbed by political differences. The ten members from Kordofan asked a number of questions in the Assembly, mostly referring to water supplies and agriculture. The educative value of their experiences was noticeable for they were able to explain to their constituents government policies and functions which they had not hitherto understood. But a price had

to be paid for this in the prolonged absence in Khartoum of some of the leading personalities with heavy administrative and judicial duties in their tribal areas.

612. In the conduct of more local affairs, further development was temporarily halted pending the inquiry into the best course for future advance. Dr. Marshall visited the province in the course of these inquiries and his report was considered by the province council during the second of its two meetings. It had previously been debated in the rural councils. The report was approved in general but the opinion was held that it would be unwise to apply it too soon in rural areas where the tribal system is still the appropriate basis for administrative organisation. The resolution subsequently adopted by the Legislative Assembly closely resembled that of the province council.

613. The year was therefore one of consolidation for the various units of local government. Although some temporary decline in public interest was discernible, the proceedings of the various councils showed that the members were lacking neither in ideas nor in independence of thought. But their effectiveness was limited by the lack of trained staff. A severe practical problem confronts rural councils wishing to assume full responsibility for the administration of large thinly populated areas.

614. Although no new local councils were created, a number of projects for their formation were considered. In particular, the Kababish member of the Legislative Assembly persuaded his nomadic tribesmen that their conservatism might weaken their ability to protect their interests. At a meeting in June the leaders of the tribe decided to transfer the headquarters of the tribe from the nazir's encampment to permanent buildings at Soderi and to obtain the services of an executive officer on secondment from government service, the tribal area to be divided into four regions each under active and literate sheikhs with permanent administrative offices.

615. The two town councils of El Obeid and Nahud were less embarrassed by problems of geography and greater concentration of effort showed more tangible results. The council elections in El Obeid were keenly contested and brought fresh blood into the conduct of the affairs of the town. It is now ten years since this council was formed and its competence has steadily improved. The first portion of the protective forest round the perimeter of the town was completed and a grant of £E. 10,000 was made by the central government towards the £E. 20,000 required for macadamized roads in the town. The council voted the balance from its reserves. At Nahud the council built and occupied new offices.

616. The hard times which some parts of the province experienced during the year were reflected by an increase in cases of theft. The exception was in El Obeid itself where a high standard of police work led to a decrease of 398 crimes reported under the penal code and an increase of 769 reported under other ordinances, particularly those concerned with public health. In the province as a whole there was some increase in judicial work and the incidence of homicide remained high. The work of the police maintained the high reputation of the force in Kordofan.

617. The prison system was revised so that all habitual criminals in the province should serve their sentences in the province prison, first offenders gradually being segregated into detention camps to serve the first part of their sentence in quarry camps to emphasise the deterrent effect of their punishment, and the second part in agricultural camps with workshops for activities during seasonal interruptions in cultivation. Under these conditions first offenders serve their sentences in more natural surroundings and emerge better fitted for ordinary life.

618. The state of the labour market also reflected the economic vagaries of the year. In general unskilled labour rates declined. During summer months they were exceptionally low in rural areas compared with the price of grain, but recovered in the Nuba area after the rains. In El Obeid labour was plentiful. A development in the field of labour was the organisation of trade unions following the introduction of comprehensive labour legislation, Four of these were independent unions confined to El Obeid and embracing the garage artizans, lorry drivers, lorry owners, and commercial clerks. The carpenters, tailors, masons, public works department employees, and mechanical transport department employees organised branches affiliated to their main unions in Khartoum. A few minor strikes occurred but the new system had not time to find its bearings.

619. Abnormal climatic conditions adversely affected the economic fortunes of the province. A long cool winter was followed by a relatively cool summer. But in general the rains were late and, except in the south, inadequate. In El Obeid the rainfall in the catchment area for the town water supply was the lowest on record. In consequence, about a third of the people in Dar Hamid in northern Kordofan grew almost no grain at all and a large part of Eastern District had the worst harvest for years. Similarly the northern part of Western District had an abnormally poor crop in an area where rain fell unevenly throughout. Grazing and water supplies were also affected and led to large migration of camel and cattle owners to the south and even into southern Darfur. Fortunately



the Nuba Mountains area, and the southern part of the province generally, had good food crops, with an estimated surplus sufficient to supply the deficiency in the north. But the crop was late and little had reached the northern markets by the end of the year. Of the other main crops, sesame fell short of the record of the previous year, and the water melon harvest in western Kordofan was below average. Apart from drought, both crops suffered from the pests peculiar to them. To add to the disappointing agricultural scene, the Nuba Mountains did not produce the cotton crop which might have been expected from the good rains in the southern two-thirds of that area. 40 per cent more seed was issued than in the previous year and a crop of 300,000 small kantars was estimated. It is probable however that the area sown was decreased in favour of grain and it is certain that pests, particularly pink and Egyptian boll worm, took a heavy toll. In consequence the crop estimate was reduced to 230,000 kantars by the end of the year, with the probability of a further reduction, possibly to the level of the previous crop of 201,580 small kantars. The value to the cultivator should however be substantially greater than the £E. 202,000 paid for the 1948/49 crop since the price of Grade I cotton advanced from £E. 1.100 m/ms. to £E. 1.700 m/ms. per kantar. At this price the kantar is worth almost five times as much as the average price from 1934 to 1939.

620. Field trials for the mechanized cultivation of ground nuts on sandy soil were continued at Sungikai. Climatic conditions were adverse. The experiment provided further experience in the use of agricultural machinery and the trials will be continued in the hope that more normal rainfall will give a fairer indication of the commercial viability of ground nut cultivation in this area. The Abu Habl scheme for the flood irrigation of the cotton soil along the water course of that name was also the scene of agricultural experiment. The problem was one of finding means for eliminating the dura midge which ruined previous grain crops. Although the small rainfall negated these experiments, valuable information was gained on 'ponding' irrigation for further trials.

621. A conservator of forests was posted to the province and Darfur at the beginning of the year. His presence was soon felt through a number of schemes for the conservation and exploitation of forests and the establishment of nurseries. Local authorities showed an intelligent interest in these schemes. A central forest plantation was started on 100 feddans of land on the Khor Abu Elabl with satisfactory initial results. In addition arrangements were completed for the reorganisation of fuel supply of El Obeid and a contract was given for the supply of 5,000 railway sleepers

from the extreme south of the province. Damage by fire throughout the province was exceptionally low.

622. The yield of gum arabic showed a decline in the early part of the year, partly through a fall in prices and partly through the effect of cold weather on individual trees. When prices recovered after the rains there was renewed activity in the gum market. The amount marketted in November and December (4,411 tons) was a record for that period.

623. Public health was unaffected by any major epidemics and the total of attendances and admissions at the hospitals showed a slight decrease. Among some isolated Nuba communities cases of malnutrition were identified due to lack of sufficient grain supplies. Relief was sent to these places and a medical comfort centre was established at Kamdung to tide the people over the hard period before the new crop was reaped. Some fatal cases of poisoning occurred at Kamdung from the eating of cassava which had not been properly prepared. As in 1948, smallpox was again introduced into the province by immigrants arriving from the west. Fortunately the disease did not spread owing to the vaccination of the populace of El Obeid in the previous year. But this annual migration from the west is a danger to the health of the country and the temporary quarantine staff at Nahud was busily occupied. Proposals for a permanent control station were made and experience during the year emphasized importance of the matter.

624. The secondary school at Khor Taggat was ready for occupation in December and the headmaster and his staff arrived before the end of the year to make final preparations for its opening. New buildings were also completed for the Ahlia intermediate schools at El Obeid and Nahud, and for the Catholic mission school at El Obeid. At El Obeid also new buildings were constructed for the technical school and the applicants for admission increased from 85 to 136. Two new elementary schools were opened at Um Dorein, in the Nuba Mountains, and at Khor Gedein, in Dar Hamid.

625. The cattle of the province suffered comparatively few losses from disease, 571 reported deaths from cattle plague being exceptionally low. Contagious bovine pleuro-pneumonia was still prevalent and the 267 reported deaths from this disease were certainly less than the real losses. Camels suffered from strongylosis and there was a heavy loss of sheep in the northern district from *heamonchus contortus* until an effective remedy for it was found. An important development to the credit of the veterinary staff and the Messeria tribe was the campaign to improve the quality of Messeria cattle. 15,000 'scrub-bulls' were castrated and 50 stud bulls were purchased from Singa and southern Darfur

with funds provided by the Messeria council. In addition the Messeria voluntarily increased their herd tax by P.T. 3 per head of cattle to finance immunisation of their herds from cattle plague. 70,000 beasts were treated.

626. No major developments in the road system occurred but before the end of the year preliminary work was begun on roads with promised valuable results. These included dry weather roads for the more economical transport of cotton from ginning factories in the Nuba area to rail-head; a road through the country between the Nuba Mountains and the White Nile and thence south of the Nuba Mountains into Darfur; and finally a new all-season road to link the main markets of the Nuba Mountains and the railway. Communications were also improved by the opening of telephone exchanges at Rahad, Um Ruwaba, Ghabsha and Wad Ashana. The trunk telephone line to Khartoum was improved.

627. In a year of light rainfall, the problem of water supply continued to demand much attention. At El Obeid, where the population has doubled in the past ten years, the amount of water provided by the public works department has been quadrupled in the same period. The supply from deep bores in rural shows a similar increase. But the demand for water is by no means satisfied. The shortage was felt particularly in the northern half of the province where many wells and ponds which normally give a good supply were unable to support the people and animals which usually drink from them. On the other hand new water yards on deep bores were opened at Kedada east of El Obeid and at Markib and Magrur, in western Kordofan. Boring at four other sites in the Western District failed to find water. The urban supply at El Obeid was safely maintained throughout the dry season although rationing of water to consumers drawing direct from the water-mains had to be introduced in April. The subsequent rains were the lightest on record in El Obeid. The shortage which ensued, and which will become acute in 1950, directed urgent attention to the programme for increasing the supply by bringing water to El Obeid from outside its normal catchment area. Work was continued on the well at Banu and 300 feet of subterranean tunnelling were completed during the year. At El Obeid also two shafts were sunk near the main reservoirs and tunnelling was begun. An important development in this field was the digging of 49 surface reservoirs (hafirs) by mechanical means in the southern part of the province. 377,000 cubic metres of earth were excavated. Only two of the 49 hafirs failed to give satisfactory results and much practical experience was gained in the choice of sites for future excavations, in methods of filling them, and in the operation of the machines. This method of providing water on fertile clay plains

hitherto denied to cultivators promises important economic results. The clamour for more hafirs of this kind was evidence that the public appreciated their significance.

628. The public works department expended £E. 210,891 on buildings. Most of this was invested in schools, particularly the secondary school at Khor Taggat, the technical school at El Obeid, and elementary schools for girls at Rashad and Muglad.

629. Although the harvest from the 1949 rains was less than average, trade in agricultural and animal products was not stagnant. Comparative figures of exports by rail, including the produce of Darfur, showed evidence of this:—

	1946 tons	1947 tons	1948 tons	1949 tons
Grain ... ..	19,500	21,990	12,637	4,266
Sesame ... ..	2,580	1,541	5,218	4,737
Sesame-oil ... ..	2,807	2,487	3,265	3,526
Groundnuts ... ..	1,967	12,619	20,412	11,678
Gum ... ..	21,442	18,045	24,642	23,347
Semn ... ..	1,198	1,384	1,091	1,341
Hides & skins ... ..	275	190	220	290
	Head	Head	Head	Head
Cattle ... ..	31,801	24,618	21,170	22,192
Sheep ... ..	45,100	48,186	28,181	54,194

630. Gum prices declined in the middle of the year but rallied sharply when the new crop reached the markets. The extent of the fluctuation is indicated by a maximum price at El Obeid of £E. 1.680 m/ms. per kantar and minimum of 400 m/ms. Although the quantity sold was less than the record 1947/48 season, it exceeded the average for the previous five years:—

Season (1st. November to 31st. October)	Weight Kantars	Value
1943/44	252,282	
1944/45	204,220	
1945/46	342,741	
1946/47	373,821	£E. 507,534
1947/48	546,974	546,853
1948/49	436,491	388,548

In November and December 97,065 kantars were marketted to the value of £E. 138,491 compared with £E. 81,866 for these

months in the previous year. The total receipts of gum producers during the year were £E. 445,170.

631. The average price of sesame also rose in November to £E. 1.930 m/ms. per kantar compared with £E. 1.116 m/ms. in the previous November. Groundnuts to £E. 1.412 m/ms. compared with 752 m/ms., and melonseed to 690 m/ms. compared with 550 m/ms. The smaller crops from the 1949 rains were therefore offset to some extent by higher prices. The following sales were recorded in the principal markets in 1949 :—

	Quantity Kantars	Value £E.
Gum .	448,204	445,170
Groundnuts	99,153	98,707
Sesame	233,569	366,907
Melonseed	169,485	114,421
	Total ...	£E. 1,025,205

632. Additional sources of income came from the local sale of 22,769 cattle and 67,970 sheep to the total value of £E. 211,333. Cotton brought in approximately £E. 200,000 and Kordofan could claim not less than a third of the £E. 1,750,885 paid in Egyptian markets for camels from the Sudan.

633. Although consumer goods were plentiful the retail trade declined during the year until the higher prices for the new crops brought a fresh wave of buying. The consumption of sugar increased from 68,025 sacks in 1948 to 100,075 sacks in 1949.

634. Revenue through province and local government budgets increased from £E. 330,505 in 1948 to £E. 385,938. The nine local government (rural areas) budgets were expected to show a surplus of £E. 13,534. El Obeid town council budgetted for a surplus of £E. 5,418 but, in the final accounts, revenue should exceed expenditure by over £E. 7,644, mainly owing to an increase in the rate of traders licences from £E. 2. to £E. 4. In the whole province business profits tax fell from £E. 25,060 in 1948 to £E. 17,647.

#### DARFUR PROVINCE.

635. The dependence of the economic and social structure of the province upon an adequate grain crop was demonstrated during 1949. Prices rose steadily through the first eight months and only small arrivals of grain from the west kept Fasher and Kutum

markets supplied. Fasher, with an intake of 12,000 ardebs, received half its normal needs at about twice the normal cost. Dukhn averaged £E. 3.883 m/ms. per ardeb. In August a maximum price of £E. 7.880 m/ms. reached, nearly double the price in Khartoum. Free issues of grain were made in Fasher on four occasions and in other places where the need was great; but the government reserve was chiefly of value for seed. The scarcity was followed by one of the heaviest sowings in the history of the province, when every remaining grain was put into the ground. The northern grazing, which had been moderately good during the winter of 1948-49, also failed, and, as a result, migration into the rain-belt by both Darfur and Kordofan nomads and by sedentary sections in northern Darfur took place on an unprecedented scale.

636. Official relations with Wadai were extremely cordial throughout the year. The most satisfactory feature was, however, the improvement in relations between territorial chiefs along the frontier, where the boundary divides tribal units throughout its length, usually leaving the original ruler on the Sudan side. During the year the Sultan of the Masalit (Sudan) visited Goz Beida (French territory) for the first time in his life and Abeche for the first time for nearly 30 years. His son, a member of the Legislative Assembly, also visited Abeche where he stayed with his fellow deputy, the Sultan's nephew, who represents Wadai in the French Equatorial Assembly. Frontier security improved in the atmosphere engendered by these visits and also by the success of the new Masalit court at Habila and the general policy of devolution which the Sultan began to adopt.

637. The Darfur representatives in the Legislative Assembly remained rather in the background in Khartoum, contenting themselves with a few questions on matters of local interest but reporting back regularly on what was taking place. Interest in the Assembly waxed during the recesses, when the members returned to give an account of its activities.

638. The province council met in October. It reaffirmed its determination to extend the Maahad course, reviewed the educational, medical and province development programmes, expressed concern at the deterioration of public security in the north and made recommendations for dealing with it. Discussion also centred on the control of export of grain from the province, and on Dr. Marshall's report which was welcomed with reservations.

639. Plans for the application to the province of the general principles laid down in Dr. Marshall's report were worked out. The main difficulties appeared to be rivalry among tribal authorities in the south, the conservative attitude of the north, and above all the

shortage of staff for secondment. The province at the end of the year was on the verge of considerable experiments in this direction and many adjustments to be made became apparent; much solid work was done by the various councils and their committees in the course of the year and the increasing awareness of the general public of their direct concern in local government.

640. Fears of being absorbed, and confusion of local government with local courts, combined to make Eastern Darfur reject the proposed amalgamation with the Fasher council and continue its precarious financial independence. Even the Fasher council, however, was finding it hard to make ends meet, despite an increase in education rate. It remained the most satisfactory working body in the province, as indeed it should, and once complete segregation of staff becomes possible it should be well ahead in achieving the primary desiderata. Its decision to spend a third of its development grant on the erection of a council chamber and offices was criticised as premature, but should certainly encourage that civic pride without which real progress is hampered.

641. The work of the southern council was disappointing, largely owing to personal friction and tribal rivalries. It remained to be seen whether the new system of sub-divisions and junior executive officers would be more successful. The Kalaka division, where a previous attempt to set up a local committee was wrecked upon the refusal of the Fellata representative to accept the chair in his turn, was having serious birth pangs owing to Habbania suspicions that their authority was being sapped. In its quiet fashion the Fur council functioned satisfactorily and the way in which it dealt with a major financial problem over education provided a most satisfactory contrast with the southern council. For all its poverty, the unofficial northern council showed a much more corporate spirit and cohesion than its wealthy and official counterpart at Nyala. Against a background of scarcity and unrest, and with a large proportion of the population far off in the south and south-west, the plans for the new official council and its administrative sub-structure were worked out. A difficulty here was the long-established identification of judicial with administrative powers both on the council itself, sitting as an appeal court, and in the person of the court member acting as an administrative agent. This confusion of function, anathema to the theorist, was to be corrected in the new council budget, and the courts were to be reconstituted.

642. The Dar Masalit administration had suffered in the past from over-centralisation, but the Sultan toured extensively during 1949 and took an increasing interest in the creation of rural centres with court, dispensary and school, on the model familiar elsewhere

in the province. His treasury was also re-organised, as the accounting staff left much to be desired and reserves had been depleted by recent building programmes. The Sultan's warrant was also revised during the year and extended to include Dar Gimr, whose head, with the restored title of Sultan, agreed to co-operate as a junior partner and share the advantages of a common chest and budget.

643. In spite of the repatriation from the east of numbers of criminals of western origin, the basic security problem in Darfur remained that of controlling isolated tribal units grazing in others' country. There was a nasty affair in August near Mellit between armed Zayadia camel thieves and a police patrol, and some Kordofan Arabs in search of lost animals were molested by Zaghawa. Zaghawa thefts of grain and camels as usual increased as the season advanced, and reached a maximum when the people were ready to move north again. It was alleged that the arrest and conviction of 43 out of 66 wanted men within five weeks had a certain cautionary affect on one section, but it was too early to judge at the end of the year.

644. It is pleasant to be able again to record no incidents between Meidob and Kababish or between Rizeigat and Dinka. The system of annual frontier meetings and exchange of permanent representatives on trans-border courts sufficed in most parts to settle outstanding differences in amity. The premature entry of Western Baggara into Zalingei District before the Fur crops were harvested and the subsequent seizure by the Fur shartais of large numbers of cattle threatened a major clash at the beginning of the year, but a settlement was reached and compensation paid. Relations between Fur and Masalit also improved with the substitution of fixed Masalit court centres on the Wadi Azum for the old peripatetic border court. The peace of Southern District was threatened by unnecessary and vexatious boundary disputes between Habbania and Rizeigat, Habbania and Beigo, and Taaisha and Gimr, which dragged on through the year and absorbed a great deal of administrative time.

645. The previous province police strength of under 400 was unable to provide adequate posts and controls in these circumstances and in 1949 the strength was increased to 442. The standard of literacy was still low at 34 per cent but this should rectify itself with the output of many new sub-grade schools and meanwhile a good type of recruit was coming forward from discharged soldiers. The greatest credit is due to a corporal in the Darfur Province Police who passed out top of his year at the Police Officers' Training School. Northern District police (and the Northern District council and tribal authorities) had a solid achievement to their credit



in the elimination of the camel thieves' refuelling stations at Hujjaj and Um Minekhhir in the hills beyond Mellit. Control was also tightened up at Amka, the next stage of the thieves' road to the French frontier. The standard of criminal investigation was still too low and steps were being taken to improve it and to eliminate unnecessary delays. The arrival of more motor transport should facilitate swift action by the police.

646. Forty-eight major courts were tried during the year. The shortage of first class magistrates remained acute. Two big tribal fights were tried by special courts during the year. Local courts were inspected during the year by the sharia inspector of native courts, and the bulk of his recommendations were accepted by local authorities. The structure of the court system in various parts of the province came under review. Mention has been made of the revision of the Masalit charter to cover the creation of local courts. In Zalingei District several redundant courts were eliminated. The Southern Magdumate court was being re-cast as the existing substructure had failed to draw away cases of first instance from the central panel at Nyala. The Northern court system was also completely revised and a proper appeal court was projected.

647. The local government development grant was of great assistance in market construction and other revenue-producing items as well as in the building of courts and council offices. In addition to numerous small works seven elementary and seven sub-grade schools, four dispensaries, eight court houses, three sets of garages and 21 market buildings of various kinds were under construction during the year. A fine set of offices and a council chamber with public galleries were begun in Fasher in December and rose to roof level by the end of the year. Office accommodation was also built for the southern council in Nyala.

648. The Public Works Department programme in Fasher was set back by the necessity of replacing eight officials' quarters which were destroyed by fire in November. Experiments were begun with fire-resisting chemicals for thatched roofing. A slum-clearance scheme was also projected in the vicinity to guard against future disasters. Advantage was taken of the temporary abundance of water in the Fasher fulas during the winter of 1948-49 to press on with the construction of the new market. Anti-erosion and road construction work continued in the town. The contrast with outside markets such as Daein, with their new but unsightly buildings, led some councils to consider investing funds in the construction of new markets themselves, thus securing uniformity of design and a regular source of revenue. A good block of shops of this kind was

put up in Buram, and another was under construction at Tullus. A small municipal housing scheme for government officials was also under discussion in Fasher.

649. Dearth of cash kept labour rates comparatively cheap in Fasher. During the cultivation season, however, the effort made everywhere to grow grain pushed up hoeing rates to double the normal.

650. Much useful work was done by province prisons through working — and quarry-camps on roads and at Wadi Golo. Under keen supervision the prison workshops put out an increased quantity of useful and saleable articles. It was hoped in 1950 to provide locally much furniture and equipment hitherto imported at great expense and with considerable damage en route. Approval for an agricultural camp and a quarry camp outside Fasher on the lines of Ben Gedid in Kordofan was received during the year, and although there was insufficient water to irrigate the area cleared below the Wadi Golo dam successful cultivation was undertaken on the falling reservoir. Approval was received to replace the Nyala prison in 1950. There, too, moveable first offenders' camps were projected.

651. Local government finances were in a really sound way only in Southern District. Sub-grade education was proving a heavy burden elsewhere and budgetted surpluses were small. The opening of bank accounts eased the strain on accounting staffs both for local government authorities and for province headquarters and should go far to obviate the confusion caused by delays in debiting. A local bank would be a further help. The black market in francs continued to flourish at Geneina where the pilgrim traffic enabled money-changers to make enormous profits by quoting their own rates to immigrants and selling back the francs to French subjects returning after disposing of their produce in the Sudan.

652. Receipts from business profits tax fell in Fasher from £E. 3,208 to £E. 2,963, reflecting the general recession in trade. Gum auctioned in Fasher market amounted to 28,558 kantars compared with 34,548 kantars in 1948. The average price, which was 679 m/ms. per kantar over the whole year, had an upward trend throughout and the average for December was £E. 1.019 m/ms. Comparative average prices are:—

1949	—	679 m/ms.
1948	—	441 m/ms.
1947	—	802 m/ms.
1946	—	684 m/ms.

The highest price per kantar was £E. 1,200 m/ms. in August and the lowest was 200 m/ms. in March. The highest in 1948 was 620 m/ms. The market thus showed some reaction to the new minimum export price and a good year for gum in 1950 was cautiously predicated.

653. The cattle trade in Southern District eclipsed all previous records and it was estimated that over 35,000 head were exported. Auction sales for export cattle in Nyala proved successful and it seemed that there would be little difficulty in getting sufficient bulls off the grazing for the Kosti meat factory. Meanwhile the mass immunisation campaign continued and there was a danger of overstocking which future heavy sales should tend to reduce. Dealers in clarified butter lost heavily during the summer owing to an unexpected influx of French Equatorial semn. Sesame became a profitable cash crop and export to El Obeid began from Nyala. The hides trade continued the recovery which it had shown in the previous three years. Trade with French Equatorial Africa dropped in value from £E. 59,000 to £E. 56,000 in 1949, but customs receipts rose and Geneina profited heavily from the pilgrim traffic and from trade in grain.

654. The rains were uneven both in time and place. Curiously heavy falls at the end of March and in early May, with usual premature sowing, were followed by a long dry spell until late in July. Six weeks of fairly normal rainfall then brought the extensive crops along well, but widespread drought succeeded until mid-October, when a sudden heavy fall over most of the province did little good and some harm. In the event much of what should have been a bumper crop dried out in the ear. Certain parts of Fasher District had good crops, Nyala District was on the whole well above the average as also was Dar Masalit south of Geneina, but the traditional province granary in Zalingei District had a bad year for dukhn and was well below average. The north and east, save for Jebel Si and the neighbourhood of Mellit, were very short. At the end of the year therefore the prospect of still higher prices had to be faced. The Nyala crop was exceptionally good, though insufficient to counterbalance the Zalingei deficit, and Nyala and Geneina filled the province reserves, civil and military, without interfering with local supplies. There was more over a steady trickle of grain into Fasher from various places to the South and southwest and into Kutum from Jebel Si and Dar Utash. Wild rumours of vast government holdings of imported grain at Khartoum North and Atbara had inspired local merchants obstinately to refuse to import grain from Geneina or elsewhere against the inevitable rise, fearing dumping at a later date. At Nyala, grain prices at £E. 2,350 m/ms. per ardeb were not out of keeping with those of

the other staple commodities, the bull and the horse. All these cost approximately four times their price ten years ago. Nyala also profited by the high price of sesame, of which a large crop was harvested. The apparent decline in the tobacco crop to one-fifth of the 1947 figure was due in part to the failure of the late rains in 1948, but smuggling to evade royalty was also suspected. Frost and unseasonable heavy rains spoiled the Zalingei potato crop and damaged the orchards, but in spite of Fur apathy there were signs everywhere of an increasing local interest in fruit growing and market gardening. The Fur winter wheat crop was fair and provided a valuable standby where the dura crop failed, but the new crop was much less promising.

655. Grazing in the north was fair at the beginning of the year and in May there were still some Zaghawa in a position to take advantage of an unseasonable spate in the Wadi Howar, but the 1949 rains were of little value except for limited areas south and west of Meidob. The new bores at Wadi Maraiga and Hagar Sari should prove their worth by enabling sheep to range further afield. The Mellit dam, fuller than ever before, was again an enormous boon to the whole north-eastern area. It is interesting to note that the Zayadia seemed to enjoy a virtual monopoly of the camel trade to Egypt. In cattle areas rinderpest and pleuropneumonia were again prevalent, the latter being increased by immigrant cattle from French Equatorial Africa. Veterinary staff from Fasher dealt satisfactorily with outbreaks west of Kebkabia at the end of the year and the Northern District's stockman carried out a valuable tour through areas requiring serum and vaccine. Baggara demand for vaccine under the mass immunisation scheme was much the same as in previous years at 220,000. A misconception as to the use of the new antrycide drugs as an open sesame to fly-infected areas had to be combated. Bad grazing on the upper river in March and April caused losses from fly but fortunately early rain enabled the herds to recover for the journey north. There was a large influx of Nigerian cattle-owning Fellata into the Baggara grazing in 1949. With the mass immunisation campaign in full swing and the Kosti meat factory yet to come there was no room for extra stock and arrangements were made for their repatriation. The skill and necromancy of these people as animal-masters are legendary, calves going out to graze with their mothers and fasting voluntarily, and sheep are proof against the attacks of wild beasts. Following upon a visit by the inspector of hides the possibilities of exporting locally-tanned goat skins were investigated and arrangements made for a sample consignment to be sent to the United Kingdom.

656. In development and water supply the first five-year plan was drawing to a close and a tribute must be paid to the work of the drilling rigs and the water-yard installation staff. The spell of success which attended their efforts lasted into 1949, when the northern rig struck ample supplies at Wadi Maraiga and Hagar Sari in the Medidob grazing area. Thereafter disappointment followed with a series of forlorn hopes undertaken because a great need existed but without any great hopes of success. The northern rig failed at Mellam el Hosh, the proposed centre for the northern Rizeigat in the dune area north of Kutum, and again at Abu Zureiga in the dry belt south of Fasher. It then moved east to Abyad and Um Jafala on the El Obeid road but had met with no better fortune up to the end of the year. The southern rig, after a success at Haskanita on the cattle route east across the Maalia Goz, tried vainly to close the gap to the west between this bore and Muhajjeriya. These efforts were supplemented by a drag-line excavator on loan from the Ministry of Agriculture, which was engaged in a hafir programme round Fasher. The first of these, at Fashshar, east of the town, was finished before the rains, and filled to the brim, watering men and cattle well into the New Year and providing, with Wadi Golo, an invaluable relief to the diminished underground water supplies of the town. Work on the Golo reservoir got under way during the opening months but was held up by shortage of plant and spares. None the less the final plan was well on the way to completion by December, consisting of a shallow 200-acre reservoir two kilometres long by 800 metres wide, with a capacity of two million tons. In addition to work on the Wadi Golo scheme the special staff were able to carry out some province projects and to give advice on a number of others. Congestion at the Fasher water yards in the summer months was relieved by allocation of different categories of user to different yards and by the introduction of the funnel-system of entry.

657. A grant was made of £E. 26,000 for experimental work on the Fasher-El Obeid road. Decontrol of transport resulted in a rates war at the beginning of the year which held up sugar deliveries for a time but was eventually solved. Local produce cannot easily stand high transport costs to railhead and the increase in petrol prices at the end of the year made the situation difficult. Road improvement should lessen the charges, and developments in local trade should help to solve the difficulty of adequate return loads. The various experimental bus services were a great success from every point of view except that of finance, and councils in 1950 must decide whether to continue to subsidise them as a public amenity and an administrative convenience.

658. Expansion of medical services in rural areas continued during the year and approval for improvements at Fasher hospital was given. Reference is made below to the prompt action taken to prevent a widespread epidemic of smallpox. A mass vaccination campaign was also planned but postponed owing to difficulties over vaccine. It was noteworthy that local councils greeted the proposal with enthusiasm, though here again local migration would make it difficult to organise. Minor outbreaks of relapsing fever were successfully localised and suppressed. The prevalence of smallpox in French Equatorial Africa during the summer emphasised the inadequacy of control arrangements on the western frontier and plans were made for a permanent quarantine station with accommodation for customs and passports staff outside Geneina. A temporary quarantine camp was meanwhile constructed at Asunga police post and dealt with the main flood of pilgrims. Some of these came on a new trans-African bus service from Accra to El Obeid. The imposition of full pilgrimage dues into Arabia combined with restrictions on export of currency from French Equatorial Africa caused considerable confusion and discomfort to the unhappy pilgrims, many of whom had to be repatriated from Port Sudan. In spite of this, however, and of other difficulties, over 4,000 persons passed through the controls and the dangerous threat of a smallpox epidemic was successfully met by the medical authorities.

659. The Ahlia intermediate school in Fasher suffered from the usual financial difficulties and notably from its inability to operate a proper provident fund scheme and so attract the right type of master. The opening of a government school in Nyala in 1950 should relieve it of the reduced fees pupil who has been a grave source of embarrassment but will also deprive it of the assistance of the wealthy southern tribes. Its finances were, however, put on a sounder footing during the year, and a provident fund scheme drawn up. The Maahad el Ilmi was disturbed by internal dissensions and the departure of many pupils to Omdurman or El Azhar. Additional boys' elementary school buildings at Fasher and Nyala were completed early in the year. Work was begun on new boys' schools at Kas in Zalingei District, Geneina and Mellit, and also on the Mellit girls' elementary school. Buram boys' school and Geneina girls' school were also nearly ready by the end of the year. Progress in girls' education was sure, if slow, and the number in boarding houses increased. The opening of a girls' sub-grade school at Daein by the Nazir's sister-in-law was an encouraging sign. The new Fasher boys' club was opened during the summer in hired premises, and made an encouraging start.

660. February 11th was the coldest day of the year in Fasher at 37 F. minimum and May 7th the hottest at 108.5 F. maximum. Temperatures on the whole were slightly below normal with an average drop of 40 between maximum and minimum daily readings. May and June were the exceptions, with temperatures well above the average and night readings approaching 80. 17 mms. of rain fell in May and no more until July 19th when the first of a few heavy showers cooled the atmosphere. But in spite of some heavy showers in August readings were below average and tailed off in September to nothing. A sudden spurt in October was too late for the grain and grass. Outside, however, there were more favoured areas. Freak hailstorms were reported from Nyala, and from Geneina where a square kilometre of ground near Kireinik was covered.

661. The Zalingei herd of elephants again did damage but a game ranger accounted for two in December and frightened the herd south. A member of the herd of giraffe which inhabits the vicinity of Geneina strolled into the market one day and appeared to be unmoved by the shouts of attendant small boys.

#### UPPER NILE PROVINCE.

662. Apart from incidents of a minor character the frontier was free from serious disturbance. The Boma area was quiet and it was decided to withdraw the Equatorial Corps post there and to replace it by a garrison of Upper Nile province police early in 1950: difficulties of supply and control at this remote outpost some 500 miles from Malakal are formidable. Relations with the Ethiopian post at Tirgol near Akobo, so far as they concerned Anuak affairs, remained good, with exchanges of visits and the beginnings of a border court to settle cases, but the position there so far as it concerned the Nuer and at Jokau was less promising. The trouble over grazing fees was temporarily surmounted but seemed likely to arise again at any time.

663. A meeting, attended by the Civil Secretary, was held at Bentiu in April. This was the third Nuer meeting: the first was held at Fangak in 1945 and the second at Ulang in Eastern Nuer District during 1947. There is no doubt that these meetings have done much to bring the people of the three predominantly Nuer districts together and assist in the adumbration and settlement of their common problems. The second meeting of the province council was held at Malakal in December, when policy in relation to medical work, education and veterinary matters was discussed. Here again, one of the main advantages has been mutual contact of people from the various parts of the province and the establishing

of a feeling of solidarity in the discussion of their common problems. During the course of the year it was decided to set up three provincial area councils, the first in Bor, the second at Fagwir on the Zeraf Island and the third at Boin, in the Mabaan country. It was not proposed that these area councils should, at any rate for the time being, be warranted rural district councils, but that the local authority should delegate such power as might be considered necessary and expedient to enable them to function. The buildings at Fagwir, the site selected for the Zeraf Island area council, were almost completed by the end of the year, while a start was made to set up the necessary quarters, in Bor, for the whole district except the two most northerly courts. Owing to the difficulty of entering the Mabaan country until the end of the year no progress was made at Boin. It was hoped to inaugurate the Zeraf Island area council in March and that at Bor in June, 1950. The Malakal town council, though hampered by the lack of council buildings which could not be erected during 1949, held its first meeting in March. In spite of teething troubles the council made a good start and should grow into a useful local government body. A decision was reached early in the year to reorganise the Shilluk local administration and to bring it as far as possible into line with local administration elsewhere. This entailed setting up and developing five major court centres to take the place of the 13 Shilluk tribal divisions and the gradual relegation of the Reth to a position of spiritual rather than both spiritual and temporal leader of the people. The first steps were taken with apparent success, two centres were built and appeared to be popular. A better understanding of the tribal set-up in the Murle country showed the advisability of reorganising the system of Murle courts and this was gradually effected during the year. Mainly in Central Nuer District, but in one case in Western Nuer District, the experiment was made of introducing executive chiefs to take over the administrative burden previously carried, together with the judicial work, by the court chiefs. This has so far proved a popular move and the executive side of the local administration improved. To what extent this was due to the personalities of the men concerned it is too early to tell, but the principle was established of divorcing the judicial from the executive organ of government.

664. Owing to a sufficiency of grain there was at times difficulty, in tribal areas, in obtaining enough labour for government works, but generally there was an adequate supply.

665. 1949 will go down to history as a good grain year in Upper Nile Province. The Renk, Paloic, Dunjol and Ngok areas had large surpluses, as did the country round Nasir which exported as much as 2,000 tons. Apart from Bor the province was self-



supporting and Western Nuer District produced a small exportable surplus for the first recorded time in its history.

Total province export of grain by river, including an appreciable quantity of maize was in the neighbourhood of 8,000 tons while large but unrecorded quantities also went north from the Dinka and Mabaan areas by canoe and lorry. Considerable progress was made in freeing the grain market from the practice of price and movement control that had become a restrictive feature of local economy. Prices rose during the year and greater areas were sown for the 1949/50 harvest. Hopes of bumper crops were however largely nullified by flooding at the end of the rains. Good, even excellent crops, were expected in the northern Dinka areas and in the Mabaan, but elsewhere with the exception of the country north and west of the Bahr el Ghazal the country promised to be little more than self-sufficient. Experimental sunflower sowing was restricted because of the difficulty experienced in expressing the oil. Sunflower, as a substitute for simsim, should do well in many areas.

666. The hafirs constructed in 1948 practically all filled in 1949 and the Rural Water Supply and Soil Conservation Board hafir team was expected to carry out further work in the Paloic area east of Melut and in the hinterland west of Kodok in 1950. Harig cultivation is becoming increasingly popular: the Shilluk have adopted it in many areas and both the Ngok Dinka of the Sobat and the Kwil Dinka north of Lake No showed eagerness to develop their harig lands. By the use of the harig technique and the provision of better road communications and water supplies in the large areas of Upper Nile Province which have adequate rainfall and which are not liable to flooding, it is certain that grain production can be increased considerably. Forestry reserves prospered and new reserves were laid out. Small pumps were obtained for Bentiu, Fangak and Pibor which should greatly improve vegetable supplies in these stations. Another and even higher river at Bor once again put the garden on the west bank under water for many months.

667. The health of the province was good in that there were no major epidemics. There was an outbreak of kala azar at Melut amounting to 15 cases and there was a total of 32 cases of this disease in the province as a whole. Malaria infection in Malakal rose rather higher, mainly owing to the heavy rains in August and September which proved too much for the draining arrangements of Malakal town. Dispensaries in outstations and in certain tribal areas proved increasingly popular. The number of attendances was 316,172 compared with 287,581 in 1948, eye diseases, at 15 per cent, being the commonest complaint. The number of operations in Malakal hospital again showed an increase from 1,226 in 1948 to

1,507 in 1949. During the early summer the Malakal town water supply was found to be defective and it proved necessary to repair the main underground storage tank, which entailed cutting off all domestic water supplies for 48 hours, but, with the assistance of the Egyptian Irrigation Department, by the use of all forms of domestic storage and by efficient repair work, the inconvenience was slight. The hospital ship, the Lady Baker, returned early in the year, having been completely overhauled and renovated after her submersion in the White Nile for many months. She was used throughout the year for medical inspection duty up and down the province, but particularly up the Pibor, when in flood, where she provided medical services for the Murle.

668. The Inspector of Education was able to devote his full time throughout the year to inspection and organisational work. All schools have been visited and reported on. An attempt was made to correlate the value of the 4th year leaving certificate from all elementary schools. The first batch of Atar boys graduated. The two district educational councils (the central Nuer and the Shilluk) held meetings which were cordial and instructive. A plan for educational expansion over the coming five years was prepared.

669. The year was remarkable for heavy rains in March and again in May. June was very dry throughout the province, and there were 23 days without rain in Malakal. September was month of very heavy rain with a total of 345 mms. in Malakal, the heaviest day's rain amounting to 126.3 mms. How great the rains were locally in September may be gauged from the rise in the Nile. The mean rise during the month of September at Malakal is 20 cms. but in 1949 it amounted to 60 cms. There was no sudden rise in the Sobat to account for this and it must be concluded that it was largely the result of local rainfall. Very heavy rain was recorded at Kongor and doubtless to a large extent this was responsible for the major inundation in that area later in the year when hundreds of square miles remained flooded.

670. In veterinary matters the main work of the year was the successful inoculation with antrycide of a further 227,038 head of cattle, making a total of 549,781 head including those inoculated in 1948 with dimidium bromide. The procedure was to continue where the previous campaign left off, by dealing with the Gaweir and remaining Central Nuer District cattle, then passing on to those of Western Nuer District. The campaign was most successful. Apart from an outbreak in the Nuer districts at the end of the dry season, cattle plague was not greatly in evidence. Contagious bovine pleuro-pneumonia was common throughout the different areas of the province for most of the year. The serum station continued to

work well, and a total of 164,140 doses of serum were prepared as against 147,000 in 1948. This was below the target figure but difficulties of grazing during the rains were mainly responsible. 298,866 doses of cattle plague vaccine were prepared. A veterinary research officer was posted to the province in October. During the year the new Malakal dairy was erected and it was in production by the end of November. Trade in cattle showed some signs of improvement, but owing to the increasing amount of money in circulation in the nilotic area the local price of cattle tended to exceed its true economic value. This, together with the increase in freight rates on the steamers, meant that moving cattle to northern markets otherwise than on the hoof was a doubtful commercial proposition, except possibly during the months of June and July when the western cattle fall off in condition. Cattle were slowly coming for sale at local auctions which, in a year of plenty such as 1949, was a sign that the local people were beginning to accustom themselves to dispose of their animals. Instructions in regard to the correct preparation of hides were given wide publicity and some improvement was evident. The success of the antrycide campaign greatly reduced the number of hides brought to market.

671. An advance in province communications was achieved towards the end of the year by the opening of radio-telephone links between Malakal, Fangak and Bentiu. The arrival of a second auto-grader in October was a welcome addition to the province road grading equipment. The 2,600 miles of roads in the province were generally in good condition. Of this total some 1,500 miles are banked up to two feet high and can only be built and maintained by hand labour for some two months in and at the end of the rains, when the ground is still soft. Apart from normal maintenance work the auto-patrol grader completed the regrading of the Paloic-Khor Wal section of the Malakal-Renk road. Preparations were well in hand for the grading of the Pibor-Boma stretch in 1950. An important new road was opened in March, from Wangkai on the Bahr el Ghazal to Abiemnom and the western Nuer-Kordofan border near Abyie. In Western Nuer District the road from Wangkai, through Leik Nuer country, north of the Bahr el Ghazal, to Bentiu, was almost completed. A further link was the re-opening of an old trace to connect the Tonga-Talodi road and the Lake No-Lake Abyad road. Flooding at the end of the year was worse than during the previous two seasons in Central Nuer and Bor Districts, and a large part of the road system was under water in November. The Bor-Malakal road was cut between Duk Fawiel and Kongor and did not open until January, 1950. A sudd block occurred at Lake No during September and had to be removed. It is of interest that in November it was possible to sail by boat from

Tonga to Abu Gussa, a distance of thirty miles inland, owing to heavy discharges in Khor Ragaba.

672. Among numerous buildings erected by the Public Works Department during the year were a new house, office block and guard room at Fangak; a new house at Atar where most of the school was re-roofed; a new dairy and two middle standard houses at Malakal. Province buildings included a guard room and prison at Wast, court centres at Abujupa and Athedwoi, stables at Bentiu, town drains, prison alterations and a dairy at Bor; police lines in Eastern Nuer District, a rest house at Ajungmir and a two-roomed office at Pibor. The construction of the Malakal town council buildings was started in April when heavy rains caused the work to be abandoned until November. The year ended with the commencement of a formidable building programme including offices, dispensary, guard room and store at Nasir. Extensions to the province headquarters and the Jonglei office block were begun, and also a number of officials' quarters.

673. Apart from the trade in grain which, owing to good harvests and high prices, kept busy the Malakal, Nasir, Melut and Renk merchants, trade as a whole was slack. The shops in Malakal contained more goods than before but those in the outside districts still suffered from lack of working capital and commercial initiative on the part of the traders.

674. An appreciable trade in firearms between the Arabs of the Nuba Mountains and the Nuer of Eastern Nuer District came to light. Owing to the difficulties of control on the Ethiopian frontier where the Nuer and Anuak on the Ethiopian side of the frontier are fully armed, it has not been expedient to disarm the Sudan Nuer, but all firearms held by them have as far as is possible been registered.

675. A herd of 24 elephants was discovered near the Malakal aerodrome in January, but eventually they moved off after taking refuge in a swamp to the north of the town. No elephants had previously been seen so near to Malakal.

676. The Jonglei investigation team, reinforced by the addition of an assistant divisional engineer of the irrigation department, continued to collect the vast amount of information required to enable it to formulate schemes for remedial measures and to estimate their cost. Owing to the immensity of the area and the diversity of problems the task is formidable. The pasture research officer was able to complete an extensive survey of the main grass areas and submitted a valuable report. He found an extensive coverage of "hyperohenia rufa" which under favourable flood conditions produces excellent grazing after being burnt off.

## EQUATORIA PROVINCE.

677. Relations between the Toposa and the Turkana of Kenya showed little improvement, although two combined meetings of the district authorities and chiefs were held. The six Turkana who killed the Toposa herd boys in 1948 were handed over by the Kenya authorities and convicted by a major court. Unfortunately they then escaped from Kapoeta prison and were not again heard of.

678. A Didinga sub-chief, with no right to do so, invited a large number of Turkana to graze in an area where they clashed with Toposa. The resultant fight had no fatal casualties but led to extravagant claims by both tribes for the loss of stock. Elsewhere individual Turkana tried to infiltrate into the more fertile but fully-grazed Toposa country.

679. In July, large number of the Nyangatom moved from Ethiopia with their women, flocks and herds into Toposa country stating that there was no grazing or water in their own country and that they intended to settle amongst their friends the Toposa. The Kenya authorities very naturally feared a repetition of the 1939 Nyangatom raids against their people. Co-operative action by the police and Equatorial Corps of the Sudan Defence Force succeeded in rounding up the trespassers and escorting them peacefully back to their own country.

680. Relations with Uganda, the Belgian Congo and French Equatorial Africa remained good. There were several instances of co-operation in the arrest of criminals and the Sudan and Uganda chiefs of the Madi tribe held a combined meeting.

681. The people enjoyed a year undisturbed by hunger, epidemics or political or labour unrest. The growing desire for cash could find satisfaction in increased prices for produce and ample work for any who sought it.

682. The province's members of the Legislative Assembly justified their selection, as a whole, by their interest in and understanding of the proceedings, despite difficulties of language and environment. The vacation gave them the opportunity to talk about it to their people and there was evidently a growing nucleus of people interested in both the assembly and the province council, even if the mass of the people remained unconcerned. There were signs of an awakening political consciousness from which a more articulate opinion on the future place of the southern provinces must be expected to be formed. Nine more appointments were made to second division posts and two men were accepted at the School of Administration in Khartoum. In December, four leading chiefs were sent on a visit to Khartoum and other places in the north.

683. The province council met only once but its agenda covered a wide range of problems common to the whole province. No formal steps were taken in the development of local government, but with the acceptance by the Legislative Assembly of Dr. Marshall's report, the formation of the provisional councils was discussed at all levels. Meanwhile the chiefs' courts continued to be the media for consultation on local administrative matters and the advisory town council at Juba gained further experience.

684. Major courts increased from 22 to 36, the number of persons convicted being 49 compared with 23 in 1948. Of these, 41 persons were found guilty of murder or culpable homicide, more than double those of the year before. The 1949 figures, however, included the six Turkana who committed their crimes in 1948. Convictions in chiefs' courts for offences against the body also rose from 849 to 946, but this was still well below the 1947 figure of 1,166. These figures fluctuate with the amount of grain, and therefore beer, available. Generally speaking, inter-tribal security was good in 1949. In particular, there was for the first time for many years no border dispute between the Mandari and Dinka. House-breaking in Juba decreased noticeably, with more effective day and night patrols. Increases in Torit and Yei suggested that the thieves still at large have turned their attention there. Convictions for hashish offences rose. The weed is widely grown for both internal consumption and sale in the north, and, in the absence of any public conscience in the matter, its detection is extremely difficult. The standard of police work continued to improve, though it was disappointing that the first native of the province to become a classified police officer was convicted of accepting a bribe.

685. The chiefs' courts worked steadily through a slightly increased number of cases. Comparative statistics for the last two years are as follows :—

	1948	1949
Criminal cases instituted ... ..	7,093	7,967
Convictions ... ..	11,278	12,565
Acquittals ... ..	1,400	1,171
Persons sentenced to imprisonment for more than six months ... ..	378	528
Successful appeals ... ..	239	328
Personal cases ... ..	4,480	4,592
Civil cases ... ..	3,157	2,914

686. In Juba town and the forest camps labour was generally adequate. There were no labour disputes of note. The number of men going to seek work in Uganda seemed to be decreasing.

The construction of the industrial area of the Equatoria Projects Board and roads and buildings programmes outside Juba still had difficulties in finding sufficient workmen but the requirements for more and more minor tasks of public utility were met.

687. Generally speaking, the rains were late in starting; there was a dry patch in June and the end came early, with a total fall below the average. As usual, however, there were several localities which proved exceptions to the general rule and the overall result was not unfavourable for crops.

688. The 1948 harvest had ensured that there would be no real want for a season and the 1949 food crops, taken as a whole, did the same. In Juba and Yei Districts the early dura was below average but there were good crops of late dura. In the Amadi-Mvolo area dura suffered for lack of rain and it did not do well in Zande District where some was grown with the intention of feeding the large number of dura-eaters now working in that locality. Eleusine grew well in most districts but in the Kajo-Kaji area it was severely attacked in October by the "army worm", a pest which seems to appear about every five years. Groundnuts yielded poorly. The sesame yield was average in Acholi country, but poor in the northern part of Zande District.

689. Cotton purchases in Zande District and Maridi finally totalled nearly 34,000 small kantars for the 1948/49 season. With an additional area sown in Tembura sub-district, it was at first anticipated that a total of 50,000 kantars might be achieved from the 1949 crop, but by November it became clear that boll-worm and helopeltis were doing serious damage, with stainer-bug further reducing the quality of the lint. The yield is now estimated at 44,000 kantars, a very useful contribution at a time when world prices enable £E. 1 to be paid to the cultivator for every kantar of grade I cotton, but the high incidence of pests causes anxiety for the future in a system of small holdings, which offers them so many alternative hosts near the cultivated plots.

690. Another 12,000 Zande families were resettled in 250 villages, leaving only about 11,000 to be resettled before the 1950 rains, to complete the work in the district. Once again the people have co-operated well with the resettlement officer and his small staff. There are signs that cultivators in other districts are only waiting for a lead to utilise more fertile land. Unfortunately lack of staff has hindered the organisation of any schemes but a start was made near Kajo-Kaji in marking out 40 farms to be taken up by nearby applicants and preliminary exploration of other areas was undertaken.

691. The forests section continued a large planting programme. The survey of the 300,000 acre Imatong reserve was completed, as well as of several smaller ones in Zande District. Reconnaissance was made of the Dongotona and Bala hills. Extraction was stepped up considerably; the output being 270,000 cubic feet of hard wood and 5,100 of soft wood.

692. Once again there were no serious epidemics. There were 60 cases of cerebro-spinal meningitis in Kajo-Kaji and 18 in Torit, but only sporadic cases elsewhere. The larger number of cases of hydatid diseases and leishmaniasis treated every year in Kapoeta hospital indicates that the incidence in that area must be high, but not necessarily that it is increasing. Only 30 cases of sleeping sickness were detected and it is suggested that the low figure for several years may have lulled all concerned into undue apathy over absenteeism at inspections. The leper survey of Amadi sub-district was practically completed. Twenty-three thousand people were examined, with an incidence of 1 per cent. There was a growing public consciousness of the value of proper latrines. While the government has been improving arrangements in the small towns, several chiefs in rural areas have insisted on people digging pit latrines and every resettled Zande homestead has one. Although 1949 might be termed a healthy year, a sidelight on the problems still to be solved was shed by an inspection of 288 apparently healthy schoolchildren at Yei. Between them they showed 435 signs of 21 different diseases, symptoms of enlarged spleens, enlarged livers, bilharziasis and ankylostomiasis predominating.

693. District educational councils showed new life in discussing local problems of village education and a programme of consolidation was agreed upon for the coming year. In all areas except Eastern District, there already exist good networks of schools which the universal desire for education should fill up to the limits of available teaching staff. In Eastern District, however, little headway has been made; better results are hoped for from a government elementary school due to be opened there in the near future. The new Minister of Education made an extensive tour through the province, accompanied by the Director, in the course of which he laid the foundation stone of the new building for Juba Training Centre. The decision to teach Arabic as a subject in intermediate schools was welcomed by all; but the policy of introducing Arabic as a medium of instruction excited adverse comment, until it was explained that vernacular languages would still continue to be used in village schools and that the teaching of English as a subject would be retained.



694. A veterinary inspector was posted to the province for the first time late in 1948 and has achieved much even in his first year. Except in Lafon and Eastern District, the confidence of the cattle-owning tribes has been sufficiently won to make them all eager to receive veterinary attention. Even the unfortunate death of 350 cattle in Kajo-Kaji from tetanus due to contaminated cattle plague vaccine did not prove a serious set-back. The conservative tribes of Eastern District were more suspicious but one Didinga chief set a fine example by allowing his cattle to be inoculated first of all. Cattle plague smouldered on throughout the year but the training of stockmen from all the cattle-owning tribes and the provision of serum and vaccine kept it well under control. The more lethal contagious bovine pleuro-pneumonia was still a problem owing to the shortage of vaccine. Antrycide was invariably successful in the cure of trypanosomiasis, but for fear of the creation of resistant forms of trypanosomes the drug could not be left in the hands of stockmen. It was particularly useful in the treatment of dairy herds in "fly" country.

695. Elephant control was more effectively exercised and there were fewer complaints of damage to crops. Buffalo were a nuisance in Moru District and three men were killed in encounters with them. Game reserves were created near Nimule and in two areas in Zande District. Two young white rhino were captured and forwarded to Khartoum zoo.

696. Trunk roads were maintained at a high level; indeed, the number of road accidents suggested that their surface is conducive of too high a speed for local drivers' control. Several new bridges were constructed on side roads. Although petrol rationing ceased, difficulty in obtaining spare parts prevented both government and commercial vehicles from answering all the calls made upon them. The bi-weekly service to Khartoum by Sudan Airways Doves continued to be most popular. Aircraft landings at Juba numbered about 100 a month. The Equatorial Projects Board's office at Nzara and the hospital at Li Rangu were connected to Yambio by telephone.

697. Several new wells were dug in Torit and Moru Districts. A hand pump was installed on a shallow bore at Nzara. In Juba town, work was started to extend the piped water supply to the third class area.

698. The public works department continued work on the buildings of Mundri primary teachers' training college, Yambio agricultural training school and Juba training centre. Fifteen artisans' quarters, a rest house and new offices for the Ministry of Agriculture were build in Juba and houses for an Inspector of

Education and a clerk of works at Yambio. New wards were started at Li Rangu hospital. In Juba, the district authorities had a full programme with nine employees' quarters, two new offices and several police houses. At the end of the year, the prison was turning out 400 cement blocks a day. A new house at Ezo, several staff houses and police and dressers' quarters and two dispensaries were completed in outside districts. There was a good deal of private building in Yei and Juba markets and in the industrial area of the Equatoria Projects Board at Nzara the oil-press factory was completed and the foundations laid of the spinning and weaving factory, besides a heavy programme of staff quarters.

699. The slump, prophesied by some, failed to materialise and all districts reported a steady trade in their main shopping centres. These are few and far between and the intervening "bush" shops remained for the most part unattractive and unenterprising. The travelling sales-vans of the trading division of the Equatoria Projects Board were very popular but lack of staff prevented the expansion of their activities as much as had been hoped. The increased popularity of weekly markets at Yei and Maridi suggested that the hitherto unsuccessful efforts to get markets going at other outside centres would in the long run bear fruit.

700. In the 1948/49 dry season Yei District led the way in removing all restrictions on the sale and purchase of grain government requirements being obtained by open tender. Juba marchants were likewise called upon to obtain the town's requirements through normal trade channels, which in the case of 1949 meant considerable purchase from the Upper Nile Province. After the 1949 harvest, control in Moru District was also freed and by the end of the year the central bloc of the province had for the first time achieved free trade in grain. Prices rose with the import of unsubsidised grain, but they did not follow the further rise in the north during the latter half of the year, and there were welcome signs that merchants were taking an interest in local purchase. Demand for honey and beeswax was always strong and the reduction in the middle of the year of the levy on chillies from £E. 3. to £E. 1. a kantar resuscitated a trade which was beginning to feel the burden of the levy in the face of a drop in price in Khartoum. It is estimated that in Zande District nearly £E. 50,000 worth of produce was sold including £E. 21,500 for the 1948/49 cotton crop, and that £E. 73,000 more money was placed in circulation in the district as a result of this and of the large sums paid out for labour on development work. Antrycide, and the apparently increased willingness of the Dinka to dispose of their bulls, greatly improved the provision of fresh meat in the larger centres. Even the conservative Toposa and Boya of Eastern District were believed to

have sold about 200 cattle and 1,000 sheep and goats to the butchers' buyers.

701. No change was made in the rate of individual direct taxes as there had been a substantial rise in 1948. Revision of lists brought the total up to £E. 47,667 which was £E. 1,134 more than the previous year. Of this, £E. 1,072 had not been paid in by the end of December and investigations are being made into three cases of defalcation by chiefs.

#### BAHR EL GHAZAL PROVINCE.

702. The year was prosperous throughout the province. The 1948 crop, good in many areas and excellent in Aweil was followed by another good grain harvest in 1949 and improved crops of ful and simsim. The fishing season was also satisfactory. Losses of cattle from disease were not extensive.

703. In the sphere of local government there was much activity. Dr. Marshall visited the province in February and was favourably impressed with the pioneer work already done and the effort to establish councils over most of the province, though he regarded the institution of the executive council as a valuable but temporary expedient which must lead to the more professional method of trained executive officers. Gogrial council was granted an independent budget which balanced at £E. 4,334 (General) and £E. 1,650 (Education). There was a surplus at the end of the year of £E. 3,275 to pass to reserve, of which £E. 1,425 represented the grant made by the central government for the starting and equipping of local government bodies in the province.

704. In Jur River District a 'blanket-warrant' was obtained; under it the two local governments of Thiet and Marial progressed well and Thiet had its first full year in the intermediate financial stage. The same method was adopted for the Bisselia council (Wau sub-District). In Lakes District the Gok council, though probably too small (30,000 souls) to continue indefinitely independent, showed spirit and activity and the Yirol council, which covers the whole sub-District, made an encouraging start and showed a good grip of affairs. Buildings were erected for a rural district council to take in the whole of Aweil District, and buildings were similarly begun for a Raga rural district council. The Agar of Rumbek would then be the only section in the province not organised under some local government body. Alone among the local government bodies the Wau town council remained disappointing, and it continued to be of consiliar value but ineffectual in administration.

705. The province council showed good sense and fertility of ideas in a number of topics. There was no change in the representation of Bahr el Ghazal Province in the Legislative Assembly. The four members played their part in the deliberations of the country, one of them, Sayed Stanislaus Paysama, being selected as a member of the special committee on the Gezira. All four members of the Legislative Assembly attended the province council meeting in July, giving an exposition of affairs in the capital and receiving the views of the council itself; and some of them have actively toured their constituencies.

706. The settlement at Boro, 70 miles west of Raga, prospered, under a strong chief and with agricultural supervision. Among the Western District people, tending to live a rather scattered and predatory existence, this settlement presents an example of large-scale community life, of a well organised and reasonably productive type, and is worthy of imitation.

707. Relationships with other provinces were good and call for little comment. Incursions of Abiem Dinka into Kordofan had to be severely dealt with, but no serious disturbances either on the Bahr el Arab or elsewhere on the province borders occurred. Bor Dinka continued to spend much time on the west bank among the Aliab. Nuer activities in the Lake Nyubor caused no serious breach, and their admission to wet-weather cattle camps in the Jur River toiches was evidence of the improvement in inter-province relations.

708. Public security was good. There were some minor fracas but only one fight worthy of mention, a large engagement near Winejok in Aweil District which caused six fatalities. The number of civil and personal cases seen by Chiefs Courts was excessive. This did not reflect a greater tendency to litigation in the Dinka, but rather too big a number of small courts, which tended to see and record many paltry cases which should have been settled out of court. Both in Aweil and Lakes Districts reorganisation of the court system was continued, with a view to a reduction of these little courts. Criminal cases showed an unsatisfactory increase, and measures for reducing the incidence were discussed by the province council. The crimes that particularly showed an increase were those typical of a good year, affray, drunkenness and hurt. There was little theft and in Wau town, though housebreaking did occur, there was very little sophisticated crime. Motor accidents were regrettably common in the first half of the year, and a number were fatal. Alcohol was an all too common cause, with mechanical defects as the next commonest. The new prison regulations were introduced during the year and given effect. Juvenile prisoners

were segregated into a special camp and were taught useful trades. The police performed their duties satisfactorily and discipline and morale improved, but it was still difficult to find literate men and trained investigators.

709. Labour rates rose early in the year and labour was hard to get, but the situation eased later. In Lakes District there was no difficulty in satisfying labour requirements, but in Jur River District it was more difficult. The shortage of artisans was as acute as that of unskilled workers. The Nyin Akok sawmills workers enterprisingly formed a trade union which was registered and had its rules approved. Nyin Akok has for long had a tradition of esprit de corps and cooperative methods.

710. The year's climate showed nothing remarkable but rainfall was in many places above average, while temperatures were normal, a cool January and February being followed by most uncomfortable months in March and April.

711. The spacing of the rains, more important than the amount, was on the whole good although they were late in starting and tailed off somewhat in October. The result was, except around Rumbek, a fair to good grain crop nearly everywhere, and for the second year in succession the province had a surplus and could export. Aweil District in particular did well as in the previous season, and the Malwal and Abiem Dinka showed signs of cultivating less in the toiches, so liable to flood, and more in the 'Gok' hinterland north of the River Lol. Both simsim and groundnuts were better in 1949 than in 1948 and there was a good surplus for export. Plans were made for the installing of an oil press, mainly for simsim but also for groundnuts, and possibly lulu, at Yirol.

712. The principal directed agricultural effort was the experimental ploughing at Tonj and Yar, and this was disappointing. The ground at Tonj proved too hard for the machinery employed and patchy in nature. Some fair simsim and dura were harvested, but not such as would indicate that mechanical ploughing might be a paying proposition. Yar, considered the more favourable site and better soil, suffered from the vagaries of rainfall, receiving no good sowing rains until the planting season was nearly past and then being heavily flooded by excessive rain in August.

713. Nyin Akok sawmills had a record output, sending out 22,077 sleepers and 978 tons of sawn mahogany. The Khor Abong forestry reserve was settled in February and the Numatina reserve was due for settlement in early 1950. The Getti central forest reserve was also settled. Fuel reserves, as an insurance for future stocks, were established at Wau, Aweil, Rumbek and Tonj and were planted with cassia, anageissus and other species.

714. The policy of early burning was pursued. An instructional course at Nyin Akok in October, designed to teach selected burners the exact time and circumstances for optimum burning, was held, and the standard of execution was on the whole up to average.

715. Gardens and dairies had successes and disappointments. The new Wau vegetable garden was badly flooded and neither vegetables nor milk supply could keep pace with the growing number of consumers, despite efforts to increase both the quantity and quality of cattle and experiments in silage for feeding, which attained some success. Grass cut between mid-June and mid-July, apparently the optimum period, was found to make very fair silage, producing its own sugar content.

716. The principal step in educational progress was the opening in April of Rumbek secondary school. The building programme was retarded, but enough accommodation was ready. Pupils were drawn from all three southern provinces. The Tonj Dinka primary school had a good year and so did Rumbek school. The Aweil school was less advanced and the response of Aweil people was not encouraging; there was considerable difficulty in filling the second-year quota and at one time it seemed as if Gogrial would have to be called on to fill vacancies. Plans for the Dinka girls' primary school were laid, the headmistress's house nearly finished and the class rooms were under construction. One new Verona Fathers Mission lease was approved, at Thiet in Jur River District, and temporary buildings erected. The Church Missionary Society site at Panekar, opposite Yirol, was developed and buildings for the boys primary and teachers training schools proceeded. The Arabic sub-grade school at Wau was improved, two good sub-grade masters from Kordofan arrived and the numbers and standard of the school were improving. A similar master from Darfur was obtained to establish another Arabic sub-grade school at Khor Shamman near Raga. Evening classes in Arabic were given to a number of southern members of the staff. The entry of local government bodies into the field of education was worthy of note. Gogrial council made special arrangements to pay for the boarding of boys at village schools and Bisselia council made similar proposals. The relations and respective responsibilities of mission and council regarding village schools and education were under discussion. The attendance at mission village schools rose in Jur River District and elsewhere, but lack of teachers retarded progress in Lakes District.

717. The year was a healthy one with no serious epidemic. Cerebro-spinal meningitis occurred sporadically, especially at Halima and elsewhere in Wau sub-District and at Nyin Akok, but

was never alarming. Though by the efforts of the public health service in Wau the town was kept both clean and remarkably free from mosquitoes, yet malaria was all too common among officials. Free issues of mepacrine to classified staff was approved, but it was too early to gauge the results. Rabies occurred in several places and both Rumbek and Tonj were declared infected areas.

718. Veterinary activity throughout the year was great. Rinderpest was sporadic in many areas but losses were small, especially on the south bank of the Bahr el Arab and in the concentrated Lake Nyubor grazing area. The year would probably have been a much worse one but for the inoculation campaign undertaken in 1948 and early 1949. In November and December the large-scale use of goat virus vaccine, believed to give permanent immunity, began with mass inoculations in Aweil District. The Aweil people responded well, and some 24,000 cattle were inoculated; losses, so far as yet ascertained, were less than 2 per cent. Contagious bovine pleuro-pneumonia was widespread throughout the year. Treatment of trypanosomiasis with dimidium bromide led to some mortality among cattle of Lakes and Jur River Districts and the confidence of the Dinka was temporarily lost; but no widespread or permanent setback to veterinary work seems to have resulted. Experiments with antrycide, though the importances of the drug may have been exaggerated by the press, gave good results on a limited scale. Dairy herds for Amadi and elsewhere were inoculated, and the export of cattle on the hoof to Yambio and Meridi was possible. Experiments with antrycide as a prophylactic for horses were also encouraging. The pasture research officer, by strenuous walking, covered a fair proportion of the main grazing areas in the province. Indications were that the available grazing would not take a much larger cattle population than now existing, making unlimited increase of Dinka cattle wealth unlikely unless after improvement in pasture.

719. The collecting zoos did not send great number of animals this year to Khartoum but the quality was high. Efforts to rear young white rhino caught by Dinka failed, but in April Mr. Carr-Hartley with a special power-waggon, was permitted to catch four well-grown young white rhino near Shambe and all have so far been successfully reared. The Ashana reserve proved successful and visits to the national park showed that, while the waterless areas contain little game, there is a fine selection of wild life to be preserved along the Ibba (Tonj) River. Two foreign hunting expeditions operated in the province during the year.

720. Much time and effort were devoted to improving the province roads. The Raga road was brought up to fair standard and

the once-dreaded 207 miles covered in under 7 hours. The Aweil-Wau road was also so greatly improved that the 95 miles have been covered in under three hours. The Jur steamer service, after a difficult beginning, arrived at Wau on 25th August, and thereafter navigation was easy, the river remaining high (and technically navigable until 1st. December) and a record tonnage was handled. The cuts made by hand under province supervision in the loops in the Jur narrows materially helped navigation. There were four services to Meshra, in January, February, March and December. The fortnightly Sudan Airways service to Wau continued throughout the year. Twice in August exceptionally heavy rain delayed the service, on one occasion making the ground unserviceable for five days. By December the Yirol landing ground had been lengthened and improved, but not yet tested. Telegraphic and telephonic communications have also remained precarious. Rumbek, an important centre, was off the air on a number of occasions. The erection of the Rumbek-Shambe line continued slowly and the section to Yirol was completed in the autumn. Telephonic communication between Wau and Tonj was poor. Ferries were installed at Gogrial and Wunrog on the River Lol. The Wau and Busseri ferries were unsatisfactory. The former capsized with a lorry in November and could not be salvaged for a month; the Busseri ferry took its place at the cost of cutting Yambio communications.

721. There was much building activity. The public works department were fully occupied on the Rumbek secondary school, the Busseri training college and on a big housing programme in Wau. Eight houses were completed during the year, as well as other buildings, and a further 11 houses were under construction. Province staff undertook the building of the whole of Rumbek primary school and the boys' and masters' accommodation at Aweil, new houses for junior staff, new Rumbek offices and prison block, and all local government buildings, and in Jur River District accommodation for the new Tonj school headmistress and for the girls.

722. Direct taxes were increased for the Dinka as the extended veterinary facilities enabled them substantially to increase their cattle wealth, and for the people of Western District as a result of increase in wealth accruing from the advanced price of honey and wax. Business profits tax showed a reduction as the year was one of only moderate prosperity.

723. Trade in 1949 was moderate and on the whole merchants prosperous. Rationing of petrol interfered with commerce earlier in the year but this obstacle was removed later. Shortage of small change also affected merchants buying crops. Aweil exported about 5,000 tons of grain, much of it to Wau and to other parts



of the province which were short, and some 700 tons northwards; a quantity went to Upper Nile Province, while the internal needs of districts, departments and missions were for the first time in 12 years met without import. There was still a surplus of 1948 grain for export, but unfortunately the first sample sent north (damaged by rain in transit) was unceremoniously classified as pig food and there is no doubt that the early-maturing grain of the province does not last very well. The Aweil District surplus went in large quantities by bull and lorry to Kordofan and Darfur. The simsim trade latterly was brisk, especially in Lakes District, and considerable quantities went to the north via Meshra and Shambe. Local prices to the cultivator rose to P.T. 16 the keila. Merchants showed a marked preference for quick resale of seed in the north to the trouble of converting the crop into oil. Honey and beeswax improved somewhat in standard, which in 1948 suffered from adulteration. Little improvement in the quality of hides was evident. The trade in Dinka bulls remained small. Arab cattle were being slaughtered for meat both in Aweil and Wau. Nevertheless 100 bulls a month went from Rumbek to Yambio and Meridi (treated with antrycide) and more could be supplied. Bush-shops continued to be badly stocked with consumer goods and merchants showed scant interest.

## CHAPTER XXI — LONDON OFFICE

724. The staffing of the Agency became more stabilised than at any time since 1939. As a result of the inauguration of the new staff superannuation scheme, the grant of an additional ten per cent. on the basic salary to staff serving on unpensionable terms, and the continued benefits of the Wellington House canteen, the Secretary and the Establishment Officer were enabled, in spite of superior emoluments offered by commercial undertakings, to keep the Agency staff more fully manned than in previous post-war years.

### PASSAGE SECTION.

725. The statistical information below shows once again a considerable increase in the number of passengers served. This is reflected not only in the figures of passages booked but in those for passports attended to and for entry visas issued. Only 74 sea, as against 2,205 air passages were booked and since all except 15 of the latter were on Sudan planes chartered under contract from Airwork Ltd. the commission earned in respect of bookings shows a large decrease. The air contract worked smoothly and at the peak

of the season in October, while flights were averaging five per week, all left the United Kingdom on schedule.

	1948	1949
Individuals dealt with	2,074	2,319
Passages booked	2,032	2,279
Passports attended to	1,670	2,089
Transit visas given	3,052	181*
Entry visas given	601	658

(\*) Transit visas for passengers travelling in direct transit by air were discontinued as from 1st. April, 1948.

Tickets issued :	1948		1949	
	No.	Value	No.	Value
Sudan Railways .. .. .	124	£444. 4. 1.	63	£297. 1. 3.
Egyptian State Railways .. .. .	—	—	—	—
Commission earned in respect of bookings ..		£788. 0. 8.		£208. 19. 0.

#### PUBLIC RELATIONS SECTION.

726. While the total number of permits for civil aircraft issued dropped to less than half the figure for the previous year, applications for flights over the Sudan by private individuals showed a marked increase as against those by charter companies. Following the conditional lifting of the total ban on motor transport expeditions through the Sudan, there was naturally a large increase in the number of applications received. Considerable improvements to the Sudan Court at the Imperial Institute were made, including the provision of an excellent relief map. Arrangements for the distribution of "Sudan Notes and Records" were taken over by this Section and although the actual distribution in the United Kingdom is in future to be undertaken by Messrs. Luzac and Company, correspondence relating to the financial and administrative aspects of this publication is considerable. General enquiries relating to the Sudan continue to increase.

#### POLITICAL AND ECONOMIC SECTION.

727. Amongst matters handled by this Section were arrangements for British and Sudanese officials to attend conferences or

courses in the United Kingdom, America and Nigeria, distribution of and in on many occasions explanatory comment upon the report on local government by Dr. A. H. Marshall, and publicity in connection with the large-scale experiments in the Sudan resulting in the public announcement of antrycide early in the year. On the economic side, correspondence for the procurement of supplies and shipment of sugar and wheat was continuous throughout the year with the Ministry of Food, and with the Treasury for the Sudan's essential requirements of dollars. Towards the end of the year the Section took over responsibility for the library, and the contents were overhauled, catalogued, cross-indexed and arranged systematically in the Board Room on the sixth floor of the Agency. The statutory requirements of the Companies Act were carried out in respect of the Kassala Railway Company Limited and the Gedaref Railway and Development Company (Sudan) Limited, annual reports and accounts published and the requisite payments for the Sinking Funds duly made.

#### SECTION FOR SUDANESE IN THE UNITED KINGDOM.

728. While the total number of Sudanese students in the United Kingdom at the end of the year was almost the same as that in the previous year, there had been during the twelve months a large turnover: whereas 86 returned to the Sudan, they were replaced by 84 newcomers. Amongst many academic and professional distinctions gained, mention should be made of the award of one Ph. D. (London) and a first class honours degree in philosophy at St. Andrews. The first Sudanese official to be posted to the London Agency took up his duties in this section early in March, and later in the year a Sudanese graduate of Oxford returned to the United Kingdom to work with Messrs. Mitchell Cotts Ltd., and thus became the first Sudanese to seek practical business experience with a large United Kingdom commercial firm.

The hostel at 10 Sussex Place, in addition to providing office accommodation for the staff of the Section and a certain number of bedrooms for students, became increasingly during the year the centre of Sudanese life in the United Kingdom. Constructional building alterations made the reception room capable of seating some thirty to forty students and through the efforts of the new and vigorous Sudan House Committee many successful cultural and social evenings were held.

#### ACCOUNT SECTION.

729. The total number of payments amounted to 19,000 involving a sum of over eight million pounds sterling, an increase of

almost a million pounds on the figure for the previous year. Exchange control restrictions continued in force and new difficulties and problems arose as a result of the sudden devaluation of the pound sterling. Dollar payments falling due about the time of devaluation were effected with a saving of £E. 75,000. Claims for loss and damage to goods in transit from the United Kingdom to the Sudan numbered 346 as against 288 in the previous year and involved refunds from underwriters and suppliers amounting to £E. 7,423.

#### SHIPPING SECTION.

730. This Section was undoubtedly the hardest pressed in the Agency throughout the year but an increase of twenty per cent. in the number of consignments over the figure for the previous year was handled without undue delay. As a result of prolonged negotiations a new freight contract with the Conference Lines was agreed and became operative from the beginning of May. In spite of a dock strike in the United Kingdom in July, shipping allocations to Port Sudan throughout the year were regular and there was no delay in shipment. The shipment of a large excavator for the Irrigation Department constituted a unique problem. Special arrangements had to be made for its road transport from the works to the docks, and to bring the machine within the loading gauge of the Sudan Railways structural modifications were made by the suppliers to the frame, which was finally welded at the site of erection in the Sudan. A scheme was inaugurated for the despatch of air freight parcels by the Airwork charter service, resulting during its period of operation over nine months of a saving of approximately £E. 1,600 compared with previous arrangements.

#### PATTERNS AND DRAWINGS SECTION.

731. During the course of the year some 500 export licences were obtained from the Board of Trade, who for the first time demanded returns containing details, including the value, of all goods shipped to the Sudan under our "General Export Licence Undertaking". This necessitated the keeping of new records which have to be compiled at the time each order is passed through for shipment. The exemption from import licence of goods from the Sudan consigned to the London Agency conceded by the Board of Trade in 1948 worked fairly smoothly, but further negotiations on the matter, involving certain modifications of the original agreement, took place during the year. The total number of orders passing through this section showed an increase of 21 per cent. over the figures for the previous year while orders for the Education Depart-

ment, the requirements of which by reason of their diverse and peculiar nature always constitute a difficult supply problem, exceeded the 1948 figures by more than 25 per cent. Over a million and a half yards of various textiles were purchased for the Stores and Ordnance Department at a cost of approximately £E. 200,000.

#### GENERAL REGISTRY.

732. The number of orders handled by this Section show increases over the figures for the previous year of 15 per cent. in the case of orders received, and 21 per cent. for orders placed. The scope of the new progress system was extended during the year. Introduced in 1947 for Railway orders only, it was expanded the next year to cover orders from all government departments. Until 1949, however, progress reports were provided for the Railways and Public Works only, but now this service has been extended to all departments. Statistics for inward and outward mail and the cost of outgoing mail showed a slight increase on the figures for the previous year and the number of outgoing cables rose by over a hundred.

APPENDIX I.  
TABLE I—GENERAL COMPARISON OF FINANCIAL POSITION.

	1942	1943	1944	1945	1946	1947	1948	1949
<i>Revenue</i>	£E.	£E.	£E.	£E.	£E.	£E.	£E.	£E.
Provinces .. .. .	699,026	753,656	737,335	754,640	807,299	807,938	860,062	879,008
Departments .. .. .	1,971,346	2,146,556	2,390,498	2,911,814	3,635,566	4,825,005	6,605,042	8,779,213
	2,670,372	2,900,212	3,127,833	3,666,454	4,442,865	5,632,943	7,465,104	9,658,221
General Central Services .. .. .	976,253	1,131,427	1,594,902	1,936,358	*1,965,102	1,829,756	2,558,608	3,253,228
	3,646,625	4,031,639	4,722,735	5,602,812	6,407,967	7,462,699	10,023,712	12,911,449
Railways Contribution .. .. .	625,000	495,000	595,000	595,000	595,000	450,000	400,000	300,000
Irrigation Department .. .. .	1,542,540	1,335,305	1,261,034	1,565,266	1,286,018	2,728,796	5,227,078	5,960,656
<b>Total Revenue .. .. .</b>	<b>5,814,165</b>	<b>5,861,944</b>	<b>6,578,769</b>	<b>7,763,078</b>	<b>8,288,985</b>	<b>10,641,495</b>	<b>15,650,790</b>	<b>19,172,105</b>
<i>Expenditure.</i>								
Provinces .. .. .	864,278	862,934	927,366	941,730	1,048,996	1,466,763	1,739,108	1,992,282
Departments .. .. .	1,946,873	2,287,463	2,601,972	3,082,096	3,481,696	4,616,222	5,688,485	6,738,797
	2,811,151	3,150,397	3,529,308	4,023,826	4,530,692	6,082,985	7,427,593	8,731,779
General Central Services .. .. .	879,325	1,135,451	1,545,045	1,476,582	1,946,717	1,174,895	1,326,881	1,477,866
	3,690,476	4,285,848	5,074,353	5,600,408	6,277,409	7,257,880	8,754,474	10,209,645
Irrigation Department .. .. .	698,365	716,792	737,323	752,519	773,543	855,843	918,832	966,628
Sudan Defence Force .. .. .	598,850	598,850	598,850	598,850	598,850	820,944	645,283	598,140
<b>Total Expenditure .. .. .</b>	<b>4,987,691</b>	<b>5,601,490</b>	<b>6,410,526</b>	<b>6,951,777</b>	<b>7,849,802</b>	<b>8,934,667</b>	<b>10,318,589</b>	<b>11,774,413</b>
Surplus of Revenue over expenditure .. .. .	826,474	260,454	168,243	811,301	439,183	1,706,828	5,332,201	7,397,692
<b>Appropriation of Surplus :</b>								
Revenue Equalisation Account .. .. .	—	—	—	—	—	—	—	1,500,000
Cotton Equalisation Account .. .. .	—	—	—	—	—	500,000	2,952,980	—
Civil Buildings Appropriation Account .. .. .	266,100	100	97,411	537,644	—	—	—	—
Roads Appropriation Account .. .. .	70,100	100	16,515	34,527	—	—	—	—
Provincial Water Supplies Appropriation Account .. .. .	14,100	100	5,210	24,238	—	—	—	—
General Development Account .. .. .	—	—	—	—	358,000	500,000	1,000,000	5,192,000
General Reserve Account .. .. .	476,174	260,154	49,107	214,892	81,183	706,828	1,379,221	705,692
	826,474	260,454	168,243	811,301	439,183	1,706,828	5,332,201	7,397,692

\* Includes £E. 200,705 transferred from Price Stabilisation Reserve Account to cover short fall on budget estimate of profits from sales of sugar.

## APPENDIX I—TABLE 2.

Comparative Statement of Finances for 1948 and 1949.

## REVENUE.

	1948		1949	
	£E.	£E.	£E.	£E.
<b>Provinces :—</b>				
Date Tax .. .. .	63		77	
Land Tax .. .. .	1,110		1,058	
Ushur .. .. .	17,500		17,069	
Poll Tax .. .. .	30,080		33,680	
Animal Tax .. .. .	30,735		34,846	
Tribute .. .. .	226,352		236,505	
Traders Licences .. .. .	11,033		12,531	
House Tax .. .. .	46,921		49,524	
Rent from Govt. land and properties .. .. .	65,123		71,674	
Contributions and receipts from local authorities ..	281,852		280,057	
Miscellaneous .. .. .	177,292	860,062	141,987	879,008
<b>Departments :—</b>				
Agriculture .. .. .	1,074,544		1,366,338	
Customs .. .. .	4,406,342		5,908,911	
Legal .. .. .	84,694		95,199	
Posts and Telegraphs ..	596,718		644,071	
Public Works .. .. .	128,037		172,788	
Sudan Airways (*) .. .. .	—		127,227	
Veterinary .. .. .	70,529		73,138	
Other .. .. .	244,178	6,605,042	391,541	8,779,213
<b>General Central Services :—</b>				
Sugar .. .. .	747,730		843,757	
Interest .. .. .	447,330		417,260	
Business Profits Tax ..	463,945		864,854	
Profit on circulation of cur- rency .. .. .	15,362		13,319	
Payment by Sudan Light and Power Co. Ltd. .. .. .	54,748		52,202	
Sudan Railways Contribution	400,000		300,000	
Royalties .. .. .	491,132		620,939	
Pension Contribution ..	125,632		128,170	
Other items .. .. .	212,729	2,958,608	312,727	3,553,228
<b>Irrigation Department .. ..</b>		5,227,078		5,960,656
<b>Total Revenue .. .. .</b>		15,650,790		19,172,105

(\*)—New Department: Revenue included in General Central Services in 1948.

APPENDIX I—TABLE 2—(Continued).  
Comparative Statement of Finances for 1948 and 1949.

EXPENDITURE

	1948		1949	
	£E.	£E.	£E.	£E.
Provinces .. .. .		1,739,108		1,992,982
Ministries and Departments :—				
Agriculture .. .. .	1,001,349		1,097,566	
Audit .. .. .	18,652		15,717	
Civil Secretary's Office .. .. .	98,163		93,731	
Aviation (*) .. .. .	—		55,040	
Consulates .. .. .	3,793		3,430	
Game Preservation .. .. .	17,903		19,168	
Prisons .. .. .	49,966		53,243	
Sudan Police H.Q. .. .. .	40,553		44,707	
Public Relations .. .. .	52,064		48,686	
Customs .. .. .	72,632		74,044	
Economics and Trade .. .. .	72,510		61,438	
Education (**)	684,329		787,227	
Finance .. .. .	96,577		118,626	
Governor-General's Office .. .. .	24,757		29,517	
Health .. .. .	895,419		1,015,745	
Legal .. .. .	151,677		159,290	
Mechanical Transport .. .. .	499,551		627,420	
Posts and Telegraphs .. .. .	700,206		736,600	
Public Works .. .. .	487,445		581,986	
Stores and Ordnance .. .. .	431,841		600,190	
Sudan Agent, Cairo .. .. .	19,913		23,830	
Sudan Agent, London .. .. .	47,092		53,370	
Sudan Airways (*) .. .. .	—		161,607	
Surveys .. .. .	71,852		81,702	
Veterinary .. .. .	150,241		143,251	
		5,688,485		6,738,797
Total Provinces, Ministries and Departments .. .. .		7,427,593		8,731,779
General Central Services .. .. .		1,326,881		1,477,866
Irrigation Department .. .. .		918,832		966,628
Sudan Defence Force .. .. .		645,283		598,140
Total Expenditure .. .. .		10,318,589		11,774,413

(\*) Expenditure included in General Central Services in 1948.

(\*\*) Excluding provision in Province budgets, and grants to Gordon Memorial College and Kitchener School of Medicine.



## APPENDIX II.

## MAIN SOURCES OF REVENUE.

	1947		1948		1949	
	£E.	%	£E.	%	£E.	%
Direct taxation ..	754,327	7.09	827,739	5.29	1,250,143	6.52
Customs duties (1) ..	2,991,943	28.12	4,406,342	28.15	5,908,911	30.82
Licences, fees and royalties.. ..	517,244	4.86	662,616	4.23	839,076	4.38
Sugar monopoly ..	279,145	2.62	747,730	4.78	843,757	4.40
Revenue from Departmental activities ..	2,010,368	18.88	2,237,206	14.30	2,774,957	14.47
Contribution from Sudan Railways .. ..	450,000	4.23	400,000	2.55	300,000	1.57
Revenue from Concessions (2) .. ..	2,850,261	26.87	5,533,711	35.36	6,418,818	33.48
Interest, dividends and house rents ..	539,820	5.00	579,250	3.70	586,579	3.06
Rates .. ..	12,023	.11	10,197	.07	10,312	.05
Fines .. ..	11,998	.11	13,588	.09	12,776	.07
Other .. ..	224,365	2.11	232,411	1.48	226,776	1.18
	10,641,494		15,650,790		19,172,105	

(1) Import and Export duties.

(2) Sudan Light and Power Co. Ltd., Sudan Plantations Syndicate and Kassala Cotton Company.  
White Nile Scheme Board.  
Gash Board.

APPENDIX III.  
SUDAN LOANS.

	Extent of Guarantee of 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, 1949
				£ (sterling)	£ (sterling)	£ (sterling)	£ (sterling)
<i>Sudan Guaranteed Loans :—</i>							
4½% Guaranteed Stock 1939-1973 ..	Principal and Interest	January, 1923	93	3,250,000 } 513,400 }	3,465,358	680,843	3,082,557
First Issue .. .. .		May, 1924	95½				
Second Issue .. .. .							
4% Guaranteed Stock 1950-1974 ..	Interest	November, 1924	86	1,500,000	1,268,711	—	1,500,000
3¾% Guaranteed Stock 1954-1959 ..		July, 1939	97	2,000,000	1,900,479	869,701	1,130,299
<i>Loans of Construction Companies :—</i> In which the Sudan Government is the sole shareholder and for the service of which the Sudan Government is responsible.							
<i>Kassala Railway Company :</i>							
4½% Guaranteed Debenture Stock, 1934-1953 .. .. .	Principal and interest Trade Facilities Act 1921	January 1923	93	1,290,000 } 150,000 }	1,173,706 } 135,799 }	1,135,647	304,353
First Issue .. .. .		January 1927	91				
Second Issue .. .. .							
<i>Gedaref Railway and Development Co. (Sudan) Ltd.</i>							
5% Guaranteed Debenture Stock 1932-1962 .. .. .	„	February, 1927	100½	2,160,000	2,132,347	932,409	1,227,599

- NOTES :—1. Sudan 5½% Guaranteed Loan 1929-59 (issued at £6,380,000 nominal) and Sudan Construction and Equipment Co. Ltd. 4½% Guaranteed Debenture Stock (issued at £540,000 nominal) have been redeemed in full.
2. In addition to the loan liabilities shown, the Sudan Government is indebted to the Royal Egyptian Government in respect of advances amounting to £5,553,359, made for development purposes in the Sudan, of which £153,846 was paid in 1949.
3. There is a contingent liability of £400,000 in respect of the 5 percent Guaranteed Debenture Stock of the Sudan Light and Power Co. 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, 1949, the redemption fund in the hands of the trustees amounted to £270,712.

APPENDIX IV.  
LOCAL GOVERNMENT.  
(MUNICIPALITIES AND TOWN COUNCILS)  
1949 FINANCIAL RESULTS.

	Revenue	Expenditure	Surplus
	£E.	£E.	£E.
<i>Municipalities :—</i>			
Khartoum .. .. .	125,952	114,161	11,791
Omdurman .. .. .	68,710	60,330	8,380
Khartoum North .. .. .	26,255	26,170	85
Port Sudan .. .. .	51,734	41,203	10,531
Atbara .. .. .	18,348	16,892	1,456
	290,999	258,756	32,243
<i>Town Councils :—</i>			
Wad Medani .. .. .	30,807	25,178	5,629
Kosti .. .. .	7,984	7,332	652
Rufaa .. .. .	2,272	2,294	* 22
Kassala .. .. .	17,484	15,972	1,512
Gedaref .. .. .	14,617	13,400	1,217
El Obeid .. .. .	36,097	28,452	7,645
En Nahud .. .. .	7,752	7,569	183
Ed Damer .. .. .	5,863	5,205	658
Berber .. .. .	3,718	3,299	419
Wadi Halfa .. .. .	2,837	3,312	* 475
Shendi .. .. .	8,371	7,302	1,069
Malakal .. .. .	6,592	5,673	919
	144,394	124,988	19,406
TOTAL .. .. .	435,393	383,744	51,649

\* Deficits.

APPENDIX V.

LOCAL GOVERNMENT (RURAL ADMINISTRATIONS).

1949 FINANCIAL RESULTS.

Unit	Revenue	Expenditure	Contribution to Central Govt.	Surplus
	£E.	£E.	£E.	£E.
<i>Bahr el Ghazal Province :</i>				
Gogrial D.C. . . . .	7,175	5,198	—	1,977
<i>Blue Nile Province :</i>				
Northern White Nile R.D.C. . . . .	68,884	33,223	27,030	8,631
Kosti D.C. . . . .	78,544	25,874	49,217	3,453
Kamlin Gims R.C. . . . .	17,658	8,034	2,123	7,501
Messellemia Gism R.C. . . . .	23,703	11,934	1,403	10,366
Halawin Khut R.C. . . . .	10,787	5,581	1,507	3,699
Shukria (Rufaa) R.C. . . . .	13,232	10,160	1,882	1,190
Centro Gism (Madina) R.C. . . . .	20,699	9,893	2,154	8,652
Southern Gism (Hosh) R.C. . . . .	25,053	10,524	6,140	8,389
Managil Local Adm. . . . .	23,532	6,854	14,898	1,780
Sennar D.C. . . . .	22,239	9,155	11,164	1,920
Fung Gism Local Adm. . . . .	25,288	15,662	7,384	2,242
<i>Darfur Province :</i>				
Southern Darfur D.C. . . . .	35,379	30,718	—	4,661
Western Darfur D.C. . . . .	14,218	11,353	—	2,865
Eastern Darfur D.C. . . . .	5,685	5,514	—	171
El Fasher Town and R.C. . . . .	23,979	21,576	—	2,403
Dar Masalit Local Adm. . . . .	13,552	8,507	3,262	1,783
<i>Kassala Province :</i>				
Gedaref D.C. . . . .	77,453	57,460	19,000	993
Tokar (Majlis Ahli) D.C. . . . .	11,934	9,018	—	2,916
<i>Khartoum Province :</i>				
Khartoum D.C. . . . .	19,134	13,039	5,443	652
<i>Kordofan Province :</i>				
Eastern Kordofan R.D.C. . . . .	33,218	27,303	—	5,915
Tagali R.D.C. . . . .	27,785	22,157	4,277	1,351
Dar Hamar D.C. . . . .	22,151	18,125	3,891	135
Dar Messeria D.C. . . . .	37,297	16,646	13,744	6,907
Dar Hamid D.C. . . . .	18,356	11,995	5,761	600
Dar Kababish Local Adm. . . . .	6,726	10,860	—	(*) 4,134
Dar Bedeiria Local Adm. . . . .	11,728	8,019	3,460	249
Nymang Nuba Conf. L.A. . . . .	6,110	3,877	1,713	520
<i>Northern Province :</i>				
Dongola D.C. . . . .	28,646	13,657	11,279	3,710
Merowo R.D.C. . . . .	35,809	17,285	13,018	5,506
Berber D.C. . . . .	19,935	10,871	6,264	2,800
Shendi D.C. . . . .	36,865	15,166	16,471	5,228
Wadi Halfa D.C. . . . .	16,062	8,123	5,675	2,264
	838,816	493,361	238,160	107,295

(\*) Deficit.

APPENDIX VI.

JEBEL AULIA COMPENSATION FUND AS AT 31st DECEMBER, 1949.

RECEIPTS		£E.	£E.	EXPENDITURE		£E.	£E.
Egyptian Government .. .. .			750,000	Protection of Towns and Basins :—			
Interest and Dividends etc. .. .			302,045	Towns :—			
Appreciation of book value of investments disposed of during :—				Kosti .. .. .	27,800		
	£E.			Ducim .. .. .	29,216		
1936 .. .. .	558			Kawa .. .. .	5,493		
1939 .. .. .	575			Gulli .. .. .	2,752		
1942 .. .. .	5,130			Basins :—			
1943 .. .. .	55			Sufi-Turaa .. .. .	12,756		
1944 .. .. .	23			Shabasha—Salati .. .. .	17,297		95,314
1945 .. .. .	1			Compensation for Individual Damage :—			
1946 .. .. .	60			River Land :—			
1947 .. .. .	25			Cash awards .. .. .	205,159		
1948 .. .. .	4	6,431		Value of land awarded .. .. .	3,531		
Deduct :—				Town property :—			
Realised loss on book value of investments disposed of during :—				Geteina .. .. .	27,613		
	£E.			Villages North of Geteina .. .. .	1,748		
1940 .. .. .	1,374			Villages South of Geteina .. .. .	53,382		
1941 .. .. .	173			Kosti .. .. .	13,112		
1943 .. .. .	7	1,554	4,877	Ducim .. .. .	11,925		
				Kawa .. .. .	2,042		
				Other interests .. .. .	29,853		
				Water supplies in areas of Government registered land .. .. .	6,828		
				Assessment costs .. .. .	37,441		392,634
				Alternative Livelihood Schemes :			
				Abdel Magid :—			
				Expenditure to 31.12.49 .. .. .	175,360		
				Less : Amount assumed by Government .. .. .	175,360		
				Fatisa and Hashaba Pump Schemes .. .. .	111,810		
				Um Gerr Pump Scheme .. .. .	66,033		
				Wad Nimr (Sufi) Scheme .. .. .	9,763		187,626
				Other Schemes :—			
				Wad Rabbah (el Ducim) Canal Scheme .. .. .	2,171		
				Ferrics .. .. .	2,733		
				Abu Gassaba Causeway .. .. .	2,729		
				Kawda Low Lift Scheme .. .. .	1,097		
				Other items .. .. .			8,730
							11,732
				Total expenditure to 31.12.49 .. .. .			696,016
				Net cost of conversion of investments in 1939 and 1943 .. .. .			31,022
				Depreciation on revaluation of investments to middle market price at 31st December :—			
				£E.			
				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, 1949 :—			
				Investments .. .. .	365,746		
				Cash with National Bank of Egypt, Cairo .. .. .	178		
					365,924		
				Less : Amount due to Sudan Government in respect of cash advances to 31.12.49 .. .. .	37,748		328,176
TOTAL			1,056,922	TOTAL			1,056,922

