

EGYPT No. 1. (1920.)

REPORTS

BY

HIS MAJESTY'S HIGH COMMISSIONER

ON THE

FINANCES, ADMINISTRATION, AND CONDITION

OF

EGYPT AND THE SOUDAN

FOR THE PERIOD

1914-1919.

Presented to Parliament by Command of His Majesty.



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Reports by His Majesty's High Commissioner on the Finances, Administration and Condition of Egypt and the Soudan for the period 1914-1919.

No. 1.

Field-Marshal Viscount Allenby to Earl Curzon.—(Received June 22.)

My Lord,

Cairo, June 14, 1920.

I HAVE the honour to transmit herewith my report for the year 1919 on the work of the Egyptian administrative departments.

As regards the Soudan, I enclose a despatch which has been addressed to me by the Governor-General.

I have, &c.

ALLENBY, F.M.

EGYPT.

Enclosure 1 in No. 1.

I.—FINANCE.

1. The Financial and Economic Situation.

AT the time when the last report by His Majesty's agent and consul-general was written, early in 1914, the country had not entirely recovered from the effects of the period of over-speculation and extravagance, provoked chiefly by the rise in price of cotton, which culminated in the economic crisis of 1907. Notwithstanding a series of plentiful harvests, realised at high prices, the liabilities which remained as a legacy from that period weighed heavily on private finances, while the higher standard of living set up during that period showed little tendency to diminish.

The outbreak of war, which occurred at the moment when the cotton crop of 1914 was about to be harvested, caused a crisis in the cotton market, and reduced the price of that commodity by at least one-third. The country was thus deprived at one stroke of the increase of revenue which it had enjoyed for some twelve years past. The sudden diminution of the country's purchasing power by many millions reacted severely on economic activity, created unemployment, reduced consumption, and left little margin for the payment of debt charges. Imports fell off by an amount even greater than the reduction in the value of the exports. A small portion of the accumulated gold hoards was brought forth and disposed of as bullion in the market. Many debts were left undischarged, and the mortgage banks succeeded in recovering only a fraction of the very large annuity due to them. Emergency measures were adopted to meet the immediate necessities of the situation. The National Bank of Egypt's notes were made temporarily legal tender and inconvertible, and a general moratorium was proclaimed, subject to a reservation in favour of bank depositors. By these means an incipient panic was arrested and an emergency currency was provided in the absence of the possibility of procuring gold from abroad. Assistance was extended to cultivators in the shape of advances on their cotton guaranteed by the Government, and in the case of the smaller cultivators, in the shape of actual purchase of the cotton by the Government. These and other measures of less importance were, however, only palliatives for a situation which, had it continued, would have been fraught with very serious consequences for the economic future of the country. Fortunately, it was not prolonged for many months. The price of cotton, stimulated by the demand for war purposes, gradually recovered until by the end of 1915 it stood as high as before the war. At the same time, the presence of a large body of British troops involved considerable expenditure on labour and material for military works and on commodities of all kinds, which was defrayed by the British Government, thus contributing further to the rehabilitation of the country's financial position. The combined result of forced economy, the recovery in the price of cotton and military expenditure, was to leave the country with a substantial balance in its favour by the end of 1915. Arrears of mortgage annuities

and other debts were collected, and the restriction of commercial credits contributed to place the import trade on a healthier basis than before the war.

These conditions continued to manifest themselves in a more and more accentuated form throughout the duration of the war. The price of cotton rose higher each year, with the result that the value of the exports steadily increased, notwithstanding reductions in the output, due partly to unfavourable climatic conditions and damage by pests, partly to restriction on the area planted in cotton in 1915 and 1918. The 1918 cotton crop was purchased by the British and Egyptian Governments at a price more than double that which prevailed before the war. Military demands operated with greater pressure on the labour and products of the country, which were paid for at enhanced prices. The increase thus brought about in the spending power of the population could not find its normal outlet in expenditure on imports, owing to the restrictions in force in other countries on the export of many important commodities. The value of the imports showed, it is true, a remarkable expansion, due partly to increase in prices all round, partly to increased quantities of goods, such as cotton fabrics, in which commerce was unrestricted, and partly to supplies destined for the army. But this expansion fell far short of that which took place in the purchasing power of the country.

The general financial development thus outlined has not materially altered in tendency during the year 1919. Military expenditure has declined with the removal of troops, but on the other hand the price of Egyptian cotton has risen to unprecedented heights, being now (April 1920) in the neighbourhood of ten times its pre-war value. The result of the year is to show a further considerable excess of exports, visible and invisible, over imports and foreign charges, and thereby to add to the reserve of purchasing power accumulated by the country during the war. This reserve of purchasing power is either held by the people in the form of notes, or is deposited with banks, or has been employed in repayment of debt, or, finally, has been remitted abroad direct for investment. In reality, however, all these forms of employment of money resolve themselves into that of investment abroad. Thus the note circulation, the expansion of which is set forth in detail in the following section of this report, is almost entirely covered by British Treasury bills; and the considerable funds deposited in banks have been remitted by the latter to London and Paris, and there invested in war loans and short-term securities. Large sums also have been employed in repayment of debt to banks, mortgage companies and others, who, in default of demand for fresh accommodation, have been unable to re-employ the money in the country. It has consequently been either deposited in banks, and invested by the latter in the manner above mentioned, or invested abroad direct by the holders themselves. Finally, direct investment has been effected on a considerable scale, chiefly in British war securities, but also to some extent in French and Italian loans, while Egyptian Government stocks and shares in Egyptian companies have, in addition, been bought up on the London and Paris markets for Egyptian account. The Government has invested sums out of its surplus revenues, the Public Custodian out of the proceeds of sale of enemy property, private companies and persons out of their profits and savings. Since, then, the entire savings of the country have been, directly or indirectly, invested abroad, no better measure of these savings can be found than the total of the foreign investments effected on Egyptian account since the beginning of the war. An inquiry which has been made in connection with these investments shows that they can be roughly estimated at a sum not inferior to £E. 150,000,000, chiefly in the form of British Treasury bills and other short-term securities.

It will be evident that the large balance thus accumulated in favour of Egypt can by no means be considered as consisting entirely of profits. It is due to a considerable extent to forced reduction in consumption of imported commodities, to the compulsory use of paper currency in place of gold, to the postponement of maintenance and renewals of public works, railways, &c., and to the large inroads which have been made in the country's resources in material of innumerable kinds for military purposes. Heavy liabilities have been accumulated in respect of many of these items which will have to be met in the near future. A further large portion of the accumulated surplus will no doubt be devoted to the purchase of more or less necessary commodities of all kinds, of which the importation was restricted during the war, while, if free gold exports are again permitted from the United Kingdom, gold will be demanded to replace a great part of the notes in circulation.

It also follows from these considerations that, although Egypt is now a creditor in respect of this large balance, the latter cannot be regarded for practical purposes

as a set-off against the still larger amount for which she is yet a debtor to foreign countries. It is true that the interest on the credit balance operates as a set-off against the interest on the debit balance, that several millions of debt have been actually repaid to banks, mortgage companies and others, and that the embarrassments of the situation which preceded the war no longer exist. But the fundamental fact remains that Egypt is still debtor for a large sum (apart from the Public Debt), which, consisting chiefly of loans on mortgage and capital invested in industrial, transport and other companies, will not be repayable for many years, while, on the other hand, she is a creditor for an amount, the bulk of which is repayable practically on demand, and can be employed as purchasing power at any moment.

From the Egyptian point of view, the position is, of course, a satisfactory one, though the extent to which the accumulation of funds during the war will ultimately benefit the country will depend on the manner in which it is employed. If it is largely devoted to the hoarding of unproductive gold and expenditure on luxuries, its beneficent power will be so far diminished. If, on the other hand, it is employed in the repayment of debt and in productive expenditure, the economic well being of the country will be enhanced, the country will be in a position to withstand the effects on its revenues of a future fall in the price of cotton, and it will be in a fair way of achieving financial independence.

The accumulation of wealth has been accompanied by a great and rapid rise in the cost of living, and the resulting economic distress among the poor is a source of grave concern to the Government and to all those who are interested in the welfare of the country. The matter is dealt with in some detail by the Financial Adviser in his note on the Budget, from which I quote the following passages:—

“ Although the increased wealth acquired from the agricultural industry has inevitably dispersed itself to some extent over the industrial and mercantile population, and although the heavy disbursements of the British army in Egypt have likewise been widely distributed, the population presents extreme contrasts of ease and want. For there can be little doubt that the high prices, the causes of which will be discussed later, have acted with extreme severity upon the poorer classes of the population, and that except in so far as wages have risen in direct proportion with the cost of essential foodstuffs, those classes have suffered and are suffering acutely from a reduction of their standard of living.

“ The following index numbers of the wholesale price of certain staple commodities in Cairo in 1919, the average price from the 1st January, 1913, to the 31st July, 1914, being taken as 100, afford some indication of the increased cost of living of the poorer classes:—

Wheat	...	...	...	...	...	...	234
Lentils	...	...	...	...	...	...	207
Maize	...	...	...	...	...	...	184
Sugar	...	...	...	...	...	...	294
Wheaten flour	...	...	...	...	...	...	251
Maize flour	...	...	...	...	...	...	200
Native butter	...	...	...	...	...	...	218
Soap	...	...	...	...	...	...	373

“ A careful estimate by Dr. Wilson, of the School of Medicine, of the monthly expenditure of a small family of the poorest class in Cairo shows an increase from P.T. 109 as cost of food alone in February 1914 to P.T. 305 at the present day. There is, moreover, reason to fear that the substitution of a larger proportion of maize for wheat in the food of the poorer part of the population, owing to the deficiency of protein in the former, may have a serious effect on the health of that part of the community.

“ The high prices of commodities in Egypt, notably of foodstuffs and clothing, are probably due in the main to the increased purchasing power available in the country applied to a restricted supply. The war has operated in various ways, through diminished production, scarcity of shipping, destruction of available stocks, to reduce very severely the quantities of the various necessary commodities at the disposal of the Egyptian market; this difficulty has been accentuated in the case of Egypt by the tendency to extend the area under cotton at the expense of the cultivation of cereals.

“ The attempt to regulate the prices of commodities by fixing a tariff of maximum prices was found to do rather more harm than good. It tended to

restrict the supply of the tariffed commodities on the open market and to encourage their surreptitious sale at prices in excess of the tariff. The formation of local committees to administer the tariff likewise disappointed expectations. The fact is, that unless public spirit and the sentiment of co-operation are strongly developed in a country as well as political organisation and education, it is extremely difficult by means of regulations to interfere effectively with the natural play of economic forces. The Government has been reduced for the present to doing what it can to secure that, at any rate, certain articles shall be supplied at a reasonably cheap rate. It has devoted its attention chiefly to wheat and flour as being the staple food consumed by all inhabitants and as a larger proportion of their total expenditure by the poorer classes in the towns, who are the chief sufferers from the high prices. The Supplies Control Board have purchased quantities of wheat and maize sufficient to keep the country supplied until next cereal harvest, and these are being sold, at heavy cost to the Government, at a price which constitutes a substantial benefit to the consumer. It may be mentioned incidentally that it has only been possible to obtain this wheat through the intervention of the British Government, the necessary freight not being otherwise obtainable. Further, large purchases are being arranged with a view to the autumn requirements. The policy adopted has been justified in so far as it has contributed to the marked fall recently recorded in the price of locally-produced cereals, for which excessive prices were being demanded. A certain number of co-operative and philanthropic societies, having as their object the supply of essential commodities at a reasonable price, have recently come into existence and, wherever they appear to be conducted on sound lines, will receive the countenance and support of the Government.

“ But while the present policy of the Government is limited to the measures above indicated, it may be useful to bear in mind that the speculative purchase of the necessities of life with a view to their resale at an excessive profit may, under martial law, prove an unprofitable enterprise to those who undertake it. The Government, while reluctant to use any arbitrary powers, will not hesitate, if circumstances warrant it, to take suitable measures for the protection of the community.

“ The estimated total quantity of wheat required to be imported during 1920 for consumption in Egypt is estimated at no less than 180,000 tons, and the sale of this imported wheat at about the present price will probably involve a loss to the Government of about £E. 2,000,000. It is unquestionable that to allow wheat to be sold at the price which it would reach but for Government intervention would involve a fresh addition to the cost of living which would bear with special severity on the poorer inhabitants of the towns, precisely the class that has benefited least from the prevailing agricultural prosperity. Although it may not be practicable to maintain indefinitely an artificially low price for wheat and wheaten flour, it appeared to the Government right and just to do something to redress the hardship from which in present conditions the consumer suffers and to place the burden where it can best be borne, viz., on the producer of cotton. The proposed cotton tax represents about 2 per cent. on the price of a commodity which has increased in price by some 500 per cent. since 1913, and cannot in fairness be called a heavy tax. It is nevertheless open to certain technical objections, which would have weight if the rate of the tax were not so low as to be almost negligible. It should be borne in mind that the land tax, which was designed to represent about one-quarter of the rental value of land, now falls very far short of this rate.

“ It has been suggested that the deficiency of wheat could be remedied, without any increase of the area sown therewith, by improved cultivation and manuring. It certainly appears that the average yield per feddân is somewhat low. Of recent years it has varied as follows:—

—	1913.	1914.	1915.	1916.	1917.
Average yield per feddan .. Ardebs	5·25	4·75	4·63	4·75	5·03

“ This is little more than equivalent to 3 quarters per acre. The poor return is said to arise from the following principal causes:—

- “ 1. The inferior quality of the seed.
- “ 2. The serious attacks of rust; the wheats now grown are very subject to the attack of the rust fungus.
- “ 3. The absence of sufficient natural manure.
- “ 4. The serious shortage of imported fertilisers.
- “ 5. The heavy drain on the soil owing to the steady increase of intensive farming.

“ A considerable amount of work has been done by the Botanical Section of the Ministry of Agriculture with a view to improve the existing wheats. A number of wheats have been imported from India, Australia and elsewhere, some of which promise well. No effort is being spared to obtain varieties which, while giving a good yield, are also immune to the attack of ‘rust.’ About sixty different varieties are being tested.

“ The great reduction in the number of cattle and buffaloes in the country from 1,250,000 in 1904 to 940,000 in 1918 has reduced the production of farm manure, causing many cultivators to resort to nitrate of soda or sulphate of ammonia, which have of late years, owing to the war, been almost unprocurable. The shortage of fuel of all kinds has also had a most unfortunate effect, as much of the manure which under ordinary circumstances would have been put on the land has been used as fuel, with loss of the nitrogen, the constituent which in this country is the most valuable.

“ As regards supply of artificial manure, this has been seriously affected by the difficulty of shipping during the war; as shipping becomes normal all the chemical manures required can be obtained.

“ It is to be hoped that it may be possible to meet the country’s requirements in cereals by means of importations and without interfering with the liberty of each cultivator to plant his land as he sees fit. But clearly, in the last resort, it may prove necessary to take steps to secure that an adequate area is sown with wheat. This will largely depend on the results of the next harvest in the great grain-producing centres of the world.

“ By arrangements with the Compagnie des Sucreries de l’Égypte, the Government has secured that sugar shall be sold in the country in adequate quantities and at a price far below that which would prevail in the absence of such special arrangements. The tariff prices are based on a wholesale price of £E. 45 a ton, while the cost of imported sugar in Egypt would be in the neighbourhood of £E. 80 a ton.

“ As regards certain other foodstuffs, the Government is considering the possibility of improving the supply and effectively reducing the price.

“ The discovery and exploitation of petroleum fields in Egyptian territory have proved of enormous value to the country during the war. Although these fields have not sufficed to meet the whole of the Egyptian requirements for oil fuel, they have supplied sufficient quantities at a moderate price to enable the country’s expenditure of coal to be very materially reduced. Unfortunately the Egyptian oilfields furnish a relatively small quantity of paraffin, not more than roughly one-fifth of the country’s requirements. As regards this commodity, therefore, Egypt has been unable to derive much advantage from the existence of its oilfields, and has been obliged to depend in the main on imported kerosene at a price governed chiefly by the current world price and the cost of freight. The Government has, however, found it possible under its agreement with the Anglo-Egyptian Oilfields Company to moderate in a substantial manner the price which would otherwise be charged, and subject to some temporary irregularities in supply has, on the whole, been able to secure that the public requirements were met.

“ The question of the supply of housing accommodation is one that has occupied the anxious attention of the Government. By the recently promulgated Rent Law, a limit has been imposed on the increase of rent which may be demanded of the tenants of dwelling-houses, the basis being the rent in force in August 1914, and the increase, subject to certain exceptions, being restricted to 50 per cent. thereon. At the same time the Government is studying the possibility of adopting measures to stimulate the construction of new houses.

“ I have indicated above some of the principal economic factors of the present situation. The dominant features are the enormous increase, unevenly distributed, of the country’s accumulated wealth, and the greatly increased cost

of certain commodities and of housing accommodation. The latter phenomena have had their natural consequence in a demand for the higher remuneration of all classes of services rendered. So far as the officials and employees of the Government were concerned, the need for a bold measure to redress this situation was recognised last summer in the general grant of a permanent increase of 20 per cent. to all salaries and a temporary indemnity of 60 per cent. on the salaries so increased, with a maximum for any individual of £E. 300. This, which has had the effect of nearly doubling smaller salaries, may be taken as meeting in a great degree the hardships entailed by the rise in the cost of living, though no doubt the lot of the lowest paid employees in this country as in others is never an easy one. As an act of grace a certain measure of assistance, in no case exceeding £E. 60 a year, has been given to the recipients of pensions amounting to less than £E. 300 a year.

"Outside the Government service the economic conditions above indicated have had their natural outcome in general demands for increase of wages as well as improved conditions, and have led to a number of strikes, some of great duration and persistence. The Labour Disputes Conciliation Board was instituted in August 1919, under the presidency of Dr. Granville, with three Egyptian and one non-Egyptian members. They have intervened in a large number of industrial disputes and resolved a great variety of questions relating to pay, hours of work, overtime, special payments for sickness, accident or death, periodical leave, &c. They have assisted in obtaining greatly improved conditions for labour in Egypt, in cases where the employers have not sufficiently promptly realised how greatly conditions of life have changed. In doing this they had to overcome considerable difficulties; the workmen in many cases, owing to lack of education, found it difficult to make clear the precise nature of their grievance and to understand, on the other hand, the standpoint of the employer. In certain important cases, notably that of the tramways companies, the negotiations were hampered by the fact that the head offices of the companies were not in Egypt, and lengthy and tedious telegraphic communications were necessary. The success which finally attended the efforts of the Conciliation Board has fully justified its creation, and the community is indebted to its president and members for their valuable services."

2. Currency.

At the outset of the war, the notes of the National Bank of Egypt were declared legal tender, and the bank was temporarily relieved of the obligation of paying them in gold. This measure was taken with the immediate object of preventing a run on the banks and of providing an emergency currency to take the place of gold, the transport of the latter to Egypt having become impossible. The statutory cover, however, of one-half of the issue in gold was maintained, gold being ear-marked at the Bank of England for the purpose. Notes were issued to the banks as required against deposit of cash in London at the par rate of 97½ piastres to the pound sterling, this arrangement having the effect of keeping the exchange steadily in the neighbourhood of par.

Gold coin rapidly disappeared from circulation, and its place was taken by notes, which were accepted with remarkably little difficulty by a population unaccustomed to paper currency. As the balance of trade accumulated in favour of the country the issue of notes expanded, the minimum cover of one-half in gold being maintained. In 1916, however, it was found impossible to ear-mark any more gold at the Bank of England, and it consequently became necessary to absolve the National Bank from the obligation to maintain the statutory minimum in gold.

The unbroken succession of favourable trade balances has had the inevitable result of carrying the note issue to higher and higher levels, the following figures showing the total at the end of each year since 1913:—

				£E.
Note issue	December	31, 1913	...	2,700,000
"	"	31, 1914	...	8,250,000
"	"	31, 1915	...	11,550,000
"	"	31, 1916	...	21,200,000
"	"	31, 1917	...	30,800,000
"	"	31, 1918	...	46,000,000
"	"	31, 1919	...	67,300,000

Of the amount of the issue at the end of 1919, only £E. 3,330,000 was represented in gold, the cover for the remainder being held in the form of securities, mainly British Treasury bills.

This very large issue of notes has no analogy with the excessive issues which have been made in other countries in connection with Government requirements during the war. The notes have afforded the only means of remunerating producers and others for the goods and services which they have supplied for the use of other countries. The proceeds of these latter having been converted into tangible securities in the shape of British Treasury bills, the notes may be considered as an indirect form of foreign investment. The bulk of them is not in active circulation but is hoarded. Had gold been freely available, imports of gold coin would have taken the place of the issue of notes, as was the case before the war, when gold coin was imported annually, and found its way to a considerable extent into hoards.

The policy of issuing notes against cash in London at par was inaugurated, as already mentioned, at the beginning of the war, when the gold basis of British currency was unquestioned, and the only liability attaching to the acceptance of cash in London was the small expense of transporting gold to Egypt at some future date. By the time when it became evident that British currency was being seriously inflated, many millions of money had already been remitted by bankers and others from Egypt to London and there invested in short-term securities on the strength of what had come to be regarded as a settled policy of exchange. Any departure from this policy in the direction of lowering the amount of Egyptian piastres issued against the pound sterling would therefore have involved the remitters in heavy losses on their liabilities in Egypt and have caused the greatest perturbation on the markets. Moreover in the absence of any free market in gold, it would have been difficult to find a standard by which to regulate the exchange so as to keep the Egyptian currency on a gold parity, and any standard adopted would have been, therefore, more or less arbitrary. Bankers, traders and others would in practice have been subject to unknown vicissitudes depending on the policy of the issuing authorities, instead of enjoying the great advantage of a stable exchange with London. Investment in London was practically the only outlet available for the surplus funds arising out of the favourable balances of trade, and it was of the utmost importance to the commerce and finance of the country that remittances in either direction should be effected without risk of fluctuations in exchange. These considerations constituted the strongest possible case in favour of the maintenance of the existing parity with the pound sterling.

The situation has now become clearer since the export of gold from the United States has been permitted, and, theoretically, it would be possible to place Egyptian currency on a gold parity by issuing notes at a rate based on the American exchange with London and depositing the corresponding cover in New York. But the amount of Egyptian liabilities represented by investments abroad has now expanded to so great an extent that such a step, taking into account the heavy fall in the American exchange, would expose bankers and others to losses which would be far beyond their power to meet. The note issue alone, in which the responsibility of the Government is involved, represents an immense liability, apart from that which would be incurred in other directions through a measure which would, in effect, enhance by many millions the value of the claims of creditors to the detriment of debtors. This practical aspect of the question must evidently outweigh in importance the considerations in favour of a reversion to the gold parity in the present state of the world's exchanges. The only course which commends itself as reasonable in the general interest of the country is the maintenance of the present policy in the confident hope that exchange conditions in Great Britain will gradually return to the normal.

The advantage which might be derived from placing the exchange on a gold parity is, moreover, susceptible of exaggeration. A stable exchange with America would imply at present instability of exchange with the United Kingdom, which is the centre of the world's exchanges and the largest exporter and importer in relation to Egypt. Stability of exchange with London is, therefore, a matter of greater importance for trade and banking than stability of exchange with New York.

The greatest advantage, however, which may be claimed for a readjustment of the exchange is that it would reduce the price of commodities in Egypt. It is undoubtedly the case that such a readjustment would react on the price of articles which are freely exported or imported. The price of cotton in particular should fall in an exact ratio to the difference in exchange. But a similar fall could hardly be expected in the price of commodities which are locally produced and consumed,

as the reserves of purchasing power in the country are amply sufficient to counteract the effect of any limitation in the issues of fresh currency. It is to be remembered, in any case, that the rise which has taken place here, as elsewhere, is far greater than that in the value of gold relatively to paper money. In the United States, where gold is on a parity with paper, wholesale prices stand at 120 per cent. over pre-war level. Even in India, where the value of the silver standard has risen considerably relatively to gold, retail prices have risen more than 50 per cent.

The export of gold and silver coin and bullion has been prohibited save under licence, and the import of gold coin and bullion was also prohibited with the same reservation. This latter prohibition has, however, now been withdrawn. Gold coin has commanded a premium for the purpose of conversion into ornaments, which has been carried on on a considerable scale for the last few years. The premium rose recently to as much as 75 per cent., but since the renewal of the prohibition of import it has fallen to 40 per cent.

Although the substitution of notes for gold in the circulation under the régime of forced currency has been accepted by the people without undue difficulty, the notes cannot compare in popularity with coin, especially for hoarding purposes. In the absence of gold the predilection for coin manifested itself from the outset in the shape of an extraordinary demand for subsidiary currency, especially silver, similar to that which was observed in many other countries at the same time. This demand increased in intensity each year, probably stimulated by decreased confidence in the notes as the issue of the latter expanded without metallic cover and as the premium on gold appeared. The total amount of Egyptian silver coin held by the public at the moment of the outbreak of war was £E. 2,500,000. It now stands at £E. 6,600,000. In this total is included silver issued not only for Egypt, but for the Soudan and for the occupied territory in Syria. The world-wide demand for silver for currency purposes made it more and more difficult to obtain and mint the increased quantities required, and various expedients were adopted from time to time to meet the situation. For example, 25 lakhs of rupees were obtained from India in 1916, and the rupee was made legal tender in Egypt. British silver coin was provided for use in the Soudan, where, in the outlying districts, notes were unacceptable, and coin was found to be indispensable for the purchase of cattle and other supplies for military purposes. The British silver was made legal tender for the purpose in the Soudan at the rate of 5 piastres to the shilling. At length, in the summer of 1918, the pressure on the world's silver supplies became so great that the Government found it impossible to continue minting silver coin, and recourse was had to issues of paper currency of small denominations in its place.

These small notes passed current without much difficulty, notwithstanding their inconvenience, but they naturally had the effect of driving the existing silver coin out of circulation. It is significant that the total issues of 25, 10 and 5-piastre notes, which now constitute the entire subsidiary circulation, amount to no more than £E. 1,800,000. A comparison of this figure with that of the previous issues of silver coin indicates to how great an extent the latter is hoarded. The issue of small notes naturally provoked an enhanced demand for coins of the smallest denominations, and for some time the scarcity of these coins caused considerable inconvenience. A continued supply of nickel coins sufficient to meet requirements seems now, however, to be assured.

On the whole, and having regard to the preference of the population for a metallic currency, there is reasonable cause for congratulation on the success of the war currency measures adopted in Egypt.

3. Government Finance.

The depressing effects on the prosperity and activities of the country which followed immediately on the outbreak of war in 1914 reacted seriously on the State revenues, especially on the receipts from Customs, Railways, Ports and Judicial fees. The heavy decrease under these heads rendered imperative both a revision of expenditure, for which purpose a special commission was appointed, and the finding of fresh sources of revenue.

In addition to meeting the deficiency in its finances, the Government was called upon to finance or to guarantee various emergency measures. As I have already stated, advances were made to cultivators under Government guarantee to enable them to hold their cotton during the crisis in the cotton market, and from the smaller cultivators cotton was bought outright by the Government. The Government was

also prepared to support exchange by procuring credit in London during the dislocation of the balance of trade caused by the falling off in exports, and it did so to the extent necessary to meet its own obligations abroad and to provide the funds required for the service of the Public Debt on behalf of the Caisse de la Dette. For all these purposes the Reserve Fund proved an invaluable resource. By means of the securities in which it was invested credits were raised in London which proved sufficient to meet all emergencies without external assistance, though His Majesty's Treasury generously agreed to provide additional credit if necessary in connection with the scheme for making advances on cotton.

The result of the revision of expenditure was to effect considerable economies on the estimates for the year 1914-1915 and to reduce the estimates for the year 1915-1916 to a figure some 2½ millions less than that of the preceding year. The greater part of this reduction was under the head of new works, which admitted of curtailing with far greater facility than administrative expenditure. At the same time, appreciable economies were effected in staff and purchases of stores, as well as in expenditure on maintenance and renewals, the latter, however, constituting a postponement of outlay and not a real economy.

On the revenue side the measures taken in the financial year 1914-1915 included the raising of the first- and second-class fares on the State Railways by 10 per cent., the doubling of the inland telegraph rates, and certain increases in the postal rates. These were followed in 1915-1916 by moderate increases in the import duties on timber, alcohol and tobacco, and by an addition of 1 per cent. *ad valorem* to the quay dues on exports, to which the consent of the authorising powers was obtained for the period of the war. Fresh sources of revenue were also provided by the profits on the National Bank of Egypt note issue under the régime of temporary inconvertibility, in which profits the Government secured a substantial share, and by the profit on the sale of the cotton bought from cultivators during the crisis.

The account for the year ended the 31st March, 1915, closed with a deficit of £E. 1,468,000, which was met by a draft on the Reserve Fund, reducing it to £E. 3,635,000. By the end of the following year, however, a great improvement had been brought about in the economic situation of the country by the recovery in the price of cotton and the expenditure of the British forces. The revenue benefitted both by this improvement and by the additional resources already mentioned, while expenditure was kept well within the estimates, with the result that on the 31st March, 1916, it was possible not only to write off a substantial sum representing depreciation on securities, but to show a surplus of £E. 1,165,000, which, added to Reserve Fund, raised it to £E. 4,800,000.

The year 1916-1917 was marked by a heavy increase in administrative expenditure, due principally to the rise in cost of materials, especially of coal. This increase was, however, more than counter-balanced by the expansion of the revenue, which benefitted directly and indirectly by a further improvement in the price of cotton and by the continuance of military expenditure. A portion of the increased revenue in this and the preceding year consisted of seignorage on the large quantities of silver coin which were issued in consequence of the preference of the people for metallic currency under the régime of forced paper currency. As this profit on seignorage could not be considered as real revenue, but rather as a liability which would have to be met when the silver eventually returned from circulation, it was decided to pass the profit in question, amounting to £E. 996,000 to the credit of a Silver Reserve Fund. After deduction of this amount, a surplus of £E. 1,690,000 remained, which was added to the General Reserve Fund, and raised it to £E. 6,490,000.

In the following year, 1917-1918, the administrative expenditure was again largely increased by the higher cost of materials and stores, by the undertaking of some portion of the arrears of maintenance and renewals, by additional expenditure on the Egyptian army, and by war gratuities to the staff to meet the increased cost of living. Expenditure on new works, though still below the pre-war figure, was increased by the cost of certain irrigation projects of immediate utility and by the purchase of the telephone system. Finally, a sum of about £E. 3,000,000 was devoted to the taking on charge of certain expenditure incurred on behalf of the Egyptian Expeditionary Force, which had, up to that time, been carried in a suspense account, but which was now definitely assumed by the Egyptian Government in recognition of the service rendered to the country by Great Britain in protecting it from the risk of invasion.

To assist in meeting these heavy charges certain new sources of revenue were

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found. An excise duty of 63 piastres per kantar was imposed on sugar produced and consumed in the country, such sugar having, since the early days of the war, been sold to the consumer at a price artificially maintained at a much lower level than that prevailing abroad. To meet the increased cost of fuel on the railways, passenger fares were raised to 50 per cent. above pre-war rates, and moderate increases in some of the goods rates were imposed at the same time. Other heads of revenue exhibited an expansion under the continued operation of the influences which had been at work during the two preceding years, with the result that the final accounts for the year showed a surplus of £E. 669,000 after all the above-mentioned charges, ordinary and extraordinary, had been met. Of this surplus, £E. 389,000 was credited to the Silver Reserve Fund, and £E. 280,000 to the General Reserve Fund, raising it to £E. 6,770,000.

The expenditure for the year 1918-1919 was lightened by the difference between the amount of 3 millions, contributed to the cost of military operations the year before, and that of upwards of half a million, which figured under that head for the year. This economy, however, was more than absorbed by increased expenditure under other heads, to which the upward movement in cost of materials and stores again contributed in a large degree, while war gratuities to the staff on a new and more liberal scale constituted a far heavier item than in the preceding year. Certain increases in administrative expenditure and new works were authorised in obedience to a pressing need for expansion or extension in various directions. On the other hand expenditure on renewals was restricted by the difficulty of obtaining labour and material.

On the revenue side the State railways charges were again raised to meet increased expenses, the passenger fares to double their pre-war figure, and a considerable number of goods rates in approximately the same proportion. This measure produced a large increase in the receipts, which was supplemented by a further considerable increase in the Customs revenue due to the expansion in value of imports, by the receipts from the newly purchased telephone system, and by moderate increases under a few other heads. The final figures for the year showed a surplus of £E. 4,277,000, of which £E. 4,210,000 was added to the General Reserve Fund, raising it to £E. 10,980,000, and £E. 67,000 to the Silver Reserve Fund, raising it to £E. 1,452,000.

In framing the Budget for the year 1919-1920, the Administration was confronted with the necessity of providing for long-deferred claims for arrears of maintenance and renewals, chiefly in respect of the State railways, and for new works under the heads of irrigation, buildings, and harbour extension, all these outlays being inflated by the high cost of material and labour. Reorganisation and extension in certain services, and the reinstatement of officials returned from military service, called for increased expenditure on personnel. On the other hand the total estimated cost of fuel and stores was somewhat diminished by the fall in freightage of coal. The revenue estimates were raised to the figure which appeared to be justified by the actual receipts of 1918-1919, but this fell short by £E. 550,000 of the total estimated expenditure, the figures as prepared by the Finance Committee being:—

	£E.
Receipts	27,300,000
Expenditure	27,850,000

At the last moment, however, the estimates of expenditure were increased by £E. 1,000,000 as a provision for the liabilities arising out of the disorders which took place in the spring.

The actual figures of revenue and expenditure for the year are not yet available; they will probably show considerable variation from the estimates.

On the revenue side the receipts from Customs show a large increase as a result of the rise in value both of imports and exports. The duty on tobacco was raised in September 1919 by P.T. 20 per kilog., the resulting annual increase in revenue being estimated at £E. 1,700,000. The receipts of the Domains Administration have been increased by the rise in the price of cotton, while the recent expansion of the note issue adds to the estimated profits from this source.

On the expenditure side the estimates have been augmented by a large addition to salaries, wages and allowances on account of the higher cost of living. The total increases granted on this account over normal salaries amount to nearly £E. 5,000,000 per annum, of which some £E. 3,000,000 have been authorised during the year 1919-1920 alone. Expenditure under other heads will probably fall considerably

short of the estimates. The disorders in the spring, besides causing a temporary suspension of work of all kinds, rendered necessary a cautious policy in carrying out plans for the immediate future, with the result that much of the work which would have been accomplished will be thrown forward into the year 1920-1921. Difficulty in obtaining supplies from abroad has also prevented the outlay of a large portion of the sums provided for this purpose.

The net result of all these factors is that instead of the deficit of £E. 1,550,000 estimated for in the Budget, a surplus of some £E. 3,000,000 may be anticipated, which will swell the Government Reserve to approximately £E. 14,000,000.

The expansion in the scale of expenditure during the period which I have thus passed summarily under review, as measured by the Budget estimates, appears as follows :—

					£E.
Budget for 1919-20	...	...	...	...	28,850,000
Budget for 1914-15	...	...	...	...	18,162,000
Increase					10,688,000

This large increase is due, in a preponderant degree, to expenditure forced upon the Government by circumstances arising directly and indirectly out of the war, the real increase on account of development and extension of services being relatively very small.

Although the taxable capacity of the population has increased greatly during the period, the inelastic character of some of the principal sources of taxation has prevented the revenue from expanding automatically to a degree sufficient to keep pace with the increasing expenditure, and the Government has, therefore, had recourse to such additional imposts, some of them of a more or less temporary character, as lay within its limited powers of taxation.

The following table shows the revenue and expenditure for the five years 1914-15 to 1918-19 :—

Years.	Revenue.	Expenditure.			Excess or Deficit.
		Ordinary.	New Works.	Total.	
	£E.	£E.	£E.	£E.	£E.
1914-15	15,389,124	14,873,341	1,984,442	16,857,783	—1,468,659
1915-16	17,759,418	16,004,219	590,447	16,594,666	+1,164,752
1916-17	19,927,274	16,519,274	721,332	17,240,606	+2,686,668
1917-18	23,166,074	20,996,733	1,500,215	22,496,948	+669,126
1918-19	27,661,239	22,031,718	1,352,603	23,384,326	+4,276,963

The progress of the principal heads of receipts is shown in the following table :—

—	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£E.	£E.	£E.	£E.	£E.
Direct taxes	5,254,096	5,594,314	5,575,338	5,608,712	5,612,291
Customs and Excise	3,105,176	3,830,138	4,840,163	5,331,902	6,926,089
Judicial and registration fees	1,195,103	1,237,531	1,376,565	1,627,294	1,606,939
Railways	3,176,220	3,724,348	4,460,897	5,003,662	6,991,105
State Domains	368,004	810,847	866,585	1,033,845	989,288
Interest on funds	301,027	390,756	649,218	1,170,306	1,615,521

The situation of the Reserve Funds at the end of each of the five years was as follows :—

—	General Reserve Fund.	Silver Reserve Fund.
	£E.	£E.
1914-15	3,634,890	..
1915-16	4,799,642	..
1916-17	6,490,310	996,000
1917-18	6,770,179	1,385,257
1918-19	10,979,838	1,452,581

4. Budget of 1920-1921.

The revenue for the year 1920-21 is estimated at £E. 40,271,000, and the expenditure at the same sum. Of the anticipated revenue, £E. 33,701,000 may be classed as ordinary and £E. 6,570,000 as extraordinary receipts, the latter including £E. 2,770,000 from the sale of land, £E. 1,800,000 from the profits on the control of cotton, and £E. 2,000,000 from the new tax on cotton. Of the anticipated expenditure £E. 31,594,418 may be classed as ordinary and £E. 8,676,582 as extraordinary expenditure. £E. 5,654,080 of the latter sum is set aside for new works, and the remaining £E. 3,022,502 includes £E. 2,000,000 to cover the estimated loss on the sale of imported wheat, and £E. 954,502 carried forward from the credit of £E. 1,000,000 opened in the Budget of the previous year to provide for the settlement of claims arising out of the disorders of last spring.

Direct taxes, the only source of revenue which is estimated to show a decrease, are expected to produce £E. 5,480,000, or £E. 92,000 less than the estimate for the previous year, a decrease which is more than accounted for by the abolition of the tax on date-palms. The Financial Adviser in his note on the budget comments as follows upon this wise measure of the Egyptian Government:—

“ The tax on date trees has been a subject of frequent criticism for many years past. The Legislative Assembly has more than once urged the Government to abolish it on the ground that as the land planted with date trees is already subject to the land tax, it is unjust that the trees themselves should pay an additional tax, particularly as other fruit trees are exempt. It was pointed out, moreover, that in most cases the owners of the date trees are not owners of the land, and belong, as a rule, to the poorer class of the agricultural population. At the time of the reassessment of the land tax, the fact that land was planted with date trees was taken into account, but no doubt it was difficult to make an appreciable difference in the assessment of the land according to the number of trees per feddân that it carried. Having regard to the objections to which the tax is open, and to the fact that no census of date trees having been carried out since the year 1907, a very large number of taxable trees now escape the duty, the Government has decided to abolish it from the 1st April, 1920, entailing a loss of revenue of £E. 136,500.”

Customs receipts will, it is anticipated, increase by no less than £E. 3,633,000, and provide £E. 10,590,000. Import duties are expected to increase by £E. 1,290,000 and tobacco duties by £E. 1,650,000, while export duties and quay dues are expected to account in almost equal proportions for an increase of £E. 1,100,000. From these must be deducted the sum of £E. 407,000, a loss arising from the abolition of the sugar excise. The proceeds of Government investments are expected to exceed the estimate for the previous year by £E. 1,232,000, while among other augmentations of revenue, the receipts of the railways show an estimated rise of £E. 636,000, and those of the State Domains, owing principally to the higher price of cotton, a rise of £E. 480,000.

“ The detailed mode of imposition of the new cotton tax,” the Financial Adviser writes in his note on the Budget, “ which is held by the legal advisers of the Government not to be of a character which requires submission to the Legislative Assembly under article 17 of the Organic Law, will in due course be determined by decree. It was announced at the beginning of the year in order to permit of its being taken into account by those already then making contracts for November deliveries of the new crop.” With respect to the revenue of £E. 2,770,000, which is expected to accrue from sales of Government land, he points out that the whole of this receipt will be more than compensated by expenditure of a character calculated permanently to improve the nation's property, whether by irrigation or other new works.

The revenue will also receive a considerable accretion from the profits on the operations of the Cotton Control Commission, a body set up in 1918 to carry out, on behalf of the British and Egyptian Governments, a scheme for the purchase of the cotton crop of that year. The price fixed for the purchase of the cotton was on the basis of 42 dollars per kantar for “ fully good fair Sakellarides ” delivered in Alexandria. The final result of the operations will show a considerable profit, the Commission having preserved throughout a margin wide enough to cover, not merely expenses, but also a provision for contingencies.

The following table is a comparison between the revenue estimates for the financial years 1919 to 1920, and 1920 to 1921 :—

Source of Revenue.	Estimated Receipts, 1920-1921.	Estimated Receipts, 1919-1920.	Increase or Decrease.
	£E.	£E.	£E.
Direct taxes	5,480,000	5,572,000	— 92,000
Customs	10,590,000	6,957,000	+ 3,633,000
Port and light dues .. .	183,000	170,000	+ 13,000
Fisheries	68,000	60,000	+ 8,000
Stamps	70,000	51,000	+ 19,000
Assay dues	30,000	30,000	..
Judicial receipts	1,863,000	1,660,000	+ 203,000
Railways	7,386,000	6,750,000	+ 636,000
Telegraphs	300,000	200,000	+ 100,000
Telephones	266,000	200,000	+ 66,000
Post Office	516,000	375,000	+ 141,000
State Domains revenues .. .	1,336,000	856,000	+ 480,000
Ghafir tax	1,179,000	853,000	+ 326,000
Military exemption	150,000	150,000	..
Deductions from salaries for pensions .. .	187,000	150,000	+ 37,000
Proceeds of investments	3,258,000*	2,026,000	+ 1,232,000
Miscellaneous receipts	813,000	700,000	+ 113,000
Cotton tax	2,000,000	..	+ 2,000,000
Sale of land	2,770,000	414,000	+ 2,356,000
Various extraordinary receipts	1,826,000	126,000	+ 1,700,000
Draft on reserve fund	..	1,550,000	— 1,550,000
Total	40,271,000	28,850,000	+ 11,421,000

* Of this sum £E. 2,176,000 represent the share of the Treasury in the profits on the issue of bank-notes.

Ordinary or recurrent expenditure is expected to total £E. 31,594,418, or £E. 7,186,437 more than the estimated ordinary expenditure for the previous year, which was £E. 24,407,981. This increase is mainly due to the higher scale of remuneration which is now accorded to all classes of Government officials and employees and to the enhanced cost of materials.

The Ministry of Finance, in order to deal efficiently with an increased volume of work, has found it necessary to create a number of new posts in its central administration, and is spending £E. 17,000 in subventions to the Sultania Library, the Arab Museum and the Committee for the Preservation of Arab Monuments, and in an increased subsidy to the University of Al Azhar.

Among the expenses of the Ministry of Education figure a sum of £E. 20,000, to be devoted to measures preparatory to a scheme of widely-extended elementary education, and a sum of £E. 50,000 for general educational development.

The Ministry of the Interior is spending £E. 18,577 on increased staff and £E. 35,411 on new or additional subventions to municipalities and local commissions; while the subsidiary departments of Public Health and Prisons are also strengthening their personnel, and the former is spending £E. 9,000 in prophylactic measures against ankylostoma.

The Budget of the Ministry of Justice shows an increase of £E. 273,380, of which £E. 271,000 is accounted for by improvements in the pay of its officials and employees and reforms in the cadre.

In the Ministry of Public Works a post of Inspector-General of Irrigation is being abolished and a post of Assistant Under-Secretary of State substituted, while the post of Under-Secretary of State is being separated from that of Adviser, with which it has hitherto been combined. In the Irrigation Department several new posts of Inspector and Director of Works are being created, and provision is made for a considerable increase in the cost of transport.

The Ministry of Agriculture is devoting £E. 25,310 to developing arrangements for the fumigation of cotton seed, and is also augmenting its personnel.

In the central administration of the Ministry of Communications a new post of Under-Secretary of State is provided for. The estimated expenditure of the State railways has increased by £E. 1,219,506 to £E. 6,594,175, of which sum £E. 1,315,000 are intended for the purchase of new material and rolling stock. This administration

has recently adopted a 48-hours' week, and granted its employees more liberal conditions of leave : a large increase of permanent and temporary staff has, therefore, been necessary, involving an additional expenditure of £E. 81,396. The staffs of the State Telegraphs of the Post Office have also been considerably increased for similar reasons. The high cost of labour and upkeep figures largely in the increased expenditure of the Ports and Lights Administration, the Main Roads Department and the Bridges Department. The Mechanical Transport and Inland Navigation Departments are new creations.

Under the heading "Provinces and Governorates" appears an increase of £E. 731,104 in ordinary expenditure: this is chiefly accounted for by the rise in salaries, but in part by the enlargement of the police and ghafir forces and the enhanced cost of forage and rations.

In spite of an economy of £E. 20,000 which results from the disbanding of the Camel Corps, the ordinary expenditure of the Ministry of War increases by £E. 188,626; this is attributable to the higher scale of pay and the greater cost of transport, forage and rations.

New works, which have necessarily remained in comparative abeyance during the past few years, figure in the current Budget for £E. 5,654,080, or £E. 2,012,061 in excess of the previous year. The largest credit is that for the Irrigation Department, which amounts to £E. 1,580,467. This will be mainly devoted to an extensive improvement of the canals and drains of Lower Egypt, as a preliminary to the reclamation of very large areas of lake and marshy land which will be undertaken as increased supplies of water become available for their irrigation. Pending the report of the commission which has been appointed to examine the important schemes of the Ministry of Public Works for regulating the waters of the Upper Nile, no provision for the execution of these schemes has been made in the Budget.

Among other credits for new works are £E. 1,239,000 for the State railways; £E. 729,770 for the Ports and Lights Administration (£E. 400,000 for the improvement of Suez Harbour, and £E. 202,000 for Alexandria Harbour); £E. 351,582 for the State Buildings Department; £E. 267,018 for the Cairo City Service, or "Tanzim"; £E. 175,060 for the Main Drainage Department (including £E. 50,000 for the installation of drainage at Suez and Mansura); £E. 165,650 for the Department of Mines, to provide for the boring of wells in the oil-bearing areas bordering the Red Sea, and for the construction of a petroleum refinery at Suez; £E. 165,000 for the repair of His Highness the Sultan's yacht which has lain at Constantinople since 1914; £E. 118,000 for the Mechanical Transport Department, for the creation of garages in Cairo and Alexandria and for the purchase of motor vehicles; £E. 111,902 for the Ministry of Interior, chiefly for new works, in connection with the supply of water and light, to be executed on behalf of local commissions; and £E. 102,000 for the improvement of the State Domains, an outlay which should be recovered in a few years in the form of increased revenues.

In concluding this survey of the current Budget, I quote from the Financial Adviser's note the following remarks, which appear to me to constitute a just appreciation of the outlook:—

"Broadly speaking, it may be said that the budgetary position gives, at any rate for the moment, and provided that no further heavy increase of expenditure is called for, no serious ground for uneasiness. The situation will never be altogether free from difficulty so long as the present restrictions on Egypt's fiscal arrangements continue. The impossibility of imposing taxation in proportion to wealth, and equally on local and foreign subjects, tends to render the present system both inelastic and inequitable. Neither the land tax nor the uniform *ad valorem* system of Customs' dues is a satisfactory form of taxation. The former, which was designed to represent approximately 25 per cent. of the rental value of the land, no longer bears a proportion approaching the above figure. The uniformity of the import duty, whether applied to luxuries or to necessaries of life, is equally open to objection. The practically complete exemption of foreign subjects and foreign companies from taxation on the wealth which they may derive from this country is a serious blot on the existing system. The limitations on local taxation seriously hamper all municipal development.

"Needless to say that the estimates assume the maintenance of public tranquillity, an indispensable condition of national prosperity. The impossibility of obtaining at present sufficient supplies of coal, which may react unfavourably on the railway receipts, besides causing grave inconvenience to

the public, is, perhaps, the chief disturbing factor in the immediate outlook. Moreover, any further serious increase in the cost of living, reacting upon the cost of services and materials, before new sources of revenue become available, would create a situation of considerable difficulty.

"But subject to these qualifications, the immediate budgetary position as above set out is reasonably satisfactory. The estimates of revenue are no doubt based upon the continuance of a fairly high range of prices both as regards cotton and imports, but the figures taken as a basis of the estimates are by no means excessive, and are such as are likely to continue for some time to come. The recurrent expenditure is sufficiently covered by the ordinary revenue, while the extraordinary revenue will probably remain for the next few years at a high figure. It should be borne in mind, moreover, that the Reserve Fund has of late years been swollen by the inability to carry out all the works of which the country has need, and that reasonable drafts upon it would be fully justified."

5. Egyptian Debt.

The public debt has been reduced since 1913 by £902,900, through the automatic amortisation of the Guaranteed Loan, and stood on the 31st December, 1919, at £93,299,640, distributed as follows:—

	£
Guaranteed Loan	6,199,900
Privileged Debt	31,127,780
Unified Debt	55,971,960
	93,299,640

Of this total, £5,282,260 represents stock held by the Government and the Commissioners of the Debt. The amount in the hands of the public was, therefore, £88,017,380.

No amortisation of the Privileged or Unified Debt has been effected of recent years. In so far, however, as the Budget surpluses are accumulated in the Reserve Fund and invested in securities, this process operates as a reduction of the Debt charge for the time being.

6. Ministry of Finance: General.

The premature death in 1918 of Lord Edward Cecil, who had occupied the post of Financial Adviser since 1912, deprived Egypt of a public servant whose devotion and foresight had been especially valuable in the difficult circumstances attending the early years of the war. During the period of his illness and for the greater part of the following eighteen months the duties of the Financial Adviser were ably discharged by Sir William Brunyate. The country was fortunate in again obtaining in 1919 the services of Sir Paul Harvey, who had preceded Lord Edward Cecil as Financial Adviser.

Important changes have been made in the organisation of the Ministry of Finance. Hitherto several departments have been subordinated to the Ministry of Finance, which are not directly concerned with the primary functions of such a Ministry. It has seemed desirable to detach these departments from the Ministry of Finance, and the recent creation of a Ministry of Communications has already permitted the transfer of the Postal Administration and the Ports and Lights Administration to that Ministry.

The Central Administration of the Ministry of Finance has also been reorganised. The important group of services included under the State Accounts Department has been redistributed; and the general control of Government Accounts, Pensions, &c., has been entrusted to a Controller of Government Accounts, while a Controller of Budget and Establishment has been appointed to undertake the preparation of the annual Budget and to deal with modifications of budgetary grants and general questions relating to departmental establishments. A consulting office has been formed under the Financial Secretary, which is intended to carry out research and to provide information and advice on economic and financial subjects.

New posts of Controller-General of Administration and Controller of Government Purchases have been created: the former official is charged with supervising the general administrative work of the Ministry and other important matters, while

the latter will co-ordinate the purchase of Government supplies : all supplies of a similar nature will be bought through the department which is most competent, and it is hoped that considerable economies will thus be effected. The duties of the Controller of Printing have been extended to include control over all Government printing executed in Egypt, an arrangement which will economise labour and material.

The previously divided control of fisheries has been amalgamated under the Coastguards Administration, with satisfactory results.

A new departure, which ought to prove of material benefit to the country, has been the recent creation of a Bureau of Commerce and Industry. The formation of such a bureau was recommended in 1918 by a commission appointed to inquire into the development of Egyptian commerce and industry, and it will be the means of carrying out other useful recommendations of the commission. The more important attributions of the bureau will be the collection of information and statistics concerning Egyptian trade and industries, the exhibition of samples of Egyptian products and manufactures, the registration of importers and exporters, the encouragement of Egyptian industries, the collection of trade catalogues for public reference, and probably the organisation of exhibitions in Cairo and Alexandria and of Egyptian sections in exhibitions abroad.

7. Direct Taxes.

The varying prosperity of Egypt during the war was reflected in the experience of the Direct Taxes Department. Owing principally to the fall in the price of cotton to under 10 dollars a kantar, great difficulties were encountered in collecting the land tax in 1914-15. The difficulties were increased by the fact that there was a tendency on the part of the Mudiria authorities to have quick recourse to seizure in default of payment : the number of seizures rose from 16,707 in 1913 to 41,996 in 1914-15, and 51,146 in 1915-16. The land tax collected in 1914-15 amounted to £E. 4,896,130, or £E. 83,870 less than the budgetary estimate. From the financial year 1916-17 the situation rapidly changed ; collections became comparatively easy, and in 1918-19 the land tax collected amounted to £E. 5,253,268, or £E. 9,368 in excess of the budgetary estimate. The number of seizures effected in the same year was 9,422. It is worthy of mention, as evidence of the increased prosperity of the small fellahen, that the instalment of debt due to the Agricultural Bank amounted in 1918-19 to £E. 576,500 only, as against £E. 1,392,000 in 1913.

In addition to the collection of the land and house taxes and the rents of Government lands, the Direct Taxes Department has been charged since 1915 with the collection of the purchase money for cotton seed supplied to cultivators by the Ministry of Agriculture for sowing, and since 1917 with the collection of the Ghafir Cess, which had hitherto been effected by the Ministry of the Interior.

In 1914, as a result of the low flood of the previous year, £E. 251,000 of land tax were remitted on an area of some 432,000 feddans. The measuring and assessment of this large area in a limited time was a work of considerable magnitude. The department has also successfully accomplished, with a reduced staff, a variety of additional work arising out of war conditions and the demands of the military authorities.

The following table shows the collection returns of the Direct Taxes Department for the financial year 1918-19 :—

Land and date tax—

					£E.
Budget estimate	...	...	...	...	5,243,900
Actual revenue to be collected	...	...	...	...	5,258,841
Collected	...	...	...	...	5,253,268
Arrears	...	...	...	£E. 5,573	
Excess over Budget	...	...	...	£E. 9,368	
House tax—					
Budget estimate	...	...	...	...	336,000
Actual revenue to be collected	...	...	...	...	379,958
Collected	...	...	...	...	347,475
Arrears	...	...	...	£E. 32,483	
Excess over Budget	...	...	...	£E. 11,475	

Government land rents—					£E.
Budget estimate	...	...	...	...	182,000
Collected	...	...	...	...	209,153
Collected in 1917–1918	...	...	...	...	187,916
Price of cotton seed—					
Amount to be collected...	...	...	...	...	242,494
Collected	...	...	...	...	242,423
Arrears	...	...	...	£E. 71	
Ghafir Cess—					
Budget estimate	...	...	...	...	820,000
Actual revenue to be collected	...	...	...	...	839,971
Collected	...	...	...	...	831,998
Arrears	...	...	...	£E. 7,973	
Excess over Budget	...	...	...	£E. 11,998	

8. Trade and Customs.

Import Trade, 1913–1918.

The following figures show the value of imports, excluding tobacco, from 1913 to 1918:—

						£E.
1913	...	...	...	...	...	26,782,809
1914	...	...	...	...	...	20,807,779
1915	...	...	...	...	...	18,474,098
1916	...	...	...	...	...	30,072,213
1917	...	...	...	...	...	30,134,698
1918	...	...	...	...	...	48,054,377

In 1913 Germany, Austria and Turkey supplied Egypt with 58·70 and 98 per mille of her imports. These imports, excepting goods which were already in bond, were cut off at the outbreak of war. Trade with Belgium and Russia, which provided 42 and 32 per mille of Egypt's total imports, was also almost entirely suspended.

The most important articles affected were wrought iron and steel from Belgium and Germany, machinery and parts from Germany, flour from Germany and Russia, sugar from Austria, timber from Austria, chemical manure from Belgium, dyes from Germany, glassware from Belgium, Germany and Austria, kerosene from Russia, live animals from Turkey, fresh and dried fruits from Turkey, and tobacco from Turkey and Russia.

The imports of wrought iron and steel were far below normal during the war until 1918, when they exceeded in value those of 1913, the United Kingdom, followed at a considerable distance by the United States, being the principal source. Machinery and parts remained very greatly below their pre-war level.

There was an immense decrease in the quantity of flour imported, from 203,546 tons in 1913 to approximately 14,863 tons in 1918; such flour as reached Egypt during the war came almost entirely from Australia and India.

The imports of sugar into Egypt from countries other than Austria was negligible in 1913; in 1918 it was imported entirely from the Far East, the quantity being 18,463 tons against 32,935 tons in 1913.

The war affected also the source of Egypt's supplies of coffee, which was sent mainly from British Possessions in the Far East instead of from Brazil.

There was practically no import of timber into Egypt throughout the war.

Ready-made clothing, which was deficient during most of the years of war, showed in 1918 a value slightly exceeding that of 1913, the place of Austria being taken by the United Kingdom and France.

The imports of chemical manure, for which Egypt became almost wholly dependent upon Chile, fluctuated considerably, but by 1918 had become totally inadequate to the needs of the country.

The cutting off of supplies of German synthetic indigo led to a remarkable revival in the importation of natural indigo from India, the value of the 1917 imports being over £E. 200,000, or more than ten times that of 1913. In 1918 the United Kingdom began to export synthetic indigo to Egypt, supplying 43,824 kilog., valued at £E. 14,742.

The glassware trade, which fell off greatly during the earlier years of the war, increased in 1918 to twice the 1913 value, though the quantity was still in deficiency; the chief importer was Japan, followed by Spain and the United Kingdom.

In 1913 the value of the kerosene imported was £E. 572,069, of which £E. 421,028 came from Roumania, £E. 145,663 from Russia, and only £E. 5,378 from the United States. By 1916 the United States had obtained the first place with £E. 811,468 out of a total import of £E. 897,727, and other countries in the Far East provided £E. 85,405, but in 1918 the whole of the imported kerosene, amounting to 76,854 tons to the value of £E. 817,612, came from crude petroleum from the Far East, which was distilled at the Suez Refinery, with the exception of 1,380 cases, which came from the United Kingdom.

Though there was a certain importation of live animals from Tripoli in 1918, the place of Turkey as a supplier of animals and fruits was not taken by any other country.

The match trade has largely changed hands. In 1913, out of a total of £E. 81,368, Sweden, Austria and Italy supplied matches to the values of £E. 39,060, £E. 23,727 and £E. 12,141 respectively. Sweden remained the chief importer until 1916, but in 1917 the imports from Italy were £E. 102,774, from Sweden £E. 62,058, and from Japan £E. 56,525. In 1918 Japan took the first place with £E. 288,778, followed by Sweden with £E. 114,278. The price of matches had by this time increased six-fold since 1913.

The value of the imports of rags, paper and printed matter has greatly increased, and the sources of supply have varied. In 1913 these articles, of which the total value was £E. 437,333, were mainly furnished by Austria and the United Kingdom, and to a less extent by France, Germany and Italy. In 1915, 1916 and 1917 Italy was the chief supplier, followed in order of importance by the United Kingdom, France, Norway, Sweden and Holland. In 1918 the value reached £E. 1,658,666, of which the United Kingdom provided £E. 727,740, Italy £E. 306,568, Japan £E. 160,414, Holland £E. 124,657, and France £E. 105,781.

The outbreak of war was followed by a decrease in the quantity of tobacco imported, which fell from 9,030,003 kilog. in 1913 to 6,756,834 kilog. in 1917, and rose again to 7,020,559 kilog. in 1918. A noteworthy feature is the increase in the quantity of manufactured tobacco imported, which rose from 62,987 kilog. in 1913 to 356,906 kilog. in 1916 and fell again to 149,006 kilog. in 1918. This fluctuation is doubtless due to the presence of the British troops in the country. In 1913 Egypt obtained most of her tobacco from Greece, Turkey and Russia. The following table shows how the import of tobacco was affected by the war and how the place of Turkey and Russia was taken by China, British India and Japan:—

—			1913.	1914.	1915.	1916.	1917.	1918.
			Kilog.	Kilog.	Kilog.	Kilog.	Kilog.	Kilog.
Greece	..	..	3,354,296	3,432,871	5,219,526	5,573,916	4,330,634	3,369,686
Turkey	..	..	2,972,643	2,072,947	1,006,806	552,492	165,067	35,049
Russia	..	..	1,953,438	1,583,378	282,087	68,490	13,733	3,642
China	..	..	66,480	30,882	89,261	255,131	733,556	1,837,141
British India	..	..	22,960	13,747	24,502	41,334	453,448	641,165
Japan	..	..	..	..	19	43	268,910	674,260

It is interesting to trace the variations in price in Egypt's most important import, cotton piece goods, during the war. The tariff for these goods is fixed periodically by the Customs Administration in agreement with the principal importers. The tariff in force at the outbreak of war, having expired on the 31st January, 1915, was replaced by a new tariff nearly 10 per cent. lower; but in June 1915 prices rose again to their pre-war level, and this increase continued until prices were approximately doubled in July 1917, trebled in March 1918, and finally reached their maximum, just before the armistice, at about four times the pre-war figure. A decline in prices occurred at last in February 1919, but it was not maintained.

High freights and difficulties in obtaining space for cargo led to a large increase in the number of parcels arriving through the post. Many firms received hundreds of parcels at a time in this way, the slight increase in cost being more than compensated by rapidity and comparative certainty of delivery. The value of all the parcels sent through the post in 1913 was £E. 967,284; it increased to £E. 1,324,997 in 1917

and to £E. 2,294,874 in 1918, exclusive of parcels for the army. The countries which most freely availed themselves of this method of sending their goods were the United Kingdom, France, Italy, Japan and Switzerland. There is no parcel post between the United States and Egypt, but large packages containing goods used to arrive by letter post from the United States in 1918. After the armistice there was a decided decrease in the number of postal parcels, but it seems probable that merchants, having realised the celerity and convenience of this method of despatch, will continue to employ it to a much larger degree than was practised before the war.

During the period of the war it became necessary, in order to prevent the entry of enemy goods from neutral countries, to insist on the production of consular certificates of origin and interest.

Export Trade 1913-1918.

The following figures show the value of exports from 1913 to 1918 :—

						£E.
1913	...	...	...	...	...	31,662,065
1914	...	...	...	...	...	24,091,796
1915	...	...	...	...	...	27,046,872
1916	...	...	...	...	...	37,461,763
1917	...	...	...	...	...	41,060,612
1918	...	...	...	...	...	45,370,020

The export trade of Egypt is almost entirely dependent on the cotton crop. In 1913 cotton, cotton seed and cotton seed-cake accounted for £E. 29,103,718 out of the total of £E. 31,267,087, or 93 per cent., and in 1918 for £E. 40,691,592 out of £E. 44,637,865, or 91 per cent. The following table shows the change of destination of Egyptian cotton during the war :—

	1913.	1914.	1915.	1916.	1917.	1918.
	Kantars.	Kantars.	Kantars.	Kantars.	Kantars.	Kantars.
Total export	6,972,686	5,909,788	6,899,132	5,416,936	4,073,700	5,019,689
United Kingdom	2,996,404	2,444,849	3,198,096	2,751,667	2,549,993	3,528,401
France.. ..	656,242	358,523	259,577	305,071	214,898	223,735
United States	673,523	928,509	1,686,310	1,228,866	621,017	561,417
Russia.. ..	599,900	484,981	394,581	346,565	106,708	..
Germany	665,101	461,829	..	..	..	..
Austria	432,051	214,927	..	..	..	..
Switzerland	274,009	417,788	540,804	183,250	112,829	115,189
Italy	265,297	293,085	444,949	254,038	262,611	290,000

The most noticeable features in the above table are the large share taken by the United States in 1915 and 1916, and the increase in the export of cotton to Switzerland and Italy at the beginning of the war.

The Cotton Control Commission was formed in June 1918 to purchase the 1918-1919 cotton crop. This resulted in the stabilising of prices, which were fixed for Customs purposes at P.T. 761 a kantar, plus P.T. 50 for expenses between purchase at Alexandria and shipment. The obligation to sell cotton to the Cotton Control Commission ceased on the 31st July, 1919.

A new development since 1913 has been the export of manganese ore from the Sinai Peninsula; 9,445 tons were exported in 1918.

The export of cigarettes was naturally affected by the war and the quantity exported fell from 493,176 kilog. in 1913 to 285,314 in 1917, but rose again to 561,948 in 1919. A drawback is given on all Egyptian cigarettes exported, which is equivalent to half the duty paid on the tobacco on import. With every increase of duty it is evident that under this system the amount of import duty retained by the Egyptian Treasury is increased. The figures given above do not appear to justify any departure from this principle. Under the present law P.T. 25 are retained on every kilog., or roughly on every thousand cigarettes.

In 1913 the United Kingdom took 431 per mille of Egypt's exports, and Germany, Austria and Turkey took 128,56 and 21 per mille respectively. The share of the United Kingdom increased to 673 per mille in 1918, and that of the United States increased from 79 per mille in 1913 to 185 per mille in 1916, but fell again to 95 per mille in 1918. Japan made a first appearance as a customer for Egyptian

goods in 1916, taking 25 per mille in that year, 35 per mille in 1917, and 21 per mille in 1918. Palestine appeared for the first time with 9 per mille in 1918.

At the outbreak of war the export of all foodstuffs was prohibited. This prohibition was gradually modified when it was found what commodities could be spared after the needs of the country had been met. A number of other articles were, however, gradually added to the list of goods of which the export was prohibited except under licence. During the latter part of the war a system of rationing was introduced for certain articles which were demanded by Palestine, the Hedjaz, Malta, Cyprus, and other Mediterranean islands.

Import Trade in 1919.

The value of the goods imported into Egypt during 1919, excluding tobacco, was £E. 44,338,973 against £E. 48,054,377 in 1918; but the imports during the last quarter of the year were considerably in excess of those during the corresponding months of 1918.

The following are the chief articles which show an increase in value as compared with 1918. It will be observed that they also show an increase in quantity :—

					Kilog.	£E.
Potatoes—						
1918 ..	..	..	..	..	134,835	3,484
1919 ..	..	..	..	..	4,435,620	107,789
Flour—						
1918 ..	..	..	..	..	14,863,737	601,745
1919 ..	..	..	..	..	21,881,850	779,505
Oranges and lemons—						
1918 ..	..	..	..	..	6,900,959	97,384
1919 ..	..	..	..	..	16,583,919	194,433
Coffee—						
1918 ..	..	..	..	..	7,118,437	597,668
1919 ..	..	..	..	..	7,278,992	811,351
Common soap—						
1918 ..	..	..	..	..	4,199,432	305,364
1919 ..	..	..	..	..	6,594,836	524,029
Kerosene—					Metric tons.	
1918 ..	..	..	..	..	76,854	817,612
1919 ..	..	..	..	..	122,399	1,710,897
Chemical manure—						
1918 ..	..	..	..	..	3,071	87,261
1919 ..	..	..	..	..	57,719	1,425,742
Timber—					Cubic metres.	
1918 ..	..	..	..	..	5,219	106,279
1919 ..	..	..	..	..	52,770	490,921

Wrought iron and steel and machines of all sorts also show an increase.

The increase in oranges and lemons is due to greater facilities of transport between Egypt and Palestine. In 1918 this trade was carried on entirely by land, but sea trading was resumed in 1919, and there is every reason to expect that the whole of the fruit trade with Palestine will in the future, as in the past, be borne by sea.

The timber trade is still far below normal.

The quantity of tobacco imported rose from 7,020,589 kilog. in 1918 to 8,350,214 kilog. in 1919.

There are decreases in the values of the following imported articles :—

					Kilog.	£E.
Cheese—						
1918 ..	..	..	..	..	1,267,145	149,142
1919 ..	..	..	..	..	81,409	21,155
Sugar—						
1918 ..	..	..	..	..	18,463,304	760,176
1919 ..	..	..	..	..	12,507,486	494,819
Tea—						
1918 ..	..	..	..	..	2,840,478	373,478
1919 ..	..	..	..	..	1,002,784	128,413
Benzine—					Metric tons.	
1918 ..	..	..	..	..	75,121	1,802,896
1919 ..	..	..	..	..	22,305	536,463
Writing and printing paper—					Kilog.	
1918 ..	..	..	..	..	4,713,398	478,136
1919 ..	..	..	..	..	3,331,886	231,746

Coal (imported)—					Metric tons.	£E.
1918	..	..	..	..	501,780	5,154,125
1919	..	..	..	..	572,660	3,040,841
Coal (in transit)—						
1918	..	..	..	..	1,257,304	13,715,237
1919	..	..	..	..	1,269,785	6,702,222
Cotton piece goods—						
1918	..	..	..	..	..	13,312,927
1919	..	..	..	..	..	11,086,788
Mosquito netting—					Metres.	
1918	..	..	..	..	5,203,133	360,342
1919	..	..	..	..	2,754,130	160,465
Sacks—					Kilog.	
1918	..	..	..	..	17,239,765	1,368,771
1919	..	..	..	..	7,064,086	585,986
Tinplates—						
1918	..	..	..	..	12,095,074	1,190,400
1919	..	..	..	..	7,384,702	362,606

The decrease in tea is partly, and the decrease in cheese and benzine wholly, attributable to diminished consumption by the British army.

The decreased value of the coal imported is, it will be observed, entirely due to the fall in the price.

Cotton piece goods, in spite of a slight increase in price, show a large decrease in quantity, both in those calculated by weight and in those calculated by metre. The reason is that large orders were placed in 1918, many of which were repeated in the anticipation of larger losses due to the activity of enemy submarines; this resulted in the Egyptian market being overstocked at the time of the armistice. The situation was saved by large re-exports to Syria, Palestine and Arabia.

The quantities of sacks and tinplates imported in 1918 were above the normal, and the decrease in the value of the tinplates is accentuated by the drop in price to half that in 1918.

The delusive nature of the high figures of import values is shown by the following table, which gives the values and quantities of the most valuable imports in 1919 and the values of the same quantities at the prices ruling in 1913. From this it appears that nearly half the value of Egyptian imports for last year is accounted for by goods which could have been obtained for £E. 6,793,107 in 1913, and that the cost of these nine articles has more than trebled.

				1919.		Price in 1913.
				£E.	Metres.	£E.
Cotton piece goods	..	..	..	5,747,596	87,475,769	1,634,904
					Kilogs.	
Cotton piece goods	..	..	..	5,339,192	12,878,462	1,630,000
					Tons.	
Coal	..	..	..	3,040,841	572,660	674,981
Kerosene	..	..	..	1,710,897	122,399	516,563
Chemical manure	..	..	..	1,425,742	57,719	530,318
					Kilogs.	
Meats, frozen, salted, or preserved	..		..	1,016,411	12,206,577	669,618
Cotton yarn	..	..	..	969,993	3,126,886	271,342
Coffee	..	..	..	811,351	7,278,992	432,921
					Metres.	
Woollen cloths	..	..	..	792,248	984,615	196,342
					Kilogs.	
Flour	..	..	..	779,505	21,881,850	236,118
				21,633,776		6,793,107

The share of Great Britain and British possessions in the import trade of Egypt, which was 376 per mille in 1913, and had increased to 683 in 1918, diminished to 582 in 1919. The United States came next, thanks to imports of kerosene, other mineral oils, and leather, with 61 per mille, and was followed by Italy, France

and Greece. It may be noted that the value of the revived import trade with Palestine was £E. 744,902, a large part of which represents soap, fruit and olive oil. Imports from Chile, which are chiefly chemical manure, increased from £E. 77,965 to £E. 1,098,055. Imports from Japan have decreased from £E. 2,533,967 to £E. 1,729,164, owing to a smaller trade in tobacco, matches, paper and glassware.

The nine most important articles of import include chemical manure and flour, which are at present admitted free of duty, and coal, kerosene and frozen meats, on which the duty is only 4 per cent.

Export Trade in 1919.

The value of the export trade of Egypt increased from £E. 45,370,020 in 1918 to £E. 75,888,321 in 1919. This was almost entirely due to the rise in the price of cotton at the end of the year; but the quantity exported also increased from 5,019,689 in 1918 to 6,708,906 kantars in 1919. The quantity of cigarettes exported was 561,948 kilog. against 404,763 kilog. in 1918. Other articles which show an increase are hides, onions, rice and cigarette paper, as well as phosphates, of which 42,574 tons, valued at £E. 76,052, were exported in 1919.

The share of the United Kingdom and British possessions fell from 691 to 543 per mille, while the United States and France increased their shares from 94 and 46 to 220 and 77 per mille respectively. The increased share of the United States is mainly due to cotton, but there was also a large increase in untanned goat-skins. The export trade with Palestine reached £E. 744,647, the most important articles being rice, cigarettes, ground nuts and sesame: in addition to this there was a large re-export trade in cotton piece goods and articles of clothing.

Trade with the Soudan.

Imports from the Soudan decreased from £E. 2,718,891 in 1918 to £E. 1,778,646 in 1919, but exports increased from £E. 2,492,208 to £E. 2,847,607.

Distribution of Trade by Ports.

During the war Egypt naturally turned increasingly to the East for its supplies, and with the decline in particular of the import of coal and timber from Europe, a larger share of the import trade of the country fell to Port Said and Suez.

In 1913 only 11 per cent. of the import trade passed through Port Said, but the proportion had risen by 1916 to 21 per cent., owing principally to imports of frozen meat, confectionery, beer, timber, cotton yarn and tobacco; it fell again in 1919 to 18 per cent. The share of Suez, 4 per cent. in 1913, increased through imports of flour, sugar, coffee, tea, natural indigo, chemical manure, cotton yarn and empty sacks, until in 1917 it reached 14 per cent. of the whole; it then declined to 8 per cent. in 1919.

Owing to the difficulty of finding cargo space from Alexandria, there was also a temporary diversion of exports, particularly cotton and gum arabic, from that port to Port Said, whose share increased from 1 per cent. in 1913 to 9 per cent. in 1918, but diminished in 1919 to less than 4 per cent.

Petroleum.

Until the latter part of 1913 all the petroleum products used in Egypt were of foreign origin. Had circumstances remained normal, the course of trade in these products during the years 1914 to 1918 would have been interesting as showing how the establishment of a local industry dealing with local raw materials might have affected the import of petroleum products, as well as other combustibles, and to what extent Egypt might have become a fuel producer for other countries. As it was, severe restrictions on the export of all kinds of fuel from nearly all the belligerent countries were coupled with difficulties in the transport of such products as were available for export from Egypt.

During 1914 the imports of benzine were 946 tons, but in succeeding years the imports increased enormously, reaching a maximum of 75,121 tons in 1918. This large increase was, of course, due to military requirements, and it is very probable that in normal circumstances Egypt would have been able to obtain from its own oil-fields all the benzine it required.

The situation with regard to kerosene has been different, and there were imported in the years 1914 to 1919 quantities varying between 50,000 and 122,000 tons. Some

of this imported kerosene was for military purposes, but by far the greater part was for civilian use.

While Egypt has remained largely dependent on foreign petroleum for its supplies of benzine and kerosene, Egyptian petroleum has been almost sufficient, and in 1918 more than sufficient, to provide the rapidly increasing local requirements of liquid fuel. I need not emphasise the immense benefit which has resulted during a period when coal has been at times almost unobtainable, even at exceedingly high prices. In 1913 8,302 tons of liquid fuel were imported and 74 tons were re-exported, so that the consumption in the country only amounted to 8,228 tons; it rose in the following years successively to 37,911, 29,739, 50,678 and 113,829 tons, reaching in 1918 its maximum of 207,651 tons, and falling slightly in 1919 to 188,702 tons.

The following table shows in tons the quantities of benzine, kerosene and liquid fuel produced at the Suez Refinery from Egyptian and foreign crude oil during the years 1914–1919 :—

	Benzine.			Kerosene.			Liquid Fuel.		
	Egyptian.	Foreign.	Total.	Egyptian.	Foreign.	Total.	Egyptian.	Foreign.	Total.
1914	14,590	4,525	19,115	25,242	9,598	34,840	33,972	21,807	55,779
1915	1,167	1,679	2,846	3,433	5,708	9,141	21,071	4,981	26,052
1916	3,324	4,554	7,878	7,541	17,340	24,881	31,305	15,908	47,213
1917	7,324	76	7,400	13,823	7,519	21,342	108,363	29,143	137,506
1918	10,784	59	10,843	24,333	2,049	26,382	245,523	6,603	252,126
1919	8,886	4,617	13,503	14,532	10,539	25,071	172,995	28,061	201,056

The rise of the Egyptian petroleum industry has caused the rapid development of Suez as a bunkering port, while the Anglo-Persian Oilfields Company are preparing to erect tanks at Port Said with the object of bunkering ships there.

Tariff Rates.

Several changes have been made in the rates of duties since 1913.

In that year the import duty on leaf tobacco was P.T. 20 per kilog. and that on cigars and manufactured tobacco P.T. 25.

In January 1914 these rates were raised respectively to P.T. 25 and 30 per kilog., in August 1915 to P.T. 30 and 40, and in September 1919 to P.T. 50 and 60.

In August 1915 the duty on timber was increased from 4 per cent. to 8 per cent., and the duty on alcohol and spirits from 8 per cent. to 10 per cent.

In June 1919 the duty on flour was suppressed. Chemical manure has continued to enjoy exemption from duty.

In October 1917 an excise of 14 milliemes per kilog. was imposed on sugar, but this was removed at the end of 1919.

In January 1916 quay dues on exports were raised to 12 per mille at Alexandria and Port Said, and in February 1919 quay dues were imposed at Suez on the completion of the new quays.

At the end of June 1919 the Tombac Monopoly expired, and tombac is now taxed at the same rate as other leaf tobacco.

Free Zone at Port Said.

During 1919 the Suez Canal Company approached the Customs Administration with a view to its putting into operation the Free Zone Régime provided for in the agreement of 1902 between the Egyptian Government and the company.

Port Said has by its nature always enjoyed great facilities in the matter of transit, and the only essential changes necessitated by the new régime are that goods should be allowed to remain in the free zone uncontrolled by the Customs, with full liberty to their owners to manipulate and repack, instead of such operations being subjected to Customs control as at present, and that there should be no limit to the period during which goods may be warehoused either in transit or pending importation. It is, however, necessary in the first instance that the whole area of the port should be surrounded by a barrier, for it is upon this that fiscal protection will entirely depend under the new conditions. The Customs Administration has, there-

fore, throughout the preliminary negotiations insisted on this point. A draft agreement has been prepared and approved by the Ministry of Finance.

Whether the new arrangement is destined to stimulate the transit trade at Port Said, or whether traders have not already been enjoying a sufficiently large measure of freedom from Customs control at that port is perhaps open to doubt, but should the free zone prove an unquestionable success it might be advisable to consider the question of isolating a portion of Alexandria harbour for the same purpose.

Statistics.

Beginning with January 1919, the monthly statement of Egyptian foreign trade has been presented in much greater detail than formerly. The classification of the various kinds of merchandise has been, especially as concerns manufactured articles, almost entirely recast and the number of headings increased from 320 to 650. The great increase in the sub-division has naturally made it difficult in many cases to compare the figures for 1919 with those for preceding years, and to mitigate this inconvenience there has been inserted in the monthly statements for 1919 a reference table to facilitate comparison.

The annual statement for 1919 has not yet appeared, but it will be based on the classification adopted in the monthly statements, with additional tables showing the trade of each port, and other information which, it is hoped, will increase its usefulness both to traders and to statisticians.

9. State Domains.

It will be remembered that this Administration was formed in 1913 at the time of the extinction of the Domains Debt of £E. 8,500,000, raised in 1878 on the security of the estates ceded under pressure by the Khedive Ismail Pasha. By gradual sales the area of these estates, which originally consisted of nearly 426,000 feddans, had been reduced by 1913 to a little over 142,000 feddans, which then reverted to the Government. The management of these properties, together with that of about 1½ million feddans of unmortgaged state properties scattered through the country, was vested in the new State Domains Administration, of which Mr. J. Langley was appointed Director-General. On his appointment as Under-Secretary of State for Agriculture in November 1916 Mr. Langley was succeeded by Mr. H. M. Anthony, the present Director-General.

The area of rural properties in charge of this Administration on the 31st March, 1920, was 1,570,232 feddans. This figure does not include unsurveyed desert lands, alluvial islands in the Nile channel, the large coastal lakes used as fishing zones or land applied to purposes of public utility of any kind. In addition to these extensive rural properties the Administration had on its books at the same date 46,305,000 square metres of urban property, of which 8,030,400 are situated in the city of Cairo, 9,744,000 in Alexandria and 28,305,000 in other towns.

Of the 1,570,232 feddans of rural property, 33,270 feddans (including estate labourers allotments) are farmed by the Administration, while 264,760 feddans are given on lease. No less than 1,272,202 feddans remain unexploited.

At first sight this seems an excessive proportion, but it should not be forgotten that by far the greater portion of this area consists either of high-lying land on the edge of the desert, the irrigation of which is not at present economically possible, or of low-lying deltaic salt lands, often waterlogged during part of the year, and requiring both drainage and irrigation works. The reclamation and development of these extensive areas of derelict land on sound economic lines in such a manner as to provide an outlet for the rapidly-increasing surplus population and to extend the cotton-growing area of Egypt, is one of the most interesting and important problems confronting the Government, and is at present engaging its careful attention.

The receipts and expenditure of the Administration since the publication of the last report have been as follows :—

RECEIPTS and Expenditure (ordinary receipts only).

Year Ending—				Gross Receipts.	Expenditure.	Net Receipts.
				£E.	£E.	£E.
March 31, 1915	..	..	..	368,005	281,834	86,171
" 31, 1916	..	..	..	810,847	227,164	583,683
" 31, 1917	..	..	..	866,585	235,813	630,772
" 31, 1918	..	..	..	1,033,845	283,011	750,834
" 31, 1919	..	..	..	989,288	286,166	703,122
" 31, 1920*	..	..	..	1,248,255	366,650	845,936

EXTRAORDINARY Receipts (principally sales of land).

							£E.
Year ending March 31, 1915	..	..	..	..	..	..	122,518
" " 31, 1916	..	..	..	..	..	..	98,437
" " 31, 1917	..	..	..	..	..	..	129,147
" " 31, 1918	..	..	..	..	..	..	212,309
" " 31, 1919	..	..	..	..	..	..	412,206
" " 31, 1920*	..	..	..	..	..	..	716,344

* These figures are approximate and may be slightly increased when final figures come in.

Large areas had always been farmed by the Domains Commissioners, and on the reversion of the estates to the Government advantage was taken of this system for the propagation of good quality cotton seed on a commercial scale. Ten thousand feddans of cotton per annum was adopted as a convenient area for the purpose. To provide this area the observance of a suitable rotation necessitates keeping some 27,000 feddans under direct culture, as well as devoting a considerable additional area to estate labourers allotments. The maintenance of such extensive State farms has roused some criticism; but, though much may be said on both sides, it is of undoubted importance to possess a controlled area on which good strains of cotton may be grown on a commercial scale under effective supervision. It would not be advisable to abandon lightly a system capable of giving beneficial results, and one which, when once abandoned, could not easily be re-established.

The following table gives the areas, qualities, and yield of Domains cotton for the years under review :—

Crop.	Area Grown in Cotton.				Yield of Domains.		Yield of whole Country.	
	Mit Afili and Assili.	Sakellaridis.	Other Varieties.	Total Area.	Average Yield per Feddan.	Mean Price obtained by Auction at Alexandria.	Average Yield per Feddan.	Mean Price
Year—					Kantars.	£E.	Kantars.	£E.
1913 ..	9,399	1,306	221	10,926	4.64	3,875	4.44	3,803
1914 ..	8,500	1,100	730	10,329	3.92	3,680*	3.67	2,402
1915 ..	3,632	1,916	576	6,124§	3.74	3,633†	4.02	3,857
1916 ..	6,252	4,614	285	11,151	3.38	7,381	3.06	7,562
1917 ..	10,019	804‡	61	10,884	4.07	7,937	3.75	7,703
1918 ..	3,436	3,578	391	7,405	3.40	8,203	3.66	7,440
1919 ..	3,366	3,711	476	7,553}	3.82	15,756	..	..

* Owing to a glut in the market the sale of the 1914 crop was held over till September 1915.

† 4,669 kantars of first picking 1915 crop was burnt at Sakha on the 16th October, 1915. Only 16,670 kantars of lower grade cotton was thus available for sale. This accounts for the poor price realised.

‡ The area of Sakel was reduced to 804 feds in 1917 on the special request of the Ministry of Agriculture.

§ The area under cotton in 1915 was reduced in accordance with the decree restricting cultivation of cotton.

|| In 1918 and 1919 anticipated food shortage necessitated increasing the area under food crops and consequent reduction in the cotton area.

Amongst the "other varieties" grown are the four pure varieties isolated by Dr. Lawrence Balls, known as numbers 77, 95, 111 and 310. A suitable area of each of these varieties has been grown each year with a view to maintaining the variety and enabling its properties to be observed over a series of years. Many other varieties have been grown for purposes of comparative observation amongst which may be mentioned Melouki, Fathy, Britannia, &c. The results of the comparative tests of all varieties have been placed at the disposal of the Cotton Research Board for study and possible eventual publication.

The main varieties, Sakellaridis and Assili, have been submitted to a process of selection from bulk. This consists of selecting by hand, by special pickers, at the time of the first picking, of cotton from typical plants, having early maturing characteristics and prolificacy. The cotton is picked over, and all locks not true as regards colour and general appearance are taken out. The quantity of selected seed obtained by this means has been about 100 to 150 ardebs of each variety every year. This seed is sown in selected areas and the resulting crop used as stock seed. The same operation is repeated on the selected area year after year.

Selection of Assili commenced in 1910 and that of Sakellaridis in 1913. Regularity in growth, uniformity in essential characteristics, and freedom from admixture of other varieties have resulted from this system of selection, whose great value lies not so much in the improvement of the actual strains as in prevention of the deterioration due to admixture of varieties and consequent cross-fertilisation, which is to-day so marked a feature of the ordinary commercial strains.

The following figures show the quantities of good quality cotton seed delivered from the Administration's ginning factory for distribution to cultivators. (One ardeb of cotton seed is amply sufficient to sow three feddans):—

COTTON Seed Distribution, from 1913 to 1919.

Crop.			Supplied to Ministry of Agriculture for Distribution.	Distributed Direct to Tenants. Private Individuals and Estate Labourers.	Grand Total.
			Ardebs.	Ardebs.	Ardebs.
1913	..	..	16,517	2,246	18,763
1914	..	..	4,039	3,745	7,784
1915	..	..	398	4,528	4,926
1916	..	..	3,276	7,836	11,112
1917	..	..	6,118	3,101	9,219
1918	..	..	2,063	5,469	7,532
1919	..	..	7,654 (anticipated)	110	7,764

Farming in other branches was carried on as usual, special efforts being made to increase the production of foodstuffs. Practically all surplus produce over and above the requirements of the estates was placed at the disposal of Egyptian Government departments, the British army and the Supplies Control Board.

During 1914 and 1915 progress was made with the work of land improvement which had been begun under the Domains Commission. Particular interest attaches to the work done on 1,658 feddans in Kafr-el-Wekala Farm, Belgas Estate, owing to the careful records kept of the volume of irrigation water used, the volume of drainage water discharged, the salt content of both, and the salt content of the soil before and after improvement. The situation of this farm lying on a natural slope between the Bahr Bessendila, an ancient branch of the Nile, and No. 1 Drain, the natural permeability of the soil, and its comparatively even surface combined to render its reclamation straightforward and easy. An expenditure of £E. 13 per feddan covered the cost of levelling, earthwork, installation of irrigation and drainage pumps, and their running costs during the progress of the work. It was estimated that an additional £E. 7 per feddan was required for stores, sheds, ezbas and staff quarters, the erection of which had unfortunately to be postponed owing to forced economy due to war conditions.

The land responded readily to treatment and has since yielded excellent crops. The only serious difficulty proved to be lack of population. This is perhaps the greatest obstacle to the rapid and successful reclamation of the waste lands in the northern delta, and constitutes the heaviest risk to those engaging large capital in reclamation works.

Owing to war economies land improvement work on a large scale was suspended in 1915 on completion of the 1,658 feddans in Kafr-el-Wekala, Belqas Estate. Since that date no large scheme has been undertaken, but it has been found possible to push on steadily with improvement work on a small scale in Beshbish Estate concurrently with ordinary farming. The scheme for improvement of Belqas Estate abandoned in 1915 is being resumed and pushed on this year.

The principal sales during the period under review have been the sale of 36,543 feddans of the Fayoum Estate, and the disposal of small outlying plots of State property scattered throughout the provinces.

On the reversion of the Domains estates to the Government in 1913 it was decided, on Lord Kitchener's initiative, to sell the greater part of Fayoum Estate, offering it, as far as local conditions might permit, in small lots at a fixed price on easy terms of payment and giving preference to cultivators and inhabitants of the locality. This estate, of an area of about 40,000 feddans, had been given on lease since 1879. Early in 1914 a valuation was made on a moderate basis and offers were invited. These at first poured in, but the fall in the value of cotton in 1914 deterred most purchasers, and during the years 1914, 1915 and 1916 the success of the scheme seemed to be doubtful. The rise in agricultural values, however, saved the situation, and in 1917 and 1918 such a rush of applications was received that it was impossible to satisfy all demands. Committees were appointed to sift the hundreds of applications and allot areas in accordance with individual capacity and claims. The valuation, which had been made when cotton was fetching about 19 dollars, was naturally far below market value of land in 1917 and 1918, when the price of cotton had more than doubled, and this disparity aroused some criticism; but in view of the fact that the object of the sale was to benefit the inhabitants of the locality and also that the price is payable in seven annual instalments, the last of which will not fall due till 1926, when land values may have again fallen; it was decided to adhere to the original valuation. On the whole the Government received good value for its property, and the inhabitants of the locality obtained an excellent bargain. Considering that there were over 4,800 purchasers of plots under 5 feddans in area and over 1,330 purchasers of plots between 5 and 20 feddans, thus creating over 6,000 small holdings, it may fairly be claimed that the results were a success from an economic point of view. The sale of one portion of the estate, amounting to about 2,700 feddans, has been suspended pending modifications in the irrigation system and in view of the possible need of an experimental farm in this district.

Details of the areas sold in each year are given below, also statistics of the numbers of purchasers:—

AREA.

—				Fed. Kir. Sahm.			Price.
							£E.
Sales up to March 31, 1915	..	..		1,008	7	16	73,300
Sales from April 1, 1915, to March 31, 1916	..	..		1,765	9	12	92,254
" " 1, 1916, to " 31, 1917	..	..		2,979	5	10	134,323
" " 1, 1917, to " 31, 1918	..	..		6,659	18	9	366,878
" " 1, 1918, to " 31, 1919	..	..		11,868	3	23	679,211
" " 1, 1919, to " 31, 1920	..	..		12,267	9	19	724,412
Total	..	..		36,543	6	17	2,070,378

Average price per feddan, £ E. 56·656.

Number of Purchasers.

Less than 5 feddans	...	...	...	...	4,806
5 to 20 feddans	...	...	...	...	1,337
20 to 25 feddans	...	...	...	...	201
More than 50 feddans	...	...	...	...	80
Total	...	...	...	...	6,424
Area sold	...	...	...	...	36,543

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The same policy of creating small holdings is being followed in selling off scattered plots of State property throughout the provinces. The administration of these thousands of isolated plots has always been difficult and unremunerative, and was generally left in the hands of the village authorities, who paid a small head rent and made what they could by sub-letting.

Though for many years past it has been recognised that their disposal would be advantageous, the almost entire lack of information as to the situation, limits, areas, &c., of these properties rendered it impossible to undertake any general measure of disposal until a detailed record or catalogue had been drawn up. This work, begun as far back as 1905, was completed province by province and occupied several years. It would indeed have been possible to dispose of these properties immediately on the completion of the catalogue of each province, but information gained during the progress of the work pointed to the existence of a considerable class of small tenants, who were in the habit of leasing these lands from the village authorities and working them. It was felt that in this direction something might be done in the way of establishing small holdings and converting these small tenant holders into proprietors. With this object in view no effort was spared to eliminate the middleman and deal direct with the small holder, giving him greater security of tenure and a lower rate of rental than had previously been exacted by the middleman. Relations having been established with individual tenants and maintained over a series of years, it became an easy matter to offer the tenant the opportunity of buying his leasehold outright on easy terms. In this way all plots of less than 100 feddans in area are being disposed of. In 1919 the work was undertaken in four provinces, Assiout, Beni-Souef, Menoufia and Kaliubia, tenants being given preference and unoccupied plots being sold by auction. In all 13,681 feddans were disposed of in 10,414 plots, of which 6,552 feddans in 6,531 plots were bought by tenants, and 7,129 feddans of unoccupied land were sold by auction in 3,883 plots. Details of the sales are given in the following table:—

Sold by Auction.

Plots of 5 feddans and less	...	...	...	3,640.
Plots exceeding 5 feddans and not exceeding 20	...	...	...	168
Plots over 20 feddans	...	...	...	75
Total	...	...	...	3,883

Sold to Tenants.

Plots of 5 feddans and less	...	...	...	6,304
Plots exceeding 5 feddans and not exceeding 20	...	...	...	195
Plots over 20 feddans	...	...	...	32
Total	...	...	...	6,531

The percentage of plots not disposed of was low. In spite of the facilities of deferred payment offered to the purchasers no less than 76 per cent. of the price of land sold to tenants and 90 per cent. of the price of land sold by auction was paid in cash. Better prices might perhaps have been obtained: but the general economic advantage of converting these 6,531 tenant holdings into ownership was felt to be a more important consideration than the price obtained. Liquidation of all scattered plots up to 100 feddans in area is being actively pursued on very similar lines during the present year throughout the remainder of the country.

10. Coastguards and Fisheries.

Coastguards.

It was expected at the outbreak of war that normal smuggling would greatly diminish, and the decision was taken, for reasons of economy, temporarily to cease recruiting for the coastguards. A number of British coastguard officers joined the army and the camel corps, coastguard craft, and marine cadets were placed at the disposal of the British Military or Naval authorities. Though the Coastguard Service was relieved of the duty of guarding the Suez Canal, it was faced with the new obligations of preventing the secret introduction of enemy agents or propaganda upon Egyptian coasts, and the escape of prisoners of war, or military information,

and in 1916 the necessity arose of re-establishing the service at its former strength and borrowing British officers to replace those who had joined the army.

In 1917 the newly-created Frontier Districts Administration was made responsible for maintaining public security and preventing contraband in the Libyan and Arabian deserts, duties which had up to that time been performed by the coastguards.

During the last year the coastguards have gradually abandoned their war-time functions, and are now engaged in their usual activities, with the exception of those which have been assumed by the Frontier Districts Administration, and the policing of the eastern and western harbours of Alexandria, which has been entrusted to the Alexandria City Police.

War conditions necessitated certain mechanical developments in the Coastguard Service, such as the linking by telephone of all stations along the coast, and the introduction of motor transport, which will be of permanent value to the Department.

Fisheries.

Until recently the sea fisheries of Egypt and those of the northern lakes, Menzâla, Burullos, Edku, and Mariût, were administered by the coastguards, and those of Lake Karûn, the Nile, canals, drains, and basins by another department of the Ministry of Finance.

Early in 1919, with a view to the better development of this important source of food supplies, a special Fisheries Department was created, to which the administration of all the Egyptian fisheries was entrusted, and the Coastguards Administration, embodying this Department, took the name of the Coastguards and Fisheries Service. A technical inspector has been appointed, and is now engaged upon the scientific study of Egyptian fisheries.

Though the lake fisheries, owing, probably, to the introduction of more fresh water and to more effective protection during the breeding seasons, have become increasingly productive during the last six years; they are almost wholly dependent upon immigration of fish from the sea, and may, therefore, at any time be adversely affected by influences beyond control; but endeavours will be made to keep open for a longer period the passages from the lakes to the sea, which normally close for several months during the summer.

The number of boats fishing the four northern lakes has increased steadily during the last ten years, and is now 3,801 as against 2,373 in 1910.

In the summer of 1919 the first shallow-draught inspection launch was put into commission on Lake Menzâla, and it was soon discovered that some 90 per cent. of the nets used by the fishermen were of a closer mesh than that prescribed by the regulations. The contention of the fishermen that they could not earn their livelihood with nets of the prescribed mesh was found to have some justification. A Commission of six members, three of whom were elected by the fishermen, was appointed to examine this question and other grievances, and the regulation was meanwhile suspended. The Commission is still sitting, and is expected to acquire much information of value to the Fisheries Service.

With regard to Sea fisheries, a complete record has been obtained of the landings of the Port Said trawlers during 1919; this is the first record of its kind for Egyptian sea fisheries, and throws important light upon the occurrence and distribution of the valuable food-fishes of these waters. The migration of the so-called sardines, a fishery which supports more than a thousand boats, will form the subject of enquiry in the coming summer.

The Fisheries Service has recently begun experiments with a view to testing the suitability of certain sites for the planting of the edible oyster, and has drawn up plans for a survey on an extended scale of the valuable sponge beds off the north-western coast.

It is the policy of the Fisheries Service to encourage private enterprise; thus a factory has been erected at Kosseir for canning the crayfish which abound in that region, and a company at Port Said has been able to experiment with great success in modern processes of brine-freezing. The same company are understood to have the intention of bringing two motor trawlers out from England; these vessels will be capable of working further afield than the sailing craft, and their fortunes will be watched with interest.

11. Survey Department.

With the completion of the first cadastral survey of the whole of Egypt in 1906, considerations of time became much less important, and since then the history of the

Survey Department has been one of continuous professional development. Cadastral resurveys were made, with steadily increasing precision, of Sharqia and Beheira, and that of North Gharbia was in progress at the outbreak of war. Topographical maps of various scales and of a steadily rising standard were spreading over the country, and in 1913 the Survey took over the preparation of alignment plans in provincial towns. In 1912, the Survey began to take over the expropriation of land for irrigation purposes, and in 1914 the transfer was complete. New responsibilities were undertaken, in conjunction with the departments concerned, for the safeguarding of the domains of the State, both public and private. The precise levelling of Egypt was completed in 1914, and at the outbreak of war the determinations of level, both of subsidiary bench marks and of cultivated land, were nearing completion. Geodetic triangulation was started, as well as other scientific activities, which were, in 1915, transferred (with their personnel and organisation), to the Public Works Ministry. Stores of information, both geographical and geological, as to deserts were being accumulated.

Early in the war, owing to the withdrawal from civilian service of several British officials who joined the army definitely, as well as of the considerable number who were lent, the British supervising staff for civilian work became very small. Accordingly, except for a small staff carrying on the levelling, all the field staff was concentrated for purposes of control in the district survey offices and employed on the completion of the cadastral survey of North Gharbia, as well as the normal work of the department concerning the public domain of the State. Since the armistice other activities have gradually been reopened, as supervising officials have returned to duty.

Apart from this normal work of the department, its functions have extended in certain new directions during the war. For several years past it has been becoming increasingly evident that, as conditions of time and expense had in the past prevented the permanent marking of survey reference points, it would in the near future be necessary to carry out a great programme of permanently marking and determining the positions of a system of reference points. In this country of ill-defined and variable topographical features, such a system is a necessary condition for any reliable large scale survey work whatever, and though it is even now not clear what technical operators will be required of the Survey in connection with reform in the registration of deeds, it has long been clear that some operators will be required, and therefore that the establishment of a system of reference points is urgent. During the war, however, owing to the impossibility of securing suitable marks in sufficient quantity, nothing could be done beyond making a start at revising the triangulation. A quantity of marks has, however, been received in the past few months, and the work is now in progress.

In 1917-18, owing to the requirements of the Controller of Supplies, a survey of all the principal winter crops was carried out. Similar surveys were made in the summer of 1918, autumn of 1918 and winter of 1918-19.

At the request of the Public Works Ministry, levelling parties have been sent to the Soudan every winter but one since the outbreak of war. Lines of precise levelling have been carried to Makwar and Jebelein, and subsidiary bench marks and land levels have been determined over some 2.5 million feddans in the Gezira.

The growing needs for production of petroleum on a larger scale has led to the establishment of a definite body for petroleum research, which is associated with the Survey Department through its geological and topographical sections. The work undertaken has been recorded in a series of bulletins, of which five were issued in 1919, dealing with research in Sinai and near Qosseir. These include large scale maps of the areas studied, and on the results obtained boring operations have been initiated under the direction of the Department of Mines.

The Survey Department lent various aid to the military authorities. British officials of the department organised and directed the 7th Field Survey Company, which employed a large number of Egyptian chainmen. The department supplied all the maps of Egypt which were required by the military authorities, compiled and printed all the maps for the Gallipoli campaign, and supplied nearly all those used on the Sinai, Palestine and Syrian fronts, and a certain number for the Salonica front. A large amount of chart printing was done for the naval authorities. From January 1916 until the armistice an official of the Survey Department was lent to the British army to undertake the distribution of all the maps required on neighbouring fronts, and from 1917 onwards all topographical information was collected and official topographical handbooks were written in the Map Office. Officials were also lent to serve, in various

expert capacities and in various places; several of them gained experience which is likely to be of value to the department in the use of aeroplane photographs for survey purposes.

It may be mentioned that the Hejaz postage stamps and the first issue of Egyptian 5-piastre currency notes were designed and printed by the Survey Department.

12. Mines Department.

The outbreak of war found the work of the Department of Mines and the development of the mining industry in a state of steady expansion. The department's revenue had increased from £E. 2,500 in 1908 to over £E. 18,000 in 1914, and the value of the mineral output in its raw state had reached approximately £E. 400,000.

The immediate effect of the war was to arrest this expansion, first, by the complete cessation of prospecting; and secondly, by the reduction in the output of the existing mines, caused by the shortage of staff, difficulty in obtaining supplies, and the lack of shipping facilities for the disposal of the output.

The phosphate mines were the first to suffer from the lack of shipping. The manganese mines were abandoned for a time, and much damage was done to the plant by the Turks. Repairs were undertaken under most difficult conditions, but the shortage of shipping and the difficulties of making a market delayed the export of ore.

Gold mining was less affected during the first years of the war because it is less dependent on shipping, but as prices of commodities rose the cost of production became excessive. This hastened the end of the two operating mines, which were becoming exhausted. In normal times new mines would probably have taken their places, but so long as the operating costs remain at their present high figure it is to be feared that there is insufficient inducement to undertake new ventures.

A new oilfield was opportunely discovered in 1914, but prospecting for petroleum ceased almost entirely during the war, and it became incumbent upon the Government to extend its investigations of petroleum resources. Fortunately, the intricate problems surrounding the petroleum industry had been studied by the chief departments concerned for a number of years, and it was possible to expand this important work in spite of the disabilities occasioned by the war.

An interesting effect of the difficulties experienced by importers was the local production, in appreciable quantities, of soda, alumina, magnesia and talc. These tided the country over a period of short supply, but whether the local product will be able to hold its own in future against the imported materials remains to be seen.

The private quarrying industry was adversely affected throughout the war by the cessation of building operations. The supply for works of public utility was also reduced. Very large quantities of stone, exceeding $1\frac{1}{2}$ million cubic metres, were quarried by, or for, the army during the period of the war.

The approximate value of raw materials raised during 1919 was £E. 1,419,300, being an increase of £E. 81,287 on the value of the output of the preceding year.

Mining operations remained curtailed by abnormal conditions, but towards the end of the year shipping became more freely available, and phosphate has been exported in increasing quantities. Market prices are high, and the industry has good prospects of making rapid recovery after lying dormant during the war period.

Manganese mining in Sinai is recovering slowly. The Barramia Goldmine closed down in November after working continuously for twelve years, during which time £E. 144,500 worth of gold was produced.

The present world-wide activity of petroleum mining has stimulated interest in Egyptian fields, and three of the best known petroleum corporations in the United Kingdom have sent prospecting expeditions to Egypt and applied for areas on which to carry out tests for oil. It is hoped that this will eventually introduce healthy competition into the Egyptian oil-mining industry. Thirty-four petroleum prospecting licences were applied for and issued during 1919, which is more than in any previous year.

The prohibitive price of imported coal and the difficulty experienced in obtaining regular supplies of oil fuel caused the Government to extend its Petroleum Research Organisation with a view to providing oil fuel for the needs of the mechanical service, and eventually for the supply of the State railways. Accordingly it was decided, as a first step, to undertake drilling operations and to purchase plant for a small refinery. Until success is attained by the Government's boring operations it is proposed to supply the refinery from royalty taken in kind, as provided for in all

Government petroleum leases. This proposal, however, does not in any way conflict with the long-standing policy of encouragement of private petroleum enterprises to which the Government looks to supply the daily increasing demand for petroleum products by public utility companies and private consumers in Egypt.

The quarrying industry expanded during the year notwithstanding the high prices of labour and material, and it would seem that the building trade is now only held back by shortage of structural steel and imported timber.

13. Analytical Laboratory and Assay Office.

At the Government Analytical Laboratory the samples examined for the purpose of controlling the quality of Government materials and stores increased in number materially during the period of the war.

The amount of work dealt with was also greater than in previous years, owing to the necessity for more searching methods of analysis in view of the extending practice of subtler forms of adulteration, and the investigation of a number of technical chemical problems, each of which involved a considerable amount of study and experimental research. Prominent among the latter was the question of cement supplies for the new masonry dams on the Blue and White Niles.

On behalf of the Railways Department, an enquiry was made into the cause of the frequent outbreaks of fire in cotton while in transit by rail, and a report was issued containing recommendations as to how the danger might be minimised.

The Government Analytical Laboratory was also able to assist in solving some of the economic difficulties which arose in Egypt in consequence of the war. Thus, owing to increased requirements elsewhere, there was a shortage of cement for Government purposes, and the Department was able to show how this could be minimised by the use of certain substitutes and the adoption of more economical methods. The gas companies at Cairo and Alexandria found it necessary to substitute "mazout" for coal, and technical advice was given as to the most practical means of effecting this change in the gas-making process.

Chemico-legal work was undertaken in many important cases. In one of these a claim for land valued at £E. 15,000,000 was made against the Government, but examination in the laboratory showed that out of 168 documents presented in support of the claim, no less than 163 were forged.

The trade in spurious alcoholic liquors was made illegal by two proclamations under martial law issued early in 1915. During the following twelve months about 1,500 samples of such liquors were analysed, and over 30 per cent. were found to be adulterated or wrongly described.

During the war the resources of the Department were placed freely at the disposal of the British army in Egypt. The work done included the analysis of army supplies for the purpose of controlling their quality, technical advice on chemical problems and special work of a confidential nature for the Intelligence Department.

At the Assay Office the principal event was the passing of the Assay Law (No. 19 of 1916). Although during the war it was found difficult to maintain a thorough inspection of goldsmiths and silversmiths, and thus ensure complete compliance with the law, the effects were, nevertheless, most beneficial. The proportion of gold and silver wares which escaped hall-marking diminished very considerably, and the public were protected against fraud to a correspondingly greater extent.

The gross assay dues rose from £E. 2,585 in 1914 to £E. 32,027 in 1918, although the rate of fees charged was reduced by about one-half.

During 1919 the Government Analytical Laboratory was engaged in the chemical (and physical) examination of materials, stores, &c., technical chemical consultations, and experimental chemical researches.

The work under the first of these headings consisted chiefly in the inspection, by analysis and testing, of materials and stores supplied to Government departments, and a great saving of money was undoubtedly effected. The same applies to the testing of the illuminating gas supplied to Cairo, which, as the result of regular examination month by month throughout the year was kept up to the highest standard of quality consistent with the difficulties in obtaining satisfactory raw materials.

The military proclamations of 1915, prohibiting the sale of spurious alcoholic liquors, remained in force, and further contraventions were brought to light by means of chemical analysis. Other work, which also had as its object the suppression of this illicit trade, consisted in the examination of essences and extracts imported with a view to the manufacture of spurious liquors by compounding them with plain spirits.

The technical consultations, in which the advice of the Government Analytical Laboratory was sought, were largely connected with questions arising in the Public Security Department of the Ministry of the Interior, and in many cases the work involved was of a nature similar to the inspection of factories where chemical processes were conducted, and stores of chemical products. Thus an extended enquiry was made at Suez into the origin of a serious fire at the Petroleum Refinery of the Anglo-Egyptian Oilfields Company (Limited), and several reports were presented relating to the question of fire risks arising from the loading and discharging of petroleum spirit, kerosene and crude petroleum at Suez Basin.

Several private firms submitted questions regarding their processes of manufacture, and the desired assistance was usually given, especially where encouragement appeared desirable, as in the case of small Egyptian industries with limited technical resources.

Among experimental researches a high degree of development has been reached in petroleum research. Under the direction of a chemist with highly specialised knowledge and experience, the crude petroleum oils of the fields at Hurgada and Gemsa on the Red Sea have been systematically studied with a view to determining the best methods of producing from them petroleum spirit, kerosene, fuel oil, "mazout," and pitch. In spite of the unpromising nature of the oil, the research carried out at the Government Analytical Laboratory has resulted in the evolution of a process for making excellent qualities of all these products, and, if necessary, lubricating oil and paraffin wax in addition.

The work has reached such a stage that trials of the refining process are being made on a semi-manufacturing scale, and it is believed that the time is in sight when the Egyptian Government will be able, without outside assistance, to produce from indigenous crude oil all the petroleum products of which it requires supplies.

At the Assay Office in Cairo, and the provincial offices in Alexandria, Tanta, and Beni-Souef, the amount of gold and silver wares submitted for assay and hall-marking during the financial year ending the 31st March, 1919, was the largest yet recorded. Taking the standard values as a basis (instead of the inflated values actually obtaining, it is found that the gold and silver handled was worth £E. 2,200,000. In view of the habit of the Egyptians of investing a great portion of their savings in the purchase of jewellery, this figure provides a fair indication of national prosperity. The gross revenue from assay dues during the last financial year was £E. 31,719. The number of inspections of establishments of goldsmiths and silversmiths was 420, and out of 50 prosecutions brought to a conclusion 46 resulted in conviction.

14. Statistical Department.

Apart from the preparation of the Statistical Year-Book, the Monthly Agricultural Statistics and the Weekly and Annual Returns of Births and Deaths, the Statistical Department has been chiefly engaged in the collection of a great variety of statistics demanded by various Government departments and commissions, and by the compilation of the results of the general census taken in March 1917.

The tabulation of the results of the census is now practically complete; a preliminary report is now in the press and will be issued in 1920. It is expected that the final report will be issued to the public during the first half of 1921.

It is gratifying to record that the population showed on the occasion of this census greater confidence than before, and greater willingness to reply to the enumerator's questions.

The total population of the country amounted to 12,750,918 persons against 11,287,359 in 1907, with an increase of 12·9 per cent. as compared to 14·9 per cent. for the decade 1897-1907.

Out of the above total population in 1917 238,661 were foreigners, but owing to war conditions this figure does not represent the normal foreign population. This does not, however, seriously affect the value of the general results, for the foreign

population represented in 1907 only 2·5 per cent. of the total population of the country.

The most important feature of the last census was the adoption of the Hollerith system for the tabulation of the results. This system has already been applied to the compilation of vital statistics, and has produced quicker and more detailed returns. Its employment for other statistical purposes is under consideration.

The natural expansion of statistical enquiries, the transfer of the vital statistics from the Public Health Department, the constitution of the Hollerith Machine Section, and of a permanent Census Office to prepare the ground for the next census have caused the increase of the Department's staff from fifteen officials of the lower grades in 1914 to fifty-five in 1919, the senior staff having been reduced during this interval from four to two.

II.—AGRICULTURE.

15. General.

The development of the Ministry of Agriculture, the creation of which was recorded in the last report on Egypt by His Majesty's agent and consul-general, was interrupted at an early stage by the outbreak of war. Not only did it become impossible to increase the somewhat scanty staff, but a number of the existing officials of the Ministry joined the army, and work has consequently been confined to narrower limits than had been foreseen. But notwithstanding the shortage of personnel, and the diversion during the years 1915 to 1918 of a part of the Ministry's activities to the procuring of large supplies of dried clover, barley, onions and potatoes for the army, a creditable amount of useful work has been accomplished.

The period under review has been remarkable for an extreme variation in the price of cotton. This commodity, which in the autumn of 1914 became for a time almost unsaleable, had reached an unprecedented price by 1916, and had again considerably more than doubled its value by the end of 1919. Very great wealth has flowed into the hands of landowners, both large and small, and ordinary cotton-growing land has reached a price as high as £E. 700 an acre. The cultivation of cereals has consequently diminished, and in many instances wheat sown for the 1920 crop was rooted up or allowed to be grazed by cattle, and cotton planted in its place; the coming crops of wheat and other cereals will be dangerously small.

The following table shows the area under the principal crops during the past six years with the approximate yields. It should be noted that in order to increase the local production of cereals the land placed under cotton in the years 1915 and 1918 was restricted to 33 per cent. of the perennially cultivated areas. In 1915 the restrictions were effectively enforced, but in 1918, under the incentive of the high price of cotton, they were to some extent evaded :—

1914.

Crop.	Area in Feddans.	Total Yield in Thousands.		Average Yield per Feddan.	
		Kantars.	Ardebs.	Kantars.	Ardebs.
Cotton	1,755,270	6,450		3·67	..
Wheat ..	1,253,221	..	5,960	..	4·76
Barley ..	383,342	..	2,010	..	5·24
Rice .	42,549	..	152	..	3·59
Maize ..	1,819,811	..	13,026	..	7·10
Millet ..	284,926	..	2,300	..	8·07
Sugar cane ..	48,209	31,184	..	6·47	..

1915.

Crop.	Area in Feddans.	Total Yield in Thousands.		Average Yield per Feddan.	
		Kantars.	Ardebs.	Kantars.	Ardebs.
Cotton ..	1,186,004	4,774	..	4·03	..
Wheat ..	1,533,801	..	7,102	..	4·63
Barley ..	445,643	..	2,482	..	5·57
Rice ..	319,573	..	1,385	..	4·34
Maize ..	1,776,528	..	13,162	..	7·41
Millet ..	274,570	..	2,268	..	8·26
Sugar cane ..	52,181	33,568	..	6·43	6·43

1916.

Crop.	Area in Feddans.	Total Yield in Thousands.		Average Yield per Feddan.	
		Kantars.	Ardebs.	Kantars.	Ardebs.
Cotton ..	1,655,512	5,060	..	3.06	..
Wheat ..	1,394,184	..	6,630	..	4.76
Barley ..	422,765	..	2,391	..	5.66
Rice ..	148,264	..	579	..	3.91
Maize ..	1,674,540	..	11,655	..	6.96
Millet ..	244,745	..	1,984	..	8.11
Sugar cane ..	59,224	38,134	..	6.44	..

1917.

Cotton ..	1,677,310	6,293	..	3.75	..
Wheat ..	1,075,656	..	5,413	..	5.03
Barley ..	478,670	..	2,739	..	5.72
Rice ..	263,022	..	1,225	..	4.66
Maize ..	1,623,395	..	11,603	..	7.15
Millet ..	264,396	..	2,203	..	8.33
Sugar cane ..	62,229	40,687	..	6.54	..

1918.

Cotton ..	1,315,572	4,820	..	3.66	..
Wheat ..	1,239,128	..	5,831	..	4.71
Barley ..	324,153	..	1,841	..	5.68
Rice ..	371,274	..	1,741	..	4.69
Maize ..	1,745,332	..	11,881	..	6.81
Millet ..	202,694	..	2,542	..	8.40
Sugar cane ..	63,575	40,332	..	6.34	..

1919.

Cotton ..	1,573,662	6,024*	..	3.83*	..
Wheat ..	1,274,929	..	5,467	..	4.29
Barley ..	343,478	..	1,830	..	5.33
Rice ..	} Not yet	ascertained.	..	..	..
Maize ..					
Millet ..					
Sugar cane ..	57,139	38,600	..	6.76	..

AVERAGE FOR 1909-13.

					Kantars.	Ardebs.
Cotton ..	..	..	..	..	4.17	..
Wheat ..	..	..	..	..	..	4.88
Barley ..	..	..	..	..	..	5.64
Rice ..	..	..	..	..	..	4.30
Maize ..	..	..	..	..	..	6.74
Millet ..	..	..	..	..	..	7.82
Sugar cane ..	..	..	..	..	6.56	..

N.B.—1 feddan = 1.038 acres. 1 ardeb = 5.444 bushels.

* Estimated.

In his report for 1913 Lord Kitchener referred to certain legislation regarding agricultural co-operative societies. The law in question was passed, with amendments, by the Legislative Assembly just before the outbreak of war. The Government, however, has postponed the examination of the amendments of the Assembly, and the law has therefore remained unpromulgated. In January 1919, an enquiry was conducted into the working of such agricultural co-operative societies as had come into existence, and it was ascertained that out of a total number of 47 societies, which had been started chiefly through the personal energy and influence of some official or notable, 32 had disappeared, while 15 were working with tolerable success, the most successful being in the province of Daqahlia.

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I may here mention the interesting fact that in 1915 a number of young egrets, reared in the aviaries of the Zoological Department of the Ministry of Public Works, were set at liberty and began to breed. The egret, one of the most valuable insectivorous birds in Egypt, had been all but exterminated. This beautiful species, in the protection of which Lord Kitchener took a particular interest, is now fully protected. Small flocks of egrets are already again a common sight to travellers in the Delta, and there is every reason to suppose that they will soon become abundant throughout the country.

16. Cotton.

As the preceding table shows, the yield of cotton per feddan has varied considerably during the past six years, and has been at a lower average than in the five previous years. The decrease is probably due to several causes; the attacks of the pink boll-worm, the larger area of Sakel (as the Sakellarides variety of cotton is currently called) which gives a smaller though more valuable crop than the older varieties, the deterioration of land through over-cropping, the extension of the cotton area into poorer zones, such as the extreme north of the Delta, and climatic conditions. Any or all these reasons may have affected the crop, but the chief causes are believed to be the pink boll-worm, which has reduced the second and third pickings, and the increased cultivation of Sakel.

The following table gives the percentages of cotton crop of different varieties. It will be observed that Sakel has shown a marked increase at the expense of all other varieties except Ashmuni, which has held its place steadily at about 20 per cent. The latter variety was grown exclusively in Upper Egypt till 1918, when a new variety was introduced, which is called Zagora; it is very similar to Ashmuni and is a slightly heavier cropper; although quite new, it is said to be already falling into disfavour in some places. In Lower Egypt, Sakel has been grown almost exclusively, owing to the prices which it has commanded during the war. The Egyptian crop thus practically represents at present only two varieties of cotton. Arrangements have been made, however, with the State Domains to maintain a good nucleus of Assili seed in order to be able to propagate it again should there be a fresh demand for that type :—

DISTRIBUTION of Varieties of Cotton.

Variety.	1914.		1915.		1916.		1917.		1918.		1919.	
	Feddans.	Per cent.	Feddans.	Per cent.	Feddans.	Per cent.	Feddans.	Per cent.	Feddans.	Per cent.	Feddans.	Per cent.
Mit Afifi ..	467,850	26·6	209,550	17·7	141,446	8·5	96,675	5·7	36,240	2·8	35,145	2·2
Sakellarides ..	394,403	22·4	547,923	46·2	1,032,140	62·3	1,133,180	67·6	952,481	72·4	1,146,443	72·9
Ashmuni ..	353,882	20·2	231,639	19·6	343,589	20·8	361,874	21·6	273,936	20·8	334,160	21·3
Yonanovich ..	127,532	7·3	28,908	2·4	4,220	0·3	1,592	0·1	223	..	97	..
Nubari ..	261,775	15·0	106,634	9·0	62,127	3·8	39,339	2·3	21,587	1·6	23,611	1·5
Assili ..	134,103	7·6	49,545	4·2	66,602	4·0	38,008	2·3	20,736	1·6	21,003	1·3
Abbassi ..	12,281	0·7	7,468	0·6	3,391	0·2	3,489	0·2	4,871	0·4	3,718	0·2
Others ..	3,944	0·2	4,337	0·3	1,997	0·1	3,153	0·2	5,498	0·4	9,485	0·6

The following table gives the average price obtained per kantar (for all varieties of cotton combined), and the total estimated value of the cotton crop during the last six years :—

Year.						Average Price in Dollars per Kantar.	Total Estimated Value of Cotton Crop.
1914	..	..	..	..	..	12·01	15,494,000
1915	..	..	..	..	..	19·28	18,416,000
1916	..	..	..	..	..	37·81	38,267,000
1917	..	..	..	..	..	38·52	48,478,000
1918	..	..	..	..	..	37·20	35,866,000
1919	..	..	..	..	..	78·85*	76,202,040*

* The figures are for the period from the 1st September to the 30th January, 1920.

In order to maintain the purity of each variety of cotton, more particularly at a time when the best seed is at a high premium, legislation is being prepared by which

the Government will be enabled to control the distribution of seed. Arrangements have existed for some years by which the Government furnishes the smaller cultivators direct with good seed, which is supplied on credit through the village "sarrafs," the prices being collected with the taxes later in the year.

The following figures show the quantity of seed so supplied during the last six years :—

Year.	Ardebs.
1913-14	118,099
1914-15	43,587
1915-16	80,944
1916-17	120,328
1917-18	183,118
1918-19	166,019

During the last three years the Government supplied more than 25 per cent. of the total seed used.

The most important work of the Botanical Section of the Ministry has been an attempt to purify and improve the existing varieties of Egyptian cotton by a process of continuous selection, the varieties dealt with being Sakellarides, Ashmuni, Nubari and Assili. This work was initiated in 1915, and seed stock of these selections has now been considerably multiplied. Arrangements have been made yearly with landowners in various localities to place land at the disposal of the Ministry as seed farms for the propagation of the selected seed; sowing and harvesting is supervised by the Ministry's staff, and all possible care is taken to keep each selection as pure as possible. During the troubles of March 1919 supervision could not be carried out, and some selections have been lost. New varieties of cotton produced in the country have been kept under observation; the yield in most cases has been investigated by means of variety tests in different districts, and valuations and reports on the spinning properties have been obtained from Lancashire.

During the 1919 season, Mr. H. Martin Leake, lately Economic Botanist and now Director of Agriculture in the United Provinces of India, and a leading authority on cotton-breeding, was invited, with the consent of the Indian Government, to visit Egypt in order to make recommendations with a view to improving the quality of Egyptian cotton and increasing the yield. During a stay of nearly four months in Egypt, Mr. Martin Leake studied these questions in all their aspects; his valuable report is now in the press.

Since the cessation of hostilities, efforts have been made to recover lost time in cotton research work. The 1919 Budget provided for a notable increase of the technical staff, and though all appointments have not yet been filled, a satisfactory start has been made. During 1919 a Cotton Research Board was created. It is composed of selected scientists from the various services of the Government, and its functions are to advise the technical sections of the Ministry of Agriculture, to co-ordinate scientific experiments, and in general to ensure the maintenance and improvement of the quality and quantity of Egyptian cotton. In order that every facility be given for research, extensive laboratories are now in course of construction at Giza, and it is hoped that they will be completed and fitted out in time for the coming cotton season. Many experiments have already been started, and I trust that this new organisation will devote to the problem of improving Egyptian cotton the close attention which the importance of the subject demands. No branch of the Ministry's activities is likely to produce such substantial and quick increase in crop returns as the improvement of varieties by plant-breeding methods. This involves, however, much research and minute work, which has in the past been greatly restricted by the paucity of the technical staff available. It is hoped that a new era of rapid improvement is now in view.

Insect Pests.

In the last report special mention was made of the alarming increase of the pink boll-worm (*Gelechia gossypiella*) which was first regarded as a major pest in 1913. It is not possible here to record the numerous measures taken to combat this pest, which is the most serious that has yet attacked Egyptian cotton, and which has damaged it to the extent of millions of pounds. Many experiments were carried out with a view to learning the life history of the insect in the country and discovering the best means of destruction, a problem rendered immensely difficult by the fact,

which has now been proved, that the life cycle varies from a few weeks to two and a half years. The eggs are laid by the moth on the young boll, singly or in groups of six or seven, and the worms, after hatching, bore their way into the interior of the bolls and, growing inside the seed, destroy the boll. During the cotton season, from July to October, several successive broods of larvæ are produced, but after that time they hibernate inside the cotton seed, either after ginning or in unopened bolls, and it is during this period that endeavours have been made to destroy them.

With this object three laws have been promulgated, which provide respectively that all bolls must be pulled off the stalk and destroyed before the stalks are removed from the ground, that all ginning factories must be fitted with hot-air machines to destroy the worm in the ginned seed, and that all unginned cotton and untreated seed must be kept in moth-proof stores from April to August.

It was hoped thus to destroy the worm in one or other of its hiding places; but the practical application of the first law presents great difficulties, as it is impossible to ensure that all bolls are picked, and in those which are not destroyed the larvæ live securely until the next season. An experiment has been carried out on the Tel-el-Kebir Estate, which is more or less isolated, and though the work of cleaning and destroying bolls was carried out as completely as practically possible, the effect does not appear to have been as satisfactory as was hoped, though the final result will not be known till next year.

There was some delay, owing to the war, in procuring the hot-air machines prescribed by the second of the laws to which I have alluded, and it was not until 1919 that ginneries throughout the whole country were fitted with them. In 1918, however, they were installed in all the ginneries of Upper Egypt, and, whether owing to this or to some other cause, the damage done to the 1919 crop in that part of the country was less than in the previous year. Though it is too soon to express a definite opinion, there is some reason to suppose that the recent increase in the damage done by pink boll-worm in the country in general has at any rate been arrested.

Realising the probable value of expert advice from outside, the Egyptian Government approached His Majesty's Government at the end of 1915, and the Colonial Office agreed to lend the services of Mr. Ballou, Imperial Entomologist for the West Indies. Mr. Ballou went most thoroughly into the subject, and his most interesting report has just been published. He has in almost every particular confirmed the opinion and action of the Ministry's staff.

The common boll-worm (*Erias insulana*) has practically disappeared, thanks to the measures taken for destroying the pink boll-worm, and is no longer to be regarded as a major pest. The ordinary cotton worm (*Prodenia litura*) which damaged the crop for so long has, during the last few years, caused very little detriment; this is chiefly due to the late watering of clover having been restricted, and to the peasantry having learnt to collect and destroy the egg-masses as soon as they appear. Minor pests, such as sore shin, wilting and stainer bug, are all receiving the attention of the scientific staff of the Ministry.

Citrus trees in Egypt have of late years been seriously attacked by black scale. The Ministry of Agriculture has hitherto been unable to cope with the increasing demand for fumigation, but will be in a position to extend its operations during the coming season. In the neighbourhood of Cairo the Hybiscus mealy bug has become a very virulent pest, and has done much damage to trees of many varieties. Owing to the prevalence of this blight and of black scale, transport restrictions are enforced on all plants leaving the Cairo area.

In February 1915 Egypt suffered serious invasion by locusts, which appeared in all parts of the country, and laid eggs in very many places. Successive swarms emerged at short intervals, and it was not until July that they practically disappeared. Fortunately the campaign instituted, which consisted in driving newly-hatched locusts into trenches and burying them, was successful, and the country escaped from the danger with practically no loss. A special report was published on this subject in 1915.

17. Other Crops.

The area and yield of the main food crops have been shown in a preceding table. The falling-off in the yield of wheat in 1919 was due to "rust" and shortage of chemical manures, the importation of which during the last few years was almost impossible.

A considerable amount of work has been done by the Botanical Section with a view to improving the existing types of wheat by selection and hybridisation. A number of wheats have been imported from India, Australia and elsewhere, some of which promise well. About sixty sorts are being tested, and no effort is being spared to obtain varieties which, while giving a good yield, are also immune from "rust." The improvement of maize is being studied, and selections made on similar lines; and a start has been made in improving rice by selection.

The following table shows the area and average yield of the sugar cane crop during the last six years :—

Year.			Area. Feddan.	Average Yield per Feddan.	Cane Production.	Sugar Content.	Sugar Production.	Molasses Production.
					Kantars.	Per Cent.	Metric Tons.	Metric Tons.
1914	..	..	48,209	647	31,184,211	12·36	69,368	36,908
1915	..	..	52,181	643	33,568,760	12·85	75,738	34,040
1916	..	..	59,224	644	38,134,445	12·88	98,964	44,185
1917	..	..	62,229	654	40,687,369	13·21	101,678	46,670
1918	.	..	63,575	634	40,332,157	12·71	79,488	37,330
1919	..	..	57,139	676	38,600,517	No figures available.		

N.B.—1 kantar = 44·928 kilog.

18. Veterinary Service.

The Veterinary Service was transferred to the Ministry of Agriculture in 1914 : on the outbreak of war all the temporary British staff, and such members of the permanent staff as could be spared, joined the army.

During the last six years 2,426 outbreaks of cattle plague have occurred, resulting in 10,838 deaths. The systematic double inoculation of cattle, which was commenced in June 1912, was continued until August 1914. It was impossible to continue it after that date owing to war-time difficulties, but serum was still used during actual attacks of cattle-plague. In 1918 experiments made with cattle on the State Domains showed that those which had been doubly inoculated in 1912 were still immune from plague. The Serum Institute, which had been closed during the war, reopened on a similar scale in 1919, and it is hoped that when a sufficient stock of serum is prepared that double inoculation will be resumed under an insurance system. The pressing demands by proprietors for double inoculation show that they have learnt to appreciate its value : 450,000 animals have been inoculated during the last eight years with only 1 per cent. of deaths.

The steady decrease in the number of cattle in the country has caused some anxiety, and a law restricting the slaughter of animals under the age of three years has not appreciably checked the decrease, which is largely attributable to the shortage of fodder during the summer months. During the last six years very few animals have arrived from abroad, except from the Soudan, whence 126,000 cattle and 690,000 sheep have been imported, almost entirely for immediate slaughtering.

19. Horticulture.

At the present time there is a most serious limiting factor to the development of all branches of Horticulture in Egypt—the scarcity of intelligent working gardeners. Horticultural education presents for the moment considerable difficulty, owing to the lack of Arabic text-books.

The Director of the Horticultural Section at Giza has, however, established an apprentice school for gardeners, where a sound practical training is given, and many of the pupils show great promise; but unfortunately the demand for gardeners is so great that the majority of the apprentices leave to take employment elsewhere before they are properly trained.

The gardens at Giza have done very useful work, especially during the war by producing seeds which could not be imported; 15 tons of vegetable seeds were sent out during the last year, as well as 80,000 young fruit trees. Many trees, shrubs and plants of ornamental and economic interest have been introduced, and during the past year 450 species new to the country had passed the seedling stage and were planted out for trial.

20. Agriculture and Veterinary Education.

The Higher School of Agriculture was transferred to the control of the Ministry of Agriculture in 1914. It provides a four years' course, and only admits students who possess the secondary certificate. Since 1910 all instruction has been given in Arabic, which, though no doubt desirable on wider grounds, impedes the teaching of scientific and technical subjects, as translations into Arabic of an adequate number of text-books have not yet been made. A committee appointed in 1918 strongly advised that instruction in technical subjects such as entomology and botany should be given in English, but the suggested change has not taken place. Owing to the language difficulty, and the insufficient technical knowledge of the teaching staff, there is no doubt that the quality of the instruction given at this school falls below the proper standard; since March 1919 the students have frequently been on strike, and very little useful work has been done.

Of the three intermediate Agricultural schools, at Mushtuhur, Damanhur and Shibin-el-Kom, the first is conducted by the Government, and the others under provincial councils receiving a grant from the Government; the latter are inspected and examined by the staff of the Ministry of Agriculture. These schools were instituted with the object of imparting agricultural instruction to young men, sons of farmers, and enabling them to farm their own lands on improved lines. This object has scarcely been attained, as the chief desire of the graduates is to obtain Government employment. A good number of useful men have joined the Ministry of Agriculture, but others have taken administrative posts in other Ministries.

There are six farm schools, intended to train boys of the peasant class in improved practical agriculture. They are conducted by the provincial councils, and are subject to inspection and examination by the Ministry, which also pays a small grant-in-aid.

In 1914 the standard of entrance certificate for the Veterinary School was raised from primary to secondary, and as the course is four years, the school is now up to the standard of a higher school, though it has not yet been declared as such. The average number of students in recent years has been forty-four. The school has been transferred to Giza, and occupies part of the Agricultural School building, where a suitable infirmary has been established for practical instruction. It is hoped that a new school building will be constructed in the near future.

III.—PUBLIC WORKS.

21. Irrigation.

As a result of the failure of the 1913 flood, the supply of water during the spring and summer of 1914 was most inadequate. Exceptional arrangements were made to meet an extraordinary situation. The Assouan reservoir was filled to a level higher than the normal maximum, and stored water was supplied to Egypt seven weeks earlier than in any previous year; an extra storage pool was formed on the Damietta branch of the Nile by the construction of two earthen dams instead of one as hitherto; the various regulations which control the distribution of water were made more vigorous in order to prevent waste; and, except in certain small areas on the Rosetta and Damietta branches, the cultivation of rice was sacrificed to wider interests. During all the time of shortage up to the coming of the new flood there was little complaint from cultivators. The supply from the Assouan reservoir was spread over six months, and towards the end of the time was doubling the natural volume of the river. Another factor contributing to successful irrigation was the new economy of water made possible by the recent remodelling of canal outlets to dimensions proportionate to the areas they serve. A fortunate decision to risk some damage to the cotton crop and permit the sowing of maize in Lower Egypt in July resulted in an excellent crop of maize and did no harm to the cotton as the arrival of the flood provided sufficient water for both.

The important projects launched in 1912 for the improvement of drainage and irrigation in the Delta were this year in full progress, but from August onwards the financial situation produced by the war prevented any continuance of work save such as was necessary for the maintenance of what had already been done. Pumping

forms an integral part of the general scheme, and until the pumps are working and more water has been provided the full benefit of these undertakings will not begin to be felt. However, the lowering of the drainage levels, consequent upon the work executed, had already sufficed to improve the higher lying areas.

The Nile in 1915 satisfied spring cultivation till the latter half of March, a fair length of time, but afterwards the river levels fell so low that the reservoir at Assouan was heavily drawn upon; it was again at one time necessary and possible exactly to double the normal discharge of the river. The flood was a month late in reaching its maximum, and for a short time there was reason to fear that the failure of 1913 would be repeated, but the river rose in September and the cultivation dependent on its increase was assured, with artificial support. Forty years ago a similar flood left some 900,000 acres unwatered and uncultivated, and was attended by famine; in 1915 not more than 50,000 acres went unirrigated, and this area was largely composed of islands, foreshores and other scattered lands; but, while the reduction of loss gives the measure of the help afforded by the barrages at Esna and Assiout and by the general betterment of the irrigation system, still the failure of a considerable area of cultivation marks the need for further independence of the natural conditions of the flood.

For economic reasons a restriction was placed upon the area of cotton cultivated. With the water thus released from the service of cotton the cultivators in the north of the Delta placed 100,000 extra acres under summer rice. At the price of £10 per acre of crop, this harvest represents £1,000,000.

In the summer of this year many areas where water is usually lifted on to the land by steam pumps were irrigated by free-flow; the policy was not without risk of injury to the soil from over-watering, but was of the greatest value in economising fuel which was now running extremely short in Egypt.

At the beginning of the year the Physical Service was transferred to the Ministry of Public Works, and the closer co-operation of the two has been of great value in relation to the study of the Nile and its water supply.

The Nile spring and summer supplies of 1916 were good. The flood was high, and its particularly long duration at high levels caused much anxiety. There is a large annual expenditure on works for strengthening and improving the Nile banks, but when high flood levels are unduly prolonged the banks become saturated and are then in danger of slipping and breaching. In 1916 the fall of levels in the Soudan was long delayed. The basins in Upper Egypt having been filled, were unable further to reduce the volume of the flood passing through Middle and Lower Egypt, and the river in its lower reaches was higher in September than it had been in August.

As regards works, the situation this year took a decided turn for the better, and the annual grant, which had been reduced to very nearly half its pre-war figure, began to rise again. Larger credits were mainly wanted to meet the increased cost of labour and material, but they also stimulated the preparations and studies for post-war schemes. The chief works carried on were the continued protection of Nile banks and remodelling of canal outlets. The latter improvements mean a great aggregate saving of water which can be used for irrigation elsewhere, while the land irrigated from the remodelled outlets is less liable to injury from over watering. Before a given canal is taken in hand the matter is fully discussed with the local cultivators, and it has been found that the object and advantages of the work are thoroughly appreciated.

During the year, in conjunction with the Soudan Government, important investigations were conducted in connection with the Blue Nile and its water supply.

In 1917 the summer supply in the Nile was remarkably good, and the flood high without becoming dangerous. It would have been different had not the contribution from the River Atbara been so moderate, for the Blue Nile flood was a high one and the White Nile flood exceptionally high. A report was received of high levels on Lake Albert.

This year preliminary drawings were completed for the proposed Sennâr and Gebel Aulia dams on the Blue Nile and the White Nile respectively. Raw materials for the manufacture of cement were found in a convenient situation, and it was decided that a factory should be erected near the site of the Sennâr dam, which would also supply the works at Gebel Aulia. The two dams, both engineering works of the first magnitude, have been widely discussed, and the schemes are at present (April 1920) under investigation by the Nile Projects Commission, which has been appointed for the purpose. I may here appropriately give a very brief account of

the objects which they are intended to serve. The Gebel Aulia dam, forty-five kilom. south of Khartoum, is designed to form a reservoir with an effective summer storage estimated at nearly double that of the reservoir at Assouan. Its object is to permit of the perennial cultivation of the remaining waste or basin areas of Egypt, amounting to some 1,900,000 acres (excluding 200,000 acres of Lake Menzala reserved for pisciculture) which are now uncultivated, and 1,200,000 acres which, under basin irrigation, produce one crop a year. To allow of the distribution of the increased supply of water to the land a series of schemes is in progress for the enlargement and extension of canals in the Delta for the provision of drainage and the reclamation of land at present heavily salted or under marsh and lake; while the construction of a barrage near Nag Hamâdi would enable basin areas in Upper Egypt to be converted to perennial irrigation. The works are intended at the same time to reduce the danger arising from an excessive flood. The dam on the Blue Nile at Makwar, near Sennâr, is intended to raise that river to the level required to feed a great canal, which is to irrigate a triangular tract of land known as the Gezîra, approximately as large as the Delta of Egypt, and lying immediately south of Khartoum. It is proposed at first to cultivate an area of 300,000 acres, one-third of which would be placed under cotton in each year. This dam would also store a limited quantity of water in order to ensure none being withdrawn at a time when it was needed by Egypt.

During the summer Sir Murdoch MacDonald, Adviser to the Ministry of Public Works, gave evidence before a Board of Trade Committee in London both as to the cultivation of cotton in the Soudan Gezîra and as to the great extension of cotton production in Egypt expected to result from the construction of the White Nile dam and other works.

A very urgent and difficult undertaking was carried out in the Soudan provinces of Dongola and Berber on behalf of the Soudan Government. It was decided to erect pumps and irrigate for cereal cultivation a number of specified areas in these two provinces. Many of the sites were remote from convenient sources of supply. The work was begun early in 1917; it was due to be completed in the autumn, and much of it had to be done before the arrival of the flood at midsummer. Machinery was late in arriving at some places, but otherwise works were in the main ready by the appointed time.

This was the second year of the working by Government of the Abu Menâga pumping station a little way north of Cairo. This station, whose electric power is obtained from the Heliopolis Oasis Company, has proved an unqualified success, and the cultivators within reach of the system have, at the expense of 15s. an acre, performed the irrigation that elsewhere in the same neighbourhood is understood to have cost several pounds.

The summer water supply of 1918 was good; the flood was late but otherwise satisfactory. Continued care was given to Nile banks and a large programme of protective works carried out. In the Soudan preliminary work was conducted at the site of the Sennâr dam, upon the canalisation of the Gezîra and also at Gebel Aulia. Certain machinery for the cement factory was bought, and quarrying for limestone and wood-cutting for fuel were begun.

The 1919 summer supply in the Nile was above normal and the flood arrived in good time. Thus, although at one time a considerable quantity of water had to be used for purposes of navigation that would normally have been reserved for crops, the season passed without undue shortage. The area cultivated with rice had, however, to be limited to 100,000 acres instead of the 200,000 which are usually attempted. The maximum level of the flood, measured at Assouan, was R.L. 92.22 and was attained on the 19th and 20th September. It was a high enough flood to allow satisfactory cultivation of the basin areas in Upper Egypt, and only an area of 16,500 acres was left without water, chiefly on islands, foreshores of the Nile and in some isolated basins. In Lower Egypt levels were not so high as to cause anxiety in regard to the safety of the river banks; the flood may, therefore, be called a fairly good one, being almost sufficient, and not unsafe.

As regards new irrigation works, the year was far from representing a return to the normal conditions of peace. Political unrest, the high cost of labour and material, the continued absence of officials with the army in Europe were causes that hindered a resumption of the schemes suspended by the war. Some advance, however, was made in the works for the Gebel Aulia and Sennâr dams in the Soudan by the erection of the cement factory at the site of the Sennâr dam and the purchase of plant, while the quarrying of limestone for cement and the cutting of timber for fuel were continued.

In Egypt, the complementary work of preparing the country for the expected increase in the summer water supply was continued by the purchase of land for the widening of the Rayah Behêra and Bahr Shebîn. At the same time a series of drainage improvements to increase the present yield of cotton on certain areas were prepared for execution in 1920. From the Main Nile Division of Irrigation in the Soudan, where in 1917 and 1918 the Ministry had carried out the erection of pumps and construction of canals for the irrigation and cultivation under cereals of a number of selected areas, it is reported that the pumps and distributary systems, to which I have already alluded, are working well, to the great benefit of the two provinces of Berber and Dongola.

22. Mechanical Department.

The most important functions of this department are the erection and maintenance of Government pumping stations, the licensing and inspection of engines and boilers, largely in connection with irrigation pumping, the management of the Government workshops and the maintenance of Government steamers.

During the war the department also undertook a large amount of work for the British army, among which may be mentioned in particular the conversion in 1915 of ten Nile steamers to enable them to voyage to Mesopotamia for river service, the manufacture of grenades, and the alteration and repair of machine guns and ammunition and baggage waggons.

In 1917 the department completed the conversion of Government pumping stations in various parts of the country to burn oil fuel, a work which has resulted in a very appreciable saving of money, and it was also entrusted with the issue of coal, oil fuel, and cotton-seed cake to meet public fuel requirements.

The extension of the Atf pumping station and the construction of a new pumping station at Kombera in Giza Province were begun in 1918, and in this year the department was called upon to supply large quantities of drums and other material for the transport of oil fuel, which was now being used to a greatly increased extent. A measure was introduced providing for the registration of river craft, and, excluding Government vessels, 12,491 boats were registered. This work was transferred in 1919 to the Inland Navigation Department of the new Ministry of Communications.

The most important work upon which the Mechanical Department has been engaged in 1919 is the continued extension of the pumping station at Atf, to which are being added nine pumps designed to discharge 750,000 cubic metres of water a day. Specifications have been prepared and tenders invited for machinery for new pumping stations at Batra in Gharbia province, and at Abu Kir. The turnover of the Government workshops has risen from £E. 35,083 in 1914 to £E. 168,000 in 1919.

23. State Buildings Department.

In 1914 the State Buildings Department completed a large secondary school at Tanta, and was engaged upon the construction of a similar school and a native tribunal at Assiout, a girls' school at Alexandria, a zoological museum, several provincial hospitals, and other buildings.

During the following four years it was found necessary greatly to reduce the building programme and maintenance work, but the construction of the Assiout tribunal and school were continued and finished, the former in 1916 and the latter in 1918. In 1916 ophthalmic hospitals at Medinet-el-Fayyum and Minia were also completed. The Department was engaged upon alterations to Abdin and Ras-el-Tin Palaces, extensions to the Abbassia Lunatic Asylum, the connection of a large number of Government buildings in Cairo to the newly-installed drainage system, and also in various works for the British army, including the maintenance of six military hospitals.

It was anticipated that in 1919 it would be possible to execute a large building programme; but work was limited by the very high cost of labour and materials, and by difficulties in the demobilisation of officials who had joined the army. The Department proceeded, however, with the building of laboratories for the Cotton Research Board, large new Government offices, and extensions of the Public Health Department's laboratories in Cairo, a pumping station at Atf, and hospitals at

Abbassia, Zagazig, Port Said, Suez and Damanhur. Preparations were also made to extend the lunatic asylum at Khanka, and I am glad to be able to record that preliminary work has at last been begun for the construction of a new hospital in Cairo to replace the old Kasr-el-Aini Hospital, which is structurally in a bad condition, no longer provides sufficient accommodation, and has been the object of criticism by successive delegates of the Royal Colleges of Physicians and Surgeons.

24. Main Drainage Department.

The principal works of the Cairo main drainage system were practically completed in 1914; they included the main collector, the purification works, the sewage farm, the main pumping station, the compressed air station and sixty-three ejectors. The sewer reticulation remained to be done. The system was opened by the Minister of Public Works in March 1915, and sewer reticulation was actively proceeded with during this and the succeeding years in spite of difficulties caused by infiltration from the high Nile of 1916. In 1917 thirty-eight ejector stations were in operation, disposing of some 14,000 cubic metres of sewage a day, and of approximately double this amount during the period of the flood. House connection with the sewers proceeded steadily under the supervision of the Department. At the sewage farm the hydrolitic tanks were by this time in constant operation, and were found to give a very satisfactory effluent for final purification on the farm, but the high cost of fuel has considerably limited the working of the filters. The crops produced on the sewage farm, which are largely vegetables, have increased rapidly from year to year, until in 1919 the farm yielded the excellent profit of £E. 22,000. In this year 22 kilom. of new sewers were laid, and house connection continued to progress.

The Port Said drainage works were completed in 1916. Begun under contract, these works were taken over in April 1915, and carried on thereafter, by the Main Drainage Department. It is satisfactory to note that they were accomplished with a considerable saving upon the estimated contract price.

Designs were prepared in 1914 for the drainage of Mansûra, and works at Tanta had already been partially completed, but it was found necessary to suspend both schemes in the following year. In 1919, however, the Mansûra scheme was revived, and a project was also prepared for the drainage of Suez.

The Department has carried out various works with a view to combating the recent increase of malaria in Egypt, according to the recommendations of a committee appointed to advise on this important subject: two experimental flood drainage systems were installed in the Gezîra suburbs of Cairo, the low-lying quarters of the town itself were drained into the main system, and a method was devised of drawing off the subsoil water in gullies before it reached the surface; certain marshes in the Suez Canal zone were drained with the same object.

25. Cairo City Service.

With no very large undertakings in active progress, there is little in the record of this Department to distinguish one year of the war from another. All larger town-planning and other schemes for the amelioration of the City of Cairo and the extension of its amenities were abandoned, the construction of new roads was reduced to a minimum, street lighting curtailed, and road maintenance limited to what was possible when the greater number of steam-rollers were absent, and materials, labour and transport scarce. Road surfaces, owing to enforced neglect, have greatly deteriorated, and several years must elapse before they can be brought up to their pre-war standard. The new and extensive use of motor-lorries has hastened the wear of the roads very considerably, and in future it will be necessary to lay the foundations of main roads more deeply.

The sudden decay of vast numbers of lebbekh trees in Cairo and the neighbourhood led to a decision to plant other species of trees, and with the aid of the experts of the Ministry of Agriculture and a special Committee about twenty different species have been tried. Apart from the replanting of gaps in existing avenues, over 4,000 new trees were planted in various streets. The total garden area of the town has been increased during the war period by some 66,000 square metres, mainly by the partial construction of the Daher Mosque and Boulac Gardens. The latter is in the heart of a congested quarter, and constitutes a valuable lung for the whole

neighbourhood. Public gardens are greatly appreciated and well treated by the population of Cairo.

Owing chiefly to the heavy increases in the cost of materials, building activity decreased considerably; this decrease had, however, begun before 1914. From 1905 to 1911, on an average, 938 building permits were issued annually; from 1912 to 1914 the average was 699, and from 1915 to 1919 it dropped to 464; meanwhile, the population has steadily increased, and the difficulties of housing are likely to remain acute for some time.

Grave fears were entertained that the high flood of 1916 would cause the collapse of large numbers of the very poorly constructed houses existing in many quarters of Cairo. Systematic house inspections were undertaken, and the public helped the Department in its task. It was also made known that any signs of collapse, such as cracks and settlements, should be notified for immediate attention. These measures had excellent results, and though many houses collapsed, they had almost all been previously evacuated: 836 houses were demolished during the high flood year of 1916.

Perhaps an exception to the statement that no large undertakings have been in progress is to be found in the removal of the huge and ancient rubbish mounds immediately east of the town, which prevent any extension to the east of the old town walls. This removal is being conducted in co-operation with the authorities of the Arab Museum. The result will be to offer a great and salubrious site for a new quarter of the city.

The total expenditure on the Cairo City Service during the year 1919 was approximately £E. 247,000 as compared with £E. 174,000 in the previous year. This increase included an advance of £E. 33,000 upon maintenance works required to begin the restoration of streets to something of their pre-war condition of upkeep. A sum of £E. 13,500 was spent on the extension of new roads and paving in the old quarters of the town. The extension of paving and macadam in all parts of the town is among the first of the new works to be undertaken by the Department in the immediate future.

26. Physical Department.

The Physical Department, since it was placed in more intimate relations with the Ministry of Public Works by its transfer from the Survey in 1915, has been increasingly occupied with the computation of the quantities of water available and required in connection with the various great irrigation projects which the Government has in hand.

The Department now controls 61 meteorological stations in and outside Egypt, 71 river gauges and 220 rainfall stations. Particular attention is being given to weather forecasting, with special regard to the expected opening of aerial routes through Egypt. Astronomical photography with the observatory's 30-inch reflector was recommended in 1919 after a lapse of several years.

The Physical Department is also charged with the execution of the law on weights and measures. 2,792 prosecutions for use or sale of fraudulent weights and measures were instituted in 1919 as compared with 4,433 in the previous year, and though during March and April administrative business was much interrupted, it may be inferred that attempts to defraud have appreciably decreased. The official sale of weights and measures brought in £E. 1,625 as compared with £E. 2,611 in the previous year; the diminution is due to the more general adoption and commercial manufacture and sale of weights and measures of the Government pattern.

27. Antiquities Department.

In 1914 the Antiquities Department was engaged upon restoration at Kom Ombo, including the clearance of the northern exterior of the temple and the erection of a wall to stop sand drift; and at Luxor in the consolidation of the statues of Ramses II in the court behind the great pylon. Sundry work of less importance was proceeding at Karnak, Dendera, Abydos, Meir, Mit Rahineh and Sakkarah. In the Cairo Museum continued alterations to the roof necessitated the temporary rearrangement of the collection. In the same year a provincial museum was opened at Assiout, the Tanta Museum moved to new quarters, and a museum was being prepared at Minia. All these museums were the first efforts of a new movement to develop the provincial centres of education. The Department's new law worked

well, and several convictions were obtained which were expected to help in restricting the illicit traffic in antiquities.

On the 6th October, Sir Gaston Maspero, the eminent savant and well-known head of the Antiquities Department, retired after a long and brilliant career, and on the 28th June, 1916, he died in Paris. He was succeeded by M. Lacau.

During 1915 and following years, the Department's excavations and restorations ceased, or were greatly restricted. The receipts from visitors and other sources, which were earmarked for the Department, fell away to little or nothing; the monuments and the Cairo Museum were, however, visited by large numbers of troops. A group of interesting Roman remains was opened up by M. Legrain, whom many visitors to Egypt may remember as inspector at Luxor, and who died suddenly in 1917. The clearance of the surroundings of the sacred lake at Dendera was begun. A certain number of fairly important finds were made in various places, but perhaps the most interesting was a limestone head discovered, not on any site, but in the hands of a dealer. The dealer had applied for permission to export the head, which on examination was found to belong to a statue discovered at Sakkara in the time of Mariette Pasha, and placed in the museum fifty years ago. It was purchased from the dealer and now reposes again upon its own shoulders.

IV.—EDUCATION.

28. General.

Although educational work in Egypt was seriously hampered by the war, a continuous effort was made not merely to avoid deterioration, but also to effect such progress as was immediately possible, whilst preparing for developments on an extended scale when peace should be restored. On the outbreak of the war, when financial prospects seemed gloomy, the educational budget was cut down by £E. 83,000, and it was not until 1918 that it again reached its pre-war level. The construction of new school-buildings was suspended; eight of the largest and most important schools were taken over by the military authorities for hospitals or other purposes. Forty-seven of the British staff of the Government secondary schools and higher colleges were released for military service, of whom five lost their lives. Owing to the shortage of paper and losses of cargoes it became extremely difficult at times to keep the schools supplied with text-books and other school requisites.

In spite of all these difficulties the Ministry of Education contrived not only to keep all its schools going, but also to introduce important improvements. During the war period the Ministry opened a new secondary school at Assiout, a men's elementary training college, and a women's elementary training college at Alexandria, and girls' primary schools at Cairo and Alexandria. It also inaugurated several new developments in the form of infant schools, higher elementary schools for boys and for girls, and a supplementary course in the women's elementary training colleges designed to provide specially qualified teachers for the girls, higher elementary schools and infant schools. The Ministry was for the time foiled in its efforts to establish a girls' high school in Cairo owing to the impossibility of securing suitable premises, but this difficulty has since been overcome. Further, preparatory studies were made for the widest possible extension of elementary education among the masses of the people, and the establishment of a State university, both of them measures of a most important and far-reaching character.

The educational outlook at the time of the armistice thus seemed most hopeful. It is greatly to be regretted that these brightened prospects should have been suddenly obliterated, at least temporarily, by the schools throughout the country throwing themselves, or being thrown, into a turmoil of strikes and demonstrations. On the 11th March 1919 (the day following the expatriation of the four Nationalist leaders to Malta) the students of the School of Law went out on strike, and were soon joined by those of the other higher colleges. Within a few days all the schools were involved, either spontaneously or by peaceful or violent persuasion, and educational work was brought to a complete standstill: the schools remained practically empty for the remainder of the school year. The Ministry of Education had no alternative but to postpone indefinitely the annual examinations which are usually held in May and June, and the colleges and schools were closed for the summer vacation at an abnormally early date. In the primary schools, however, an extra session was held during the month of August to make up for lost time, and in order to give the pupils

a chance of passing the entrance examination to secondary schools. The postponed secondary education certificate examination was held in September, but the number of candidates was small. In a spirit of conciliation, and so as to avoid the loss of a year to the students and pupils generally, the Council of Ministers decided on the 11th August, 1919, to hold the promotion and diploma examinations of the higher colleges and a second session for the secondary examination in January 1920.

On the re-opening of the colleges and schools in October, unrest still prevailed, and strikes again broke out. On the 19th November, an order was issued under martial law requiring all students and pupils to attend in their classes from the 23rd November, under penalty of exclusion from the general examinations in January. On the date named most of the students and pupils returned to their colleges and schools in formal compliance with the proclamation. Work was carried on under considerable difficulties for a short time, but early in December organised efforts, accompanied by intimidation, were again made to bring all the schools out on strike. As a result practically all of the students of the higher colleges and many of the pupils of the secondary schools found themselves excluded from the January examinations.

On the 24th December the Council of Ministers issued an order requiring all students and pupils to return to work by certain fixed dates, and to continue in regular attendance, under penalty of exclusion from all examinations to be held during 1920. As a result of wiser counsels this order was generally complied with, and since that date attendance has been fairly regular. There have been sporadic strikes of short duration, but generally the situation in the schools has calmed down, and work has since proceeded fairly normally. This has made it possible, as a further conciliatory measure, to grant certain concessions to the students of the higher colleges and special schools so as to liquidate the arrears in examinations and the consequent congestion in the colleges and schools by holding an extra examination for certain categories of students in March 1920.

The injury to education which has been inflicted by these disturbances is not to be measured by loss of studies. Discipline in the school and parental control at home has been seriously undermined, and a state of juvenile anarchy has come into existence which must, unless it is remedied, imperil national stability and progress.

I am confident that the Egyptian Government will not be deterred from its educational programme, but will offer rapidly increasing opportunities of elementary education to the masses of the people, while not neglecting at the same time to extend and improve the facilities for the higher branches of study. There is ample room for reform in the educational system of Egypt, which is in particular excessively dominated by examinations both as an end in themselves and as providing a qualification for posts in the Government service. It is to be hoped that in the future the function of education as a training for life and citizenship will be kept clearly in view, and every encouragement given to the desire for knowledge and the cultivation of general intelligence. There is a keen demand for education throughout the country. I trust that the coming years will see a sustained effort on the part of the Ministry of Education, backed by a more liberal allocation of funds than it has hitherto been usual to provide, not only to meet the amount of the demand, but to instil true educational ideals into the minds of the people and of those who are responsible, under the central authority, for educating them.

Mr. Douglas Dunlop, who had served the Ministry of Education since 1889 and the last thirteen years had held the post of Adviser, retired in November 1919, and has been succeeded by Mr. R. S. Patterson.

The following tables show the attendance in February 1920 at the educational establishments of all grades (a) under the direct management of and (b) under inspection by the Ministry of Education :—

(a) *Under the Management of the Ministry of Education.*

Category of School.	Number of Schools.	Attendance.		
		Boys.	Girls.	Total.
I. Vernacular schools—				
Elementary schools (maktabas)	134	9,524	8,779	18,303
Higher elementary schools	6	207	464	671
Training colleges for elementary teachers ..	4	261	447	708
Domestic schools	1	..	77	77
Industrial schools	3	619	..	619
II. Europeanised schools—				
Infant schools	2	170	..	170
Primary schools	35	8,609	578	9,187
Secondary schools	7	2,525	..	2,525
Technical schools and evening classes ..	6	1,026	..	1,026
Professional classes	5	1,028	82	1,110
Egyptian Educational Mission in Europe ..	..	30	..	30
Total	203	23,999	10,427	34,426

(b) *Under the Inspection of the Ministry of Education.*

Category of School.	Number of Schools.	Attendance.		
		Boys.	Girls.	Total.
I. Vernacular schools—				
Elementary schools (maktabas)—				
Under other Government departments ..	78	2,389	469	2,858
Provincial Council	484	30,238	8,937	39,175
Private (grant-in-aid scheme)	3,282	177,491	24,726	202,217
Provincial Council higher elementary schools	18	1,370	..	1,370
Provincial Council training colleges for elementary teachers	22	1,020	381	1,401
Private domestic schools	2	..	47	47
Provincial Council trades schools	12	1,585	..	1,585
Private trades schools	6	539	248	787
II. Europeanised schools—				
Provincial Council primary schools ..	44	3,964	1,034	4,998
Private primary schools	83	10,179	2,413	12,592
Private secondary schools	38	4,588	..	4,588
Training school for nurses and midwives ..	1	..	46	46
Egyptians studying in Europe at the expense of other departments	..	1	..	1
Egyptians studying in Europe at the expense of the Egyptian University	..	5	..	5
Egyptians studying in Europe at their own expense	..	356	..	356
Total	4,065	233,725	38,301	272,026

29. **Elementary Education.**

Although complete reliance cannot be placed on the exactitude of statistics of literacy in Egypt, according to the census of 1917 only 8 per cent. of the Egyptian population of five years of age and above are able to read and write as compared with 6 per cent. in 1907. Too little has been done in the past to meet the educational needs of the population at large. In 1917 the Minister of Education, Sir Adly Yeghen Pasha, who took a great interest in this question, appointed a commission to examine a scheme for the extension of popular education. This commission, after a lengthy investigation of the subject, submitted its unanimous report in November 1918. It is a misfortune that the unrest which was at that moment beginning to manifest itself has since rendered it difficult for the authorities to give to this question the consideration which it urgently needs.

The report formulates a scheme by which the Provincial Councils would be placed under a statutory obligation to provide efficient elementary schools, within a maximum period of twenty years, in every town and village, for 10 per cent. of the total population. The accomplishment of this requirement would raise school attendance in Egypt to the same level as in the less advanced European States. The capital cost for sites and buildings for schools is estimated at 12½ million pounds, spread over twenty years, whilst the ultimate cost for the maintenance of the elementary schools and the training colleges for elementary teachers is estimated at over 2 million pounds a year. Since these estimates were framed there has been a considerable rise in commodity prices and in the pay of teachers, and the figures are now undoubtedly too low. The cost would be borne in a fixed ratio by the State and the Provincial Councils.

The consummation of this scheme would, it is clear, completely transform the outlook in Egypt, and would give hope of better success for all efforts towards the amelioration of the condition of the people. All that has happened since the report was submitted has confirmed the arguments on which the proposals are based, and has made it more necessary to deal with the question. The education of the masses is an essential step in the wider participation of the people in the government of the country.

The Ministry of Education has not allowed the recent difficult years to elapse without taking advantage of such concrete opportunities as offered for the improvement and extension of elementary education. In the 134 elementary schools (maktabs) managed by the Ministry of Education the teachers are now paid fixed salaries instead of having to depend mainly upon school fees. The staff has been reinforced, and school buildings and equipment have been improved, the course of study has been revised, and medical inspection has been introduced. In these 134 elementary schools 9,524 boys and 8,779 girls are now receiving fairly efficient instruction, as compared with 8,615 boys and 5,401 girls in the 142 elementary schools managed by the Ministry of Education in 1914.

Comprised in this increase is the experiment inaugurated in 1917 in Alexandria by the Ministry of Education in co-operation with the municipality. Twenty-four private maktabs have been acquired by purchase from their owners, and converted into municipal elementary schools. This alteration in status has enabled the Ministry of Education to effect a complete reformation in these schools, where 2,254 boys and 1,498 girls are in attendance. The Ministry now contributes £E. 6,285 annually to the cost, and the Alexandria municipality £E. 5,855.

In 1918 Messrs. Cozzika and Co., distillers of industrial alcohol, generously presented to the Ministry of Education an elementary school which they had erected and equipped at Tura, between Cairo and Helwan, at a cost of £E. 10,000, together with £9,000 Egyptian Unified Stock as an endowment.

The Provincial Councils maintain 484 elementary schools, which are attended by 30,238 boys and 8,937 girls. They also give grants-in-aid to 2,832 private elementary schools within their areas, whilst the Ministry of Education gives grants-in-aid to 450 private elementary schools in the governorates and (exceptionally) in Assouan province. These private elementary schools are attended by 177,491 boys and 24,726 girls. All of these schools are regularly inspected by the Ministry, and the grants-in-aid to the private schools are in general awarded in conformity with the reports of the inspectors.

The devaluation of money has thrown an increased burden on the resources of the Provincial Councils, and has made it necessary for them to raise the supplementary tax from 5 per cent. (at which it generally stood before the war) to 7 per cent. and 8 per cent., and even in one case to 10 per cent. Some of the councils have found it necessary to close certain of their schools as a measure of economy, but the Ministry of Education is coming to their aid.

One of the most promising developments in connection with vernacular education is the institution in 1916 of higher elementary schools for boys and girls, in which the course begins where the elementary course leaves off. The Ministry of Education now maintains one school for boys and five for girls, and has made provision for opening a boys' higher elementary school at Alexandria. These schools are attended by 207 boys and 464 girls. The Provincial Councils also maintain 18 higher elementary schools which are attended by 1,370 boys.

The boys' higher elementary schools are of two types, urban and rural, and the course in each extends over four years. The scheme of work for rural schools provides for lessons in rural science and nature study, mensuration and surveying

(in addition to the usual literary subjects), and practical work in the school garden, as well as a certain amount of manual training. On the other hand the scheme of work for the urban schools gives an industrial bias and colouring to the teaching by comprising lessons on materials, machines and manufactures (in addition to the usual literary subjects), as well as a large amount of training in manual occupations. A competent inspector for rural teaching, and also one for manual training, have been appointed to guide the teaching and see that it progresses on the lines desired. The manual work, whether in the school workshops or in the school garden, is not intended to fit the pupils to become carpenters or metal-workers or farmers, but rather to be a means of mental training. It aims at developing the minds of the pupils through instruments other than books. Actual experience of the work in the schools has fully justified this method. Close observation of the pupils has shown not only that they become dexterous, neat and exact in the manual work, and take great interest and delight in it, but that the manual training reacts on their book-work, in which as a result they show surprising intelligence, much in advance of the level reached in the primary schools. Nine former pupils from the Ministry's school have recently been appointed to posts as laboratory assistants, and most favourable reports have been received as to their intelligence and handiness. An interesting issue of this experiment is that wood-work is about to be introduced as a voluntary subject into one of the most important of the Government secondary schools.

In the girls' higher elementary schools, in view of the shorter period that is generally available for a girls' education in Egypt, the course is limited to three years. The instruction in the girls' schools is also given a very practical bias; more than one-third of each week's time-table is devoted to domestic training (needle-work, cookery, laundry work, housewifery, household accounts and home hygiene).

The Ministry of Education maintains two elementary training colleges for men teachers, and two for women teachers, attended by 261 men and 447 women. The Provincial Councils maintain 13 colleges for men and 9 for women, attended by 1,020 men and 381 women. The staff of these colleges has in recent years been considerably improved. It is obvious that the general spread of elementary education implies a large increase of trained teachers, and the Elementary Education Commission in its report recommends that the Ministry of Education should take over the responsibility for meeting this need. The Ministry is already taking tentative steps in this direction.

30. Primary Education.

During the first years of the war there was a falling off in the numbers in the boys' primary schools, but since 1918 the numbers have notably increased and several of the Government schools are now full, and even overcrowded. The attendance is now 8,609 as compared with 6,407 in 1914 and 6,197 in 1915. A considerable improvement has been effected in the teaching staff of the Government schools in the last few years. Religious instruction continues to be given simultaneously to Moslems and Copts during the last hour of the school day by teachers of their own faith on the regular staff of the school. It is compulsory for Moslems and optional for Copts.

The Provincial Councils maintain 34 primary schools attended by 3,964 boys. These schools are regularly visited by inspectors of the Ministry of Education. The Council schools are in general below the level of the Government schools in efficiency, buildings and equipment. The Councils are handicapped by the fact that the best teachers prefer to enter Government service.

The Ministry of Education has also under inspection 60 private primary schools, attended by 10,179 pupils. These schools are in general inferior to the Council schools as they labour under the further disadvantage of inadequate financial resources. As it is not considered desirable to encourage the multiplication of primary schools where there is little prospect of the pupils continuing their education beyond that stage, these schools receive no grant-in-aid.

The primary education certificate examination was abolished in 1916, as it had ceased to have any value as a qualification for admission to the Government service. It was replaced by an entrance examination to secondary schools.

31. Secondary Education.

Since 1914 the number of Government secondary schools has increased from six to seven; but the attendance has fallen from 2,637 to 2,525. The schools suffered considerably during the war owing to budgetary economies, loss of English staff, and transfer to improvised premises, and it can scarcely be a matter for surprise that there was some falling off in efficiency. The decline in numbers is to be attributed to

the growing competition of cheaper schools. Arrangements are being made for opening a secondary school at Zagazig in October next.

The number of private secondary schools under the inspection of the Ministry of Education rose from six in 1914, with an attendance of 1,508 pupils, to thirty-three in 1919, with 4,588 pupils enrolled. Only ten of these schools, however, were eligible for a grant-in-aid, as the remainder provided only half of the recognised secondary course. In consequence of the increased cost of maintenance the Ministry has found it necessary to double its usual grants. The Ministry has further assisted the three largest of these private schools by seconding selected members of its pensionable staff as headmasters. Besides these schools under the inspection of the Ministry of Education, there are some thirty Egyptian secondary schools, with an attendance of 1,645, which are not under the department's inspection, as compared with twenty-one schools attended by 2,121 pupils in 1914. Most of these schools are very inefficient, and make no attempt to provide instruction beyond the first two years of the secondary course. The mushroom growth of inefficient private secondary schools presents a serious educational and social problem, which is engaging the careful attention of the Ministry.

The secondary education certificate examination continues to be held in two parts (viz., at the middle and end of the secondary course).

Part I has revealed in recent years progressive deterioration in the quality of the work coincident with an expansion in the number of candidates, as will be seen from the following figures :—

Year.	Presented.	Passed.	Percentage Successful.
			Per cent.
1914	2,436	1,265	52
1915	2,574	868	34
1916	3,244	1,070	33
1917	3,899	1,022	26
1918	5,192	979	19

The decline was general in all categories of schools, but was much more marked in the private schools. The greatest source of weakness was the English language, in which 76 per cent. of the candidates failed. A commission, which was appointed to investigate the matter, attributed the deterioration in the attainments of the candidates in English to the largeness of the classes, the partial temporary transfer of the teaching to Egyptians, and the general inefficiency of the organisation and staffing of the private secondary schools. An effort is being made to remedy the defects as far as they concern the Government schools.

In Part II the results have been as follows :—

Year.	Presented.	Passed.	Percentage Successful.
			Per cent.
1914	1,074	557	52
1915	920	458	50
1916	1,336	532	40
1917	1,229	638	49
1918	1,341	470	35

The percentage of success among Government school candidates in both Parts I and II was generally about double that among candidates from the private schools.

Strikes dislocated all arrangements for the public examinations in 1919. For the secondary examinations, eventually held in September, the results were as follows :—

—	Presented.	Passed.	Percentage Successful.
			Per cent.
Part I	1,936	684	35
Part II	444	176	40

For the second session of the secondary examinations held in January 1920 the results were as follows :—

—			Presented.	Passed.	Percentage Successful.
					Per cent.
Part I ..	..	..	692	386	56
Part II ..	..	..	566	312	55

The higher percentage of success at these two sessions appears to be due to the elimination of a large proportion of the weaker candidates by failure to attend their schools. About two-thirds of the candidates who succeed in Part II continue their studies beyond the ordinary course. Of the remainder there is, however, a large residue who find themselves stranded without employment.

32. Female Education.

Among the many changes which have taken place in Egypt during the last few years none is more striking than the awakening interest of a certain section of Egyptian women in affairs outside the immediate circle of the home. This is largely the result of education, and will influence, in its turn, the progress of education in the future. A few years ago it was rare to find a mother taking a direct personal interest in the welfare of her daughter at school; this was left to the father, who generally made all the necessary arrangements for his daughter, and often had to overcome maternal opposition to her education. During the last few years these conditions have changed in the larger towns, where mothers now visit the schools to discuss their daughters' progress with the head mistress. This change has the important effect of forming a bond between the home and school, without which no system of girls' education can be really successful.

During the last six years the number of girls attending schools of various types belonging to or under the inspection of the Ministry of Education has increased from 31,656 in 1913 to 48,728 in 1919. Progress is still hindered by the scarcity of qualified women-teachers, especially those of the higher grade.

The Ministry now maintains 54 girls' elementary schools (maktab) attended by 8,512 girls, as compared with 19 maktab attended by 3,123 girls in 1914. The course of study in these schools now includes needlework, hygiene and nature study, whilst kindergarten methods are followed in the lowest classes. Each class now occupies a separate class-room with its own teacher. 214 women-teachers are employed in these schools as compared with 81 in 1914; 153 of these teachers are certificated; 17 of the schools are staffed entirely by women. Among the reformed municipal maktab at Alexandria nine are set apart for girls, and these have an attendance of 1,448 pupils. The Provincial Councils now maintain 79 girls' maktab, attended by 6,908 pupils, as compared with 29 maktab, attended by 2,142 pupils in 1914. Among the 3,282 private maktab under the inspection of the Ministry of Education for grants-in-aid, only 24 are set apart for girls. In the others girls are taught together with boys. The conditions in most of these schools are still very unsatisfactory.

The Ministry maintains five higher elementary schools with an attendance of 464 girls. These schools are of special value in bridging the gap between the maktab and the elementary training college, as well as in preparing for admission to the school for nurses and midwives.

In the two women's elementary training colleges maintained by the Ministry there are now 447 students. In 1916 the scheme of work was revised and improved. The staffs of these colleges have been strengthened by the appointment of Egyptian women who, after completing a course in Egypt, have received further training in England. The Provincial Councils maintain nine women's elementary training colleges attended by 381 students. These colleges suffer, like all non-Government schools, from lack of competent teachers. The standard of admission to the colleges in the provinces is also unduly low. Two of the Provincial Councils have recently decided to suppress the women's elementary training college, owing to lack of funds; the Ministry of Education is about to take them over, as well as those in the other two provinces. In order to provide qualified teachers for the new higher elementary

schools and for infant schools, a supplementary course was added to the Bulak Elementary Training College in 1917. The course comprises three parallel sections, for general subjects, domestic science and kindergarten, and extends over two years.

It is attended by forty-four students. A similar addition has recently been made to the college at Alexandria.

The Ministry maintains four girls' primary schools, attended by 578 girls, as compared with two schools attended by 438 girls in 1914. Primary education for girls has made less progress in the provinces than in Cairo and Alexandria. The Provincial Councils have ten primary schools attended by 1,034 pupils. Few of the schools are full, and there is a large wastage during the course. Six of the schools have boarding sections, and in these there are always more applications for the boarding section than can be accommodated. There are also twenty-three private primary schools under the inspection of the Ministry of Education, having a total attendance of 2,413. Regulations have been adopted for the award of grants-in-aid to these schools as well as to the Provincial Council schools.

The Sania Training College, which trains teachers for the primary schools and elementary training colleges, is now attended by eighty-two students as compared with forty-eight in 1914. In view of the pressing need for a much larger supply of trained teachers, steps are being taken to secure the rapid expansion of this college.

A girls' high school, with the nucleus of a secondary department, is to be opened in Cairo after the summer vacation.

Medical inspection in the girls' schools has been improved by the appointment of a second English lady medical officer and of Egyptian visiting school-nurses.

33. Technical, Industrial and Commercial Education.

At the outbreak of the war all new schemes and developments under consideration by the Department of Technical Education were put aside, in response to the demands of the Ministry of Finance for the most stringent economy. It was indeed only with great difficulty that the existing activities of the Department were kept going. School staffs were reduced owing to men being called up or volunteering for active service, and there was a shortage of books and other school necessities. The model workshops could not obtain raw materials except at largely increased prices and in irregular and insufficient quantities. It is therefore satisfactory to note that the numbers in attendance at the eight schools and model workshops maintained by the Department increased from 1,544 in 1914 to 1,591 in 1918, and that all the trades schools and others inspected or aided were kept going with no loss of numbers.

It was also found possible to reorganise the School of Engineering, and it was decided to add new sections in mechanical, municipal and electrical engineering to the already existing sections of irrigation and architecture. As it was impossible to secure the necessary staff and equipment, the erection of the electrical engineering section was temporarily postponed, but the other two sections made a good beginning.

In connection with the introduction of higher elementary schools into the elementary education scheme in 1916, classes for instructing teachers in manual work, clay modelling, &c., were held during the summer vacation in 1915-1918, and a permanent section for the training of teachers in such subjects has now been added to the Bulak Technical School.

The problems created by the shortage of materials from abroad aroused considerable interest in the development of Egyptian industry and commerce; and in this connection the Department of Technical Education organised a trades exhibition at Alexandria in August and September 1916, which was attended by large numbers of people of all classes.

From April 1915 to December 1916 the model workshops and trades schools devoted their engineering sections very largely, and during some periods entirely to work for the military authorities. This work was centralised at the Bulak Model Workshops, which shared the work with the model workshops at Assiout and Mansûra and the majority of the trades schools in Lower Egypt. For several months the engineering sections of the Bulak Model Workshops were working day and night. Large numbers of handgrenades and propellers were made, and during the latter part of 1916, 300 sets of a special form of chain-rails were made for the wheels of heavy military vehicles to enable them to be used for desert traffic. When the Royal Air Force opened its workshops in Egypt the lack of skilled mechanics was severely felt. To minimise this some of the apprentices at the trades schools were allowed to

complete their training at the military workshops, and the military authorities expressed complete satisfaction with their work.

It will be seen from the above review that during the five war years all that could be done in connection with technical education was to maintain the existing schools. The positions at the beginning and end of this period are shown in the table below :—

	Number of Students.	
	1914.	1918.
Ten Government schools	1,948	2,148
Twenty-two aided schools	2,447	2,605
Total	4,395	4,753

In the Department's budget for 1919 provision was made for certain schemes that had been under consideration for some time, but which had been postponed owing to war conditions. These included the establishment of a school of Egyptian arts and crafts in Cairo, and a school of weaving at Damietta. The latter scheme was postponed owing to difficulties in arranging for suitable accommodation, but the Arts and Crafts School was established in the neighbourhood of the native bazaars, and was in full working order before the close of the year. The trades taught in the new school include weaving, dyeing, internal decorative work, plaster work, furniture and other art constructional woodwork, wood-carving, inlay and mashrabia, metal beating, engraving and inlaying, art metal work in forged iron and other metals, jewellery, tent work, ornamental leather work and cane and basket work. The majority of the young apprentices are sons of craftsmen engaged in the various trades, while the craftsmen themselves may seek help from the school in difficulties that occur in connection with their work, whether in regard to the supply of materials and tools or the preparation of drawings and designs.

34. School of Medicine.

The School of Medicine suffered during the war in many ways, but chiefly from the reduction of the staff. Only three out of a total of eleven professors remained at their posts throughout all the period. Through the devotion of the assistant staff the work was, however, carried on with a considerable measure of success. The number of students varied only slightly, there being 234 in 1919 as compared with 237 in 1914; 213 students graduated during this period.

Dr. Keatinge, whose devoted work during thirty-five years raised the school to its present level of efficiency, retired from the post of director in 1919. He has been succeeded by Dr. Richards, a distinguished member of the staff.

Valuable research was carried on in the school during the war, the most important being the elucidation of the life-history of bilharzia by Lieutenant-Colonel Leiper. Bilharzia was discovered in this school in 1851 by Theodore Bilharz; it was reserved for an Englishman working in the same school nearly seventy years later to clear up the more important question of its life-history and transmission, the knowledge of which is a necessary condition of any serious attempt to exterminate it. The welfare of the Egyptian peasantry is closely bound up with the investigation, as the disease is a scourge among them.

In the spring of 1919 the School Council seriously took up the question of the reorganisation of the staff, and changes have been adopted of sufficient importance to be set forth in some detail. As regards the hospital staff, Egyptians have been appointed to two posts of surgeon, two posts of physician, one post of gynaecologist and one post of ophthalmic surgeon. These posts carry with them the right to a seat on the Hospital Council, which is consequently now composed of equal numbers of English and Egyptians. The holders have their own wards and their own teams of students, for whose training they are responsible.

A system of selecting assistant staff, with the power of transferring them elsewhere without loss of pay, pension, or prospects if after probation they do not prove

to be the best teachers available, has been drawn up in consultation with the Department of Public Health.

Two whole-time professors of clinical medicine and clinical surgery have been appointed in place of the half-time professors of the same subjects. This change is one which is now being adopted by several of the more progressive London hospitals, and is likely to lead to more thorough training of the students and to the furtherance of clinical research. Two additional posts for assistant-physicians have been added.

The vacant post of Registrar and Medical Tutor has been filled, and a lecturer in anæsthetics and a radiologist have been added to the staff. These posts exist in every other teaching hospital, and their addition will be of great benefit to the students.

The school staff has been organised on the principle that every department should comprise a professor, an assistant-professor (Egyptian), one or more lecturers, one or more demonstrators, and one or more laboratory attendants.

The professor will control his department and direct the teaching and research. The assistant-professor will conduct some branch of the teaching and take the place of the professor when he is absent. The lecturers are on a contract limited to three years; they will do a part of the teaching, and are expected to do research work during their term of office. At present three of these posts are filled by Egyptians, three by Englishmen, and two are vacant. It is proposed to appoint suitable Egyptians to them on their return from the Educational Mission as a probation for permanent teaching posts. The demonstrators are half-time posts, on a yearly contract. The laboratory attendants will be trained in the technical work of their department in order to free the teaching staff from the routine work which has hitherto consumed much of their time. With departments staffed in this way the teaching will be much improved, and due opportunity will be given for research.

The curriculum has been entirely revised and made to extend over five years instead of four. The students under this scheme will spend a year on chemistry, physics and biology. Biology, which has hitherto been taught merely by a course of fifty lectures, without practical work, has now been made a serious practical course. The next eighteen months will be devoted wholly to anatomy and physiology. The next year will be spent in the study of various subjects, such as pharmacology, which are preparatory to medical work, and the students will also attend out-patients. The two final years are devoted to work in the wards of the hospital.

A site has been secured and plans are being prepared for new buildings for the School of Medicine and Kasr-el-Aini Hospital. The necessity for this has repeatedly been urged by the delegates of the Royal Colleges of Physicians and Surgeons. Meanwhile necessary extensions are being effected in the existing buildings, part of which it is proposed ultimately to use for the School of Science in the university.

A small department has been built for the teaching of throat and ear work, and the physiology department has been enlarged and is being equipped for the teaching of experimental physiology. A research room and store have also been added. The old museum has been cleared out and fitted up as a laboratory for sixty-four students, and a large room for research. There is still very great congestion in the department of chemistry and physics. Enlarged accommodation will be provided for these branches before October next.

These new arrangements will, it is confidently believed, not only raise the value of the general medical training to be obtained in the school but will provide opportunities for post-graduate research, and will prepare for the time when the School of Medicine in its proposed new quarters will form one of the principal elements in the State University. One immediate advantage derived from the reorganisation is that the professor of chemistry has already undertaken to train in his laboratories chemists for service in other Government departments.

I am glad to record that various distinguished medical men, whose war work in Egypt brought them into contact with Egyptian doctors trained in the Cairo School of Medicine, expressed a high opinion of their professional capacity.

The curriculum of the School of Pharmacy has been revised and extended. The students are now given instruction in chemistry, physics and botany as a preparation for their strictly professional training, and a three months' advanced course in pharmaceuticals is added immediately before their final examination. The object is to bring this school into line with the schools of pharmacy in the United Kingdom. The number of students has increased from 26 in 1914 to 36. The number who have obtained their diploma since 1914 is 35.

The School for Nurses and Midwives is also being reorganised. An effort is being made to secure a better type of student, so as to raise the status and efficiency of the school. There are now 46 women in training as compared with 43 in 1914.

35. Higher Training Colleges.

These colleges train teachers for the primary and secondary schools and the elementary training colleges, and have to meet the requirements not only of the Government schools but of the schools under Provincial Councils and the private schools. The Nasria Training College trains Sheikhs as teachers of Arabic and cognate subjects, and the Sultania Training College trains teachers of the effendi class for all other higher teaching posts. These colleges, with the Sania Training College for schoolmistresses, are thus pivotal institutions. Upon their expansion and progress depends the whole future development of Egyptian education.

It is therefore a matter of deep concern that the Sultania Training College should be in a state of decline. The number of students admitted to the college has declined from 108 in 1915, 99 in 1916 and 95 in 1917 to 45 in 1918 and 15 in the current school year. As a result the total number of students is now only 143, as compared with 224 in December 1918 and 273 in December 1917. Not only has there been this serious falling-off in numbers, but the quality of the students recruited has also in recent years markedly deteriorated. Until the year 1914 the college obtained nearly all the students it required from the first half of the secondary certificate examination pass list, but more recently the candidates who stand high on the pass list have in an increasing degree turned to professions other than teaching. It is obvious that unless this tendency is checked it will be very prejudicial, if not fatal, to the general improvement and extension of education throughout the country. Several causes seem to have combined to bring about this result—the imposition of school fees in 1914, the extension of the course of training from three to four years in 1918, and the inferior prospects open to teachers in comparison with those in other professions. As regards the last cause, which is undoubtedly the most influential, the question of revised scales of pay for teachers is under consideration, and I hope that the teaching profession will again become sufficiently attractive to command a satisfactory class of candidate.

About half of the students were excluded on account of non-attendance at the college from the diploma examination in December 1919. Of the 50 students who were allowed to attend 44 passed. The college is in urgent need of new buildings.

The number of students in the Nasria Training College has declined from 331 in 1914 to 305 in 1919.

36. State University.

Educational developments have now reached a stage which makes it possible, and very desirable, to consider as a practical question the establishment of a State University. Government at present provides professional courses of university standard in medicine, pharmacy, veterinary science, law, engineering, agriculture, commerce and education, in dissociated colleges. The existing organisation is, however, admittedly incomplete and defective. It is found that the students on admission are inadequately prepared for higher specialised studies, and in consequence a certain amount of general preliminary education has to be included in the professional courses. The existing colleges furnish no opportunity for students, after completing their secondary course, to secure a liberal education apart from a professional career; the complete separation of the courses makes the present organisation of higher education inelastic, leaving little opportunity for optional studies or for different combinations of courses, and insufficient provision and incentive exist for post-graduate studies or original research. In short, the present organisation insufficiently sets forth high ideals, has developed no academic traditions, and is too exclusively utilitarian. It tends to foster the belief that the obtaining of a diploma is the one and only purpose to be kept in view, and fails to evoke the true spirit of culture—the pursuit of learning for its own sake. It therefore does not succeed in making an adequate contribution to the life and thought of the nation. Moreover, the number of pupils who now complete the secondary course and desire to continue their studies has outgrown the existing provision for higher education.

While there is need for the expansion of the existing professional colleges (especially the schools of medicine and engineering) an effort should be made at the

same time to meet the requirements of those for whom the present arrangements make no provision, namely, those who wish to pursue a higher course of study for the sake of general culture, without reference to any particular profession or career. Further, the long and varied history of Egypt, as well as its geographical situation and its position in the Moslem world, clearly point to the appropriateness of Cairo as a seat for a college of oriental studies. At present Egypt, in spite of incomparable advantages, provides no opportunities (such as exist in the most important European universities) for acquiring a literary knowledge of the languages that are cognate with Arabic and of the comparative philology of the Semitic languages, or of the languages of Ancient Egypt, or for the investigation of the many literary, archaeological, historical and philosophical questions on which these studies throw light. The time has come for the creation of higher courses of study of the true university type—in particular, a faculty of letters, a faculty of science and a faculty of oriental studies. The establishment of these three faculties would give a large measure of completeness to the provision for higher education. Brought into proper correlation under a single authority the higher colleges would then form a real university, with a wide variety of courses.

A commission was appointed by Sir Adly Yeghen Pasha in 1917 to consider this question. In 1918 it presented a preliminary report, but no effective steps were taken thereupon. The question is now being pressed forward with a view to early effect being given to the proposals.

37. Egyptian Students in Europe.

In 1914, before the outbreak of war, fifty-two students were being maintained by the Ministry of Education in Europe, 46 in England and 6 in France. There were also some 700 Egyptians who were studying in Europe at their own expense; 209 of the 373 private students in England, 60 out of 139 in France, 13 out of 64 in Switzerland, and 5 out of 18 in Belgium, or in general somewhat under 50 per cent. had placed themselves under the care of the director of the mission in London, Paris, or Geneva. This proportion increased with the difficulties created by the war to 60 per cent. in 1915, 66 per cent. in 1916, 71 per cent. in 1917, and 80 per cent. in 1918.

The number of Egyptian students in the United Kingdom, France and Switzerland at the end of 1919 was as follows:—

—		United Kingdom	France.	Switzerland.	Total.
Government students	..	31		..	31
Private students—					
Supervised	..	189	140	25	354
Unsupervised	..	35	14	12	61
Total	..	255	154	37	446

The conduct of the supervised students has continued to improve, and there have been few cases of misbehaviour to report. In spite of political unrest the relations of the students with the directors of the missions have on the whole remained very friendly. The chief difficulties with which the directors had to contend were connected with the health and financial affairs of the students. From the beginning of the scheme of supervision in 1913 up to the end of 1918, a sum of approximately £E. 39,000 was sent through the Ministry to the mission office in London, about £E. 1,800 to the Paris office, and about £E. 4,300 to the Geneva office, on behalf of private students. Many of the students who obtained qualifications in England and France during the war, especially medical students, elected to remain abroad and obtained immediate and well-paid employment.

An unprecedentedly large number of Egyptian youths are leaving Egypt at the present time for Europe, principally for Berlin and Vienna, with the purposes of study more or less definite; 150 are reported to have left recently by a single steamer. This movement may be ascribed to a variety of causes: the lack of accommodation in some of the higher colleges in Cairo, the great difficulty of obtaining admission to the overcrowded universities of the United Kingdom, political motives, a belief in the excellence of the education to be obtained in Germany and Austria, and

accounts in the Egyptian press of the welcome extended to Egyptian students and the cheapness and gaiety of life in Berlin. It serves to emphasise the desirability of extending the Egyptian colleges which prepare for medicine, engineering and law so as to enable Egyptian students to receive their ordinary professional training in their own country.

38. Sultania Library.

Dr. Schaade, the director of the Sultania Library, left Egypt on the outbreak of the war, and his post is now filled by Ahmed Sadik Bey. In May 1919 his Excellency Gaafar Wali Pasha, ex-Minister of Wakfs, was entrusted with the special mission of studying the reorganisation of the library. As a result of his proposals the administration is being remodelled; the section of the Government press, which was devoted to the renaissance of Arabic literature, has been transferred to the library, and the Government has agreed to give a grant of £E. 6,000 a year for expenditure connected therewith, while the various scattered parcels of Wakf land which belong to the library are to be exchanged for a compact block of agricultural land which will admit of being more economically administered.

Since 1914 the library has published the following Arabic works: "Subh-el-A'shâ" (fourteen volumes), "El Ahkâm" (four volumes), "El I'tisâm" (three volumes), "El Tirâz" (three volumes), "El Khasâis," "El Asnâm" (first volume) and "El Tâg."

The library now contains 92,000 books as compared with 79,000 in 1914. 40,000 of the books are in the oriental section and 52,000 in the European section.

The total number of attendances in the reading rooms increased from 33,000 in 1914 to 55,000 in 1918, and the number of books borrowed for home-reading increased from 3,000 in 1914 to 14,000 in 1918. A considerable falling off occurred in 1919, the number of attendances declining to 18,000, and the number of books borrowed for home-reading to 10,000.

V.—INTERIOR.

39. General.

The effect of war conditions was particularly pronounced in the sphere of the Ministry of the Interior. All classes of the population were, in varying degrees, psychologically disturbed; and Egypt, though not the scene of active operations, passed for many purposes almost completely under military administration. Apart from the natural dislocation of Government, caused by the existence of two authorities distinct in kind, and the necessary incursion of the military authority into the sphere of the civil, certain civil departments fell to a greater or less extent under military control and were obliged to divert their normal activities to the fulfilment of the demands of the army, while a number of officials were either serving as officers or were occupied in performing various local functions for the different branches of the Expeditionary Force. Thus the Public Security Department became, for certain purposes, a local branch of the Intelligence Section of the General Staff; members of the Egyptian Police were regarded as the executive of the Commander-in-chief for the enforcement of the provisions of proclamations and orders issued under martial law; and the provincial machinery of the Ministry of the Interior was for considerable periods very largely occupied by recruiting for the Egyptian Labour Corps and obtaining supplies for the army. I need not multiply instances, but it may be said without fear of exaggeration that half the time and energy of the officials of the Ministry of the Interior was devoted during the period of the war to the pursuit of public activities other than that of administering the country. The administration suffered severely, and especially from the point of view of public security. The effect on the minds of Egyptians of the war in Europe and the conflict at their gates with their co-religionists; the activities of propagandists, who seized a situation so advantageous for the pursuit of personal, political and religious interests; the great wealth accumulated by a small minority of society and the absence of a corresponding improvement in the conditions of the majority; the so-called exactions of the army in grain and livestock; these, and many other factors, contributed to a considerable

increase of crime and lawlessness throughout the country with which the already insufficient and still further depleted police force were unable adequately to cope.

40. Public Security.

The increase in crime from 1914–1918 amounted to about 19 per cent., which, in the circumstances, was perhaps not excessive. In 1919, however, there occurred the alarming increase of 64 per cent. over the preceding year. The chief cause of this increase was undoubtedly the trouble which took place in the spring of 1919. In March, April and May of 1919 the increase in crime over the same months of the preceding year was 52 per cent., 75 per cent., and 96 per cent. respectively. The latest figures available are those for February 1920, when the total number of crimes was 547, an increase of 25 per cent. over the same period last year (1919).

The police force in the provinces suffered considerably in prestige during the disorders, and it is to be feared that some time will be required before they have regained their influence in the public estimation. Other contributory causes to the increase of crime undoubtedly are the general influence of war and the very high cost of living.

The reorganisation of the provincial police has been the subject of a special enquiry carried out during the last few months, and a report on the whole question has been drawn up and submitted to the Ministry. It is hoped gradually to develop some of the suggestions made therein. A reorganisation has already been carried out in the department at the Ministry. The creation of a Criminal Investigation Bureau is confidently expected to lead to good results. The most important of the other reforms which have been, or which are to be, carried out are: A reform of the Police Cadet School curriculum and of the system of training police officers; a decentralisation of police work in the provinces and the establishment of a clearer definition between administrative and executive functions; the creation of a number of small police posts; certain reforms in respect of the recruitment, pay and conditions of service of ghafirs and the creation of a special Railway Police Force.

A commission is being appointed to deal with the questions of child vagrancy and child labour in Egypt, a subject to which I shall revert in the following section.

Since 1913 the provincial police have been increased by 19 officers and 1,018 men, and in the same period the numbers of the "Nizam" ghafir force have risen from 33,000 to 45,000.

The following table shows the number of crimes reported to the police monthly during 1918 and 1919:—

	Murder.		Attempted Murder.		Thefts with Violence.		Attempted Theft with Violence.		Other Crimes.		Total.	
	1918.	1919.	1918.	1919.	1918.	1919.	1918.	1919.	1918.	1919.	1918.	1919.
January ..	45	47	48	69	72	88	17	11	180	155	362	370
February ..	58	58	55	61	72	94	11	13	196	211	392	437
March ..	79	130	56	102	64	178	16	20	233	251	448	681
April ..	72	149	62	170	75	207	13	44	235	231	457	801
May ..	88	122	77	135	60	203	6	26	203	366	434	852
June ..	77	106	90	154	58	210	9	31	184	258	418	759
July ..	102	164	101	159	91	186	17	27	152	282	463	818
August ..	80	117	90	138	87	159	16	30	126	230	399	674
September ..	72	109	62	126	69	127	10	24	100	161	313	547
October ..	73	106	70	143	83	135	6	23	107	174	339	581
November ..	45	101	61	84	63	143	11	23	117	164	297	515
December..	44	93	51	82	71	145	14	24	132	241	312	585
Total ..	835	1,302	823	1,423	865	1,875	146	296	1,965	2,724	4,634	7,620

COMPARATIVE Statement showing Crimes reported to the Police from November 1
to the end of October of the following years.

—	1914.	1915.	1916.	1917.	1918.	1919.
Murder	758	805	803	785	869	1,236
Attempted murder ..	528	593	564	560	704	1,215
Theft with violence ..	338	441	417	506	726	1,606
Attempted theft with violence	53	65	73	110	134	247
Other crimes	2,092	2,288	2,123	2,280	2,061	2,647
Total	3,769	4,192	3,980	4,241	4,494	6,951

41. City Police.

The energies of the City Police since 1914 have naturally been very largely devoted to the execution of measures arising out of the war. While the duty of carrying out regulations concerning, for example, maximum prices of commodities, the sale of controlled articles, lighting and early closing, and the trade in adulterated liquors, as well as prosecutions before summary military courts, has fallen upon the Cairo, Alexandria and Suez Canal police alike, the Alexandria police has been called upon to provide supervising staff for a variety of other activities of a more or less military nature. I may mention the press censorship, which as far as the control of enemy and neutral newspapers was concerned was concentrated under ultimate military control exercised through the Ministry of the Interior at Alexandria, where during the earlier part of the war some 4 million foreign newspapers were dealt with annually, in addition to the local Alexandrian press, which itself is published in seven different languages; the postal censorship, which, up to the beginning of 1917, when the military authorities assumed direct control of it, had dealt with 4½ million letters; the registration of 3,000 enemy aliens and the supervision of their movements; and the duties of compensation officer in connection with claims on account of damage to property or expenses due to the occupation of land or buildings by allied troops. The commandant of the Alexandria Police was appointed provost-marshal for that area, and among his functions were the control of Alexandria Harbour, which was declared a military port in August 1916, and the issue under the military authority of permits to leave Egypt by sea and to enter military zones in Egypt.

The Suez Canal police were called upon to register enemy aliens in their area and to assist the military authorities in the administration of the canal military zone. The force behaved most creditably in the emergency of the air raids on Port Said in 1916 and 1917.

The presence of large numbers of troops in Egypt raised to greater importance the problem of prostitution, and with the co-operation of the military authorities measures were taken in Cairo, Alexandria and Port Said both to delimit more effectively the prostitutes' quarters and to ensure the constant medical examination of the women.

Both this question and that of juvenile vagabonds demand the urgent attention of the Egyptian Government. During the last year in Cairo alone 710 children were convicted of stealing, and 487 of begging and other offences. It is estimated that there are at any moment on the streets of Cairo some 200 homeless children and 300 sent out by their parents to pick up such casual earnings as they may. The same evil is almost as rife in Alexandria.

The disturbances of 1919 and the general political excitement which has prevailed severely tried the police both in Cairo and Alexandria. The Cairo police have been subjected to a long period of unrelenting strain with outbreaks of disorder, while the Alexandria police have on several occasions had to cope with acts of violent and determined aggression. I am glad to be able to pay a tribute to the efficiency, good discipline, and restraint which all ranks of the police force have displayed in the difficult times through which they have passed.

Crime showed a tendency to diminish during the period of the war but increased in 1919. It would no doubt be advantageous to public security in Cairo and

Alexandria if it were found possible to abandon the employment of ghafirs in these towns and to replace them by police.

42. Police School.

From December 1915 to September 1919 the Police School was placed under canvas, the buildings having been taken over by the military authorities as an army hospital.

Between 1914 and 1918 113 cadet officers passed the examination after their two years' course and received commissions as police officers. On the 1st January, 1919, there were 72 cadet officers at the school, of whom 32 were in their second and 40 in their first year.

In April 1919 all the cadets went out on strike for three weeks at the same time as the Government employees, and on the 17th December they again struck for two days; the ringleader was expelled from the school.

A section was formed at the school in October 1917 for the training of police clerks, but the experiment was unsuccessful, and was abandoned in July 1919.

Between 1914 and 1918 1,240 conscripts from the recruiting department of the Egyptian army were trained as mounted or foot police for his Highness' body guard or as prison warders; 92 per cent. of these men were illiterate when they joined the school; 79 per cent. passed their training examination in reading, writing and arithmetic. In January 1919 there were 244 conscripts at the school.

The behaviour of the conscripts during the troubles of 1919 was excellent, thanks to the staunchness of the non-commissioned officers on the staff of the school.

43. Prisons.

The total number of prisoners at the close of the year 1919 amounted to 16,978 compared with 13,310 at the close of 1918, the daily average being 15,411, or an increase of 1,026 on the figures of 1914.

Of the 16,978 prisoners, 6,234 were undergoing sentence of penal servitude (5,965 in 1918), 5,831 detention or imprisonment (4,724 in 1918), 1,107 were under appeal (884 in 1918), and 3,806 were still awaiting trial (1,603 in 1918). Of the number confined at the close of the year, 476 were women (727 in 1918).

In accordance with the decree of the 11th July, 1908, 95 men and one woman were sentenced during the year to the Adult Reformatory for indeterminate periods; the total number confined in the said reformatory at the close of the year amounted to 693. The number of juveniles in the reformatory on the 31st December was 841 (1,028 in 1918), 691 being boys and 150 girls. The daily average confined throughout the year was 749 boys and 152 girls.

There was a certain amount of influenza prevalent, more especially in Upper Egypt; otherwise, the prisons were free from infectious diseases in epidemic form.

The mortality per thousand on the average population was 29·7, of which 2·1 from infectious diseases and 4·2 from pulmonary tuberculosis; 38 prisoners were released on medical grounds, of which 10 were suffering from pulmonary tuberculosis.

An up-to-date sewage installation (partly working now) is in course of construction at Tura Convict Prison.

The expenditure of the department during the year 1919 (from January to December), exclusive of special grants for buildings, but including industries, amounted to £E. 380,395 (£E. 314,904 in 1918), the cost per prisoner on daily average population of prisons, in which prisoners are fed and clothed, being £E. 22·922 m/ms as compared with £E. 20 in 1918 and £E. 12 in 1914.

44. Health.

General.

Since the last annual report was written various administrative changes affecting the department have been carried out, of which the following are the most important:—

The lunacy and veterinary sections were converted into separate departments, the former under the Ministry of the Interior, the latter under that of Agriculture (1914).

For the proper inspection of all public water supplies, a special water service was established (1914).

The reorganisation of the Central Medical Commission and the appointment of a permanent president and vice-president was carried out (1914).

In 1917 a commission was appointed to enquire into the public health conditions in the country, which were alleged to be unsatisfactory. The commission was composed of members drawn from outside the Egyptian Government. The commission reported most favourably on the existing organisation, but made a strong recommendation that the status of the department should be improved and that a Ministry of Public Health should be formed. The report of the commission was issued in July 1918.

The feeling of discontent amongst the technical staff of the administration has for some years been growing, and has now become so pronounced that difficulty is experienced in obtaining candidates for the department. The low rate of pay and the limits of the career offered are the chief causes of complaint, and the whole status of the department is now under consideration by the Government.

As a result of the findings of the Government Commission, which sat in June 1918 to enquire into the work of this administration, an improvement in the status of the department has been decided upon, and preferential treatment as regards the pay of doctors has been promised.

A Board of Health had been set up by legal enactment for the consideration and study of questions of public health policy, proposals for new laws and decrees, campaigns against particular diseases, &c.

A reorganisation of the Medical School at Kasr-el-Aini has been undertaken, which will ensure an increased output of doctors. The project as at present existing also provides for the rebuilding of the Kasr-el-Aini Hospital, which serves as the teaching hospital of the school. For years it has been recognised as unsatisfactory and inadequate. The new Medical School will include a School of Dentistry.

During 1919 the scavenging and watering service of the city of Cairo was detached from the Public Health Administration and handed over to the Ministry of Public Works, the idea being that the department responsible for making and repairing the roads, &c., is best qualified to attend to the cleaning and watering of them. It is, however, part of the duty of the medical officer of the city to keep an eye on the work and to report upon and control it.

As was anticipated in the 1918 report, the Central Medical Commission, with its branches in London and Paris, were retransferred from the Ministry of Finance to the Public Health Administration.

The Deputy Director-General, recalled from military service at the end of November 1918, was definitely appointed Director-General.

Dr. Ferguson Lees, late Medical Officer of Health, Cairo, was promoted to the post of Deputy Director-General, and he was succeeded by Dr. Williams in the important post at Cairo.

The Budgetary allowance for 1919-1920 amounted to £E. 716,017, as compared with £E. 596,562 in 1918-1919. It is to be noted that the grants for repairs and new buildings are not included in the former figure, being now shown in the budget of the Ministry of Public Works.

The political excitement in the spring, culminating in demonstrations, disturbances and strikes, resulted in a serious set-back to public health work in 1919. Owing to the desertion of the non-technical staff, and to the difficulty of supply, isolation hospitals and camps and infectious disease treatment centres had of necessity to be closed down, so that isolated *foci* of infection in out-districts and villages, usually easily dealt with, could not be taken in hand, and were perforce left to smoulder and to flare up subsequently in epidemic virulence. Not only the lower grade personnel quitted their posts and work at out-stations, but even the clerical staffs at Mudiria towns and headquarters became so infected with the general excitement that it is to be feared statistical tables and figures suffered, and will fail to give reliable statements of the work of the different sections and departments of the administration.

Although the great majority of the Egyptian medical staff participated in the national movement and aspirations, to their credit be it said that their sense of public duty, respect for humanitarian principles, and for professional ethics, led them to report their assurance of the continuity of service at hospitals, dispensaries, laboratories and public health offices at a moment when practically every other branch of the service had stopped work as a sign of public protest.

(2.) *Water Supplies and Drainage.*(a.) *Water Supplies.*

The following table shows the various water supply systems in existence throughout the country :—

Town.	Type of Installation.	Source of Supply.	Output (approximate).
			Cubic metres per day.
Filtered water supplies—			
Cairo	Jewell ..	River Nile ..	60,000
Giza	Slow sand ..	" ..	1,740
Me'adi	Mechanical ..	" ..	250
Alexandria	Jewell ..	Canal ..	50,000
Port Said	Puech-Chabal ..	" ..	6,000
Suez	" ..	" ..	2,800
Ismailia	" ..	" ..	2,000
Mansura	Jewell ..	" ..	3,000
Damanhour	" ..	" ..	1,100
Damietta	" ..	" ..	1,100
Zagazig	" ..	" ..	2,000
Bena	" ..	" ..	700
Beni-Souef	" ..	River Nile ..	1,000
Well-water supplies—			
Zeitun	..	Wells ..	2,500
Heliopolis	..	" ..	2,000
Assiout	..	" ..	2,500
Tanta	..	" ..	3,000
Minuf	..	" ..	400
Kafr-el-Zaiyat	..	" ..	260
Luxor	..	" ..	360
Tanta	..	" ..	450
Zifta	..	3 stations—2 from Nile and 1 from artesian well	360
Mit-Ghamr	..	Wells ..	360
Unfiltered water supplies—			
Assouan	..	River Nile ..	850
Kena	..	" ..	760
Girga	..	" ..	450
Sohag	..	" ..	340
Manfalut	..	Well (artesian) and canal ..	300
Mellawi	..	Canal ..	265
Minia	..	" ..	1,000
Fayoum	..	" ..	400
Helwan	..	River Nile ..	1,220
Bilbeis	..	Canal ..	250
Shibin-el-Kom	..	" ..	300
Rosetta	..	River, until river is sudded ; then storage water only	130
Edfu	..	River Nile ..	150
Aklunim	..	Canal ..	40
Tala	..	Canal ..	40
Beba	..	Canal and artesian well ..	150
Mehalla-el-Kobra	..	Canal ..	150
Manzala	..	Reservoir holding 12,500 cubic metres of unfiltered canal water and a small engine with 4 in. pump	..

(b.) *Drainage.*

Cairo.—The disposal works and sewage farm were completed at the end of 1914. Since then a gradual scheme has been worked out extending the system of sewerage to the various quarters of the city. All the public buildings and a very large number of private houses have now been connected. The connections are being pushed on as rapidly as the supply of material will admit.

Port Said.—The disposal works and sewage farm were completed in 1917. The connections of all public buildings and a good many private houses are finished, but lately it is reported that there has been a falling off in the demands for connection. A drainage law making connection compulsory is badly needed at Port Said.

Suez.—A scheme for drainage of the town has been approved and the necessary financial grant sanctioned. The scheme consists of liquefying tanks and streaming

filters with disposal of the effluent on a sewage farm. The contracts for the work are at present being placed.

Mansourah.—For this town also a drainage scheme has been approved and the necessary credits granted. The scheme is similar to that of Suez. The contracts for the work are being put up to tender at present.

Drainage Law.—A drainage law has been drafted by representatives of the Public Health Administration and of the Ministry of Public Works. This law makes house connection compulsory in all towns possessing a public drainage system. The law is ready for promulgation, but has been purposely held up owing to the fact that the Ministry of Public Works reports that there is such a shortage of the necessary materials in the country at present that it could not be enforced.

(3.) *Vital Statistics and Infant Mortality.*

In the report for last year the occurrence of an excess of deaths over births was recorded—a very unusual state of affairs in Egypt. A glance at the vital statistics for 1919 shows something of a reversion to more normal conditions, though not uniformly so throughout the whole country. For example, both in Cairo and Alexandria the deaths exceeded the births during the past year. In Cairo there were 30,794 births (a rate of 40·4 per 1,000) and 32,161 deaths (a rate of 42·2 per 1,000). In Alexandria there were 15,684 births (a rate of 35·0 per 1,000) and 18,198 deaths (a rate of 40·4 per 1,000).

Practically all the other large centres of population showed an excess of births over deaths—in some cases very small—so that the figures for the twenty principal towns (*i.e.*, fourteen Moudiria towns and five Governorate towns, with the addition of Ismailia) show a mean birth-rate of 40·5 per 1,000 and a mean death-rate of 39·0 per 1,000.

The general rates for the whole country are: Birth-rate, 38·0 per 1,000; death-rate, 30·0 per 1,000.

During the year considerable evidence was collected showing that the formidable increase in the prices of practically every article of food was having a very deleterious effect on the health of the population, especially the lower classes, as it was proved that the revenue of many families was quite insufficient for the purchase of an adequate supply of even the simplest articles of food. These facts were brought to the notice of the authorities; energetic measures were taken, especially as regards the sale of flour at reasonable prices, and a great improvement in the food conditions of a large section of the population was brought about.

A brief table is annexed giving the salient figures regarding vital statistics and infant mortality in 1919:—

Vital Statistics : Whole Country.

Population, calculated on July 1, 1919	...	...	...	12,878,000
Total births—				
Egyptians	...	...	...	491,222
Foreigners	...	...	...	2,266
			—	493,488
Birth-rate, per 1,000	...	...	...	38
Total deaths—				
Egyptians	...	...	...	381,421
Foreigners	...	...	...	2,448
			—	383,869
Death-rate, per 1,000	...	...	...	30

Infant Mortality.—These figures refer only to the following towns: Cairo, Alexandria, Ismailia, Port Said, Damietta, Suez, Benha, Damanhour, Mansura, Shibin-el-Kom, Tanta, Zagazig, Assiout, Assouan, Beni-Souef, Fayum, Giza, Minia, Kena, Sohag.

Percentage of children born who died before attaining one year of age, 22·4.

(4.) *Infectious Diseases.*

With regard to epidemic disease in 1919, the chief features to be noted are:—

1. The large incidence of smallpox.
2. A notable decrease in the incidence of typhus and relapsing fever cases as compared with 1916, 1917 and 1918.

3. The persistence of the influenza epidemic of 1918 into the first two months of 1919.
4. A severe and fatal epidemic of malaria at Derr Markaz, Assouan Moudiria.
5. An increase in the mortality rate of most of the important infectious diseases caused presumably by non-reporting of cases due to the disturbed internal conditions in the spring and early summer. In this respect it may be noted that the mortality rate of typhus fever cases was 32·8 per cent. in 1919, compared with 26·4 per cent. in 1918.

Smallpox.

The number of smallpox cases recorded in 1919 is the largest during the last ten years. As soon as the unusually large incidence of cases was noticed early in the year a vaccination campaign was at once begun, but most unfortunately, owing to the disturbances and interruption of communications, this campaign was stopped. It is also quite certain that the number of cases reported in March, April and May was much below the real number of cases occurring. In June, however, as conditions became more normal, the notification and discovery of cases improved, and has remained at its usual standard since. As soon as possible the general vaccination campaign was reopened. The number of persons revaccinated during the year was 2,500,000. The campaign is still being carried out, and at the time of writing this report (May 1920) over 6 million people have been vaccinated. In the course of the work many concealed cases of disease were discovered in villages by the vaccinating gangs. The total number of cases of smallpox found and reported was 7,895; of this number 1,926 died, giving a mortality rate of 24·39 per cent.

Malaria.

A severe and fatal epidemic of malaria occurred in Derr Markaz—the most southerly markaz of Egypt—inhabited by a poor population living on the narrow strips of cultivation on each side of the Nile. The increase in the death-rate was remarked in the autumn, and blood films examined in the central laboratory in Cairo revealed positive malaria. Many of the blood films were taken from women, and as it is well known that Berberine women seldom travel away from their own villages, the suspicion was strengthened that there existed a local and fatal epidemic. A divisional inspector, detailed to investigate and report, confirmed the diagnosis, and found the whole of the markaz south of Derr town infected, with a heavy death-rate. Another English inspector was at once despatched with a full medical staff, and an active anti-malaria campaign was started. The sick were hospitalised and treated, quinine was distributed throughout the infected districts, arrowroot and milk supplied, and breeding places of mosquitoes searched for, located, and anti-mosquito measures put into force. The area infected extended roughly to 106 kilom. of the river, and included seventeen districts, none of which escaped infection. In certain places so many of the inhabitants were incapacitated that work stopped in the fields, and at one place, Ibrim, even the dead lay unburied in the houses for two or three days, owing to absence of able-bodied people to bury them. Although it was suspected that the disease had been imported by servants or Labour Corps men returning from Palestine or the Soudan, no evidence could be elicited to prove this.

Mosquito breeding was found to be taking place in irrigation wells, a few birkas, and in zeers in houses. Unused wells were covered in, used wells were stocked with fish, birkas were filled in or drained off into the river. A passenger control station was instituted at Shellal, where travellers from Derr to Egypt were medically examined, their addresses taken and sent to the medical officer at the place of destination with instructions that if necessary such persons were to be treated free of charge.

The various sub-committees appointed by the Anti-Malaria Commission continued their work, though considerable delay on account of the disorders in the spring was reported. The commission had at its disposal the sum of £E. 21,000 for the year, and this sum was spent as follows:—

	£E.
In Cairo and districts	5,000
In the canal zone	1,739
In the principal Moudirieh towns	10,161
In the Oases	2,100

A sum of £E. 1,000 was set aside for a survey of the mosquitoes of Egypt. The work was practically completed at the end of the year, and the results will be published by the Commission.

Influenza.

The epidemic which appeared in the country in May 1918 lasted until February 1919. The peak of the curve was reached in the first week of December 1918, and by the end of February this year the disease had practically disappeared.

In February 1919 it was made compulsory by law to notify cases of influenza to the Public Health Administration. This was advised on account of the possibility of typhus fever being diagnosed as influenza in order to escape the obligation to notify the disease, and thus escape the irksome consequences of disinfection, isolation, &c.

Plague.

The total number of cases reported was 877 as compared with 357 in 1918. The number of deaths was 473, showing a mortality of 53·9 per cent. as compared with 153, and a death-rate of 42·8 per cent. in 1918. Of the 877 cases occurring in 1919 64 were septicaemic, 76 pneumonic, and the rest bubonic.

Typhus.

The Weil-Felix reaction having been found positive for some 70 per cent. of typhus fever cases at the Fever Hospital, Abbassia, is now carried out as a routine practice for aid in the diagnosis of that disease .

INFECTIOUS Disease Statistics.

Disease.	1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.
Meningitis	64	39	84	48
Chicken pox	359	6	451	29
Cholera	15	6	..	..
Diphtheria	1,302	409	990	344
Measles	3,684	1,757	3,483	1,643
Plague	357	153	877	473
Relapsing fever	12,642	829	3,276	598
Scarlet fever	247	9	217	15
Smallpox	1,198	360	7,895	1,926
Typhoid fever	3,094	932	2,701	587
Typhus fever	24,953	6,589	16,970	5,569

Anthrax.

The Department is in communication with the British authorities in connection with the installation of a disinfecting station to deal with the disinfection of wool from the Soudan and Egypt prior to its exportation abroad as a guarantee against the spread of anthrax. A committee has been set up in England to study this question, and when it has completed its experiments regarding the best method of procedure for wool disinfection, it is proposed to adopt the same system in Egypt.

Cases of anthrax having occurred amongst British soldiers in August, due it was supposed to the use of infected shaving brushes, investigations showed that these brushes had arrived from Kobe, Japan. The suspected consignment was traced, and bacteriological examination proved the presence of anthrax bacilli. The consignment was destroyed.

The Customs Administration was requested to hold up all consignments of shaving brushes in Egyptian ports pending bacteriological examination, and a law forbidding the admission into this country of all shaving brushes unaccompanied by certificate of disinfection was prepared and put forward for promulgation.

Prior to the war the trade in cheap shaving brushes was practically a German monopoly, and in that country adequate precautions were taken to disinfect the horsehair from which they were made. Hair used in the brushes made in Japan comes, it is understood, chiefly from Chinese sources—a type of hair notoriously known to be infected with anthrax.

Passenger Control.

Ordinary passenger traffic throughout 1919 continued to be limited. The same system of passenger control was enforced as in passed years, that is, address-taking at the port of arrival, transmission of address to the medical officer at the town or district of destination, where the person concerned is kept under medical observation for a definite period. The results were that in Cairo 86 per cent. of arrivals were traced and medically observed; at Alexandria 92 per cent., at Port Said 99 per cent., and in the interior of the country 97 per cent. Of the total of 4,961 arrivals only 161 passengers were not traced; thus the percentage of the total arrivals traced was over 96 per cent.

Ankylostomiasis and Bilharziasis.

Steps have been taken to reopen the campaign against these two diseases, which cause so much suffering and loss of efficiency amongst the population of Egypt, especially the fellaheen. An Anglo-Egyptian committee has the matter in hand, and is drawing up a comprehensive scheme, including the organisation of an experimental district in the province of Qaliubia (Lower Egypt), which is considered to be a suitable field, in order to test the practicability of various proposals put forward.

This opportunity is taken of expressing the appreciation of the Egyptian Government and the health authorities for the very substantial assistance which the Rockefeller Foundation, International Health Commission, afforded in the past for the combating of these diseases, and it is hoped, that now the work is to be again undertaken, further assistance will be afforded.

Venereal Diseases.

Under the system at present in vogue for controlling venereal diseases in Egypt, 171,243 examinations of prostitutes were carried out throughout the country, with the result that 6,192 women were found to be infected either with syphilis or gonorrhœa. Of course it is unnecessary to state that these figures do not by any means represent the amount of venereal disease existing in the country, as they only refer to the notorious class of "femmes publiques" registered by the police.

Of late years there has been, even in those continental countries where the system originated, a movement to reconsider the efficacy of the medical inspection of prostitutes, or card system, with compulsory hospitalisation of such as were found to be diseased, and to adopt a more civilised system, which consists briefly in propaganda, prophylaxis, and gratuitous treatment centres run on confidential lines, for the benefit of any person contracting venereal disease. Such treatment centres have, with the help of judicious propaganda, been established and are working with marked success in many places.

It is hoped to start on these lines in Egypt, and a committee is at present engaged in working out the details of the scheme.

(5.) Hospitals and Medical Aid.

General Hospitals.

The number of Government hospitals remains the same as last year, 24.

As above noted, the hospital service was considerably interfered with owing to the circumstances which arose in the early part of the year.

No new building operations in connection with hospitals were undertaken during the year.

The original building programme for general hospitals will be completed with the construction of modern hospitals at Esna and Damietta. The sites, plans, &c., are now ready, and it is expected that the work will be begun on both of them early in 1920.

The time has almost arrived when the provision of further hospital accommodation by the Central Government cannot reasonably be expected. Further hospital extension or provision must be met by voluntary subscription and local effort, and it is to be hoped that the Provincial Councils will in future endeavour to make such provision.

Messrs. Thos. Cook and Son have generously offered to present their hospital at Luxor—freehold site, building and equipment—to the Government on certain conditions of upkeep, &c. This hospital, when repaired and opened, will serve the needs of a large district with a population of some 50,000 people.

X-ray apparatus are now provided at twelve provincial hospitals, as follows: Alexandria, Suez, Port Said, Tanta, Damanhour, Benha, Mansura, Kaliub, Kasr-el-Aini, Beni-Souef, Assiout and Zagazig.

War and post-war conditions have caused a considerable increase in expenditure on the upkeep of hospitals; the sum spent this year was £E. 183,142 as against £E. 166,218 in 1918. The utmost economy compatible with efficiency has been exercised, as is shown by the figures of the cost per patient per day for the years 1915 to 1919 :—

				Milliemes.
1915 : cost per patient per day	...	...	...	134
1916 : cost per patient per day	...	...	...	130
1917 : cost per patient per day	...	...	...	131
1918 : cost per patient per day	...	...	...	149
1919 : cost per patient per day	...	...	...	179

The total receipts from hospitals show a decrease of £E. 5,180, the figures being £E. 18,097 in 1919 as compared with £E. 23,277 in 1918. The reduction is due to the diminished number of military patients and to the interruption of communications owing to the political disturbances in the spring.

An increase of the medical staff of the hospitals at Bena, Sohag and Kena has been found necessary, and a second medical officer has been appointed to each of them. It is intended to make a similar addition to the staffs of the other hospitals which continue to be worked by one medical officer. These are Damietta, Assouan and Esna.

English matrons will also be provided for the hospitals as soon as quarters can be built for them.

GENERAL Hospital Statistics.

		1918.	1919.
Number of hospitals		24	24
Number of beds		4,543	4,592
Number of in-patients		75,002	64,704
Of which voluntary patients		38,612	33,299
Death-rate of in-patients	.. Per cent.	6.946	6.571
Number of days of treatment		1,117,791	1,021,498
Number of new out-patients		215,417	219,573
Number of out-patients' visits		436,035	402,996
Major operations		8,500	9,051
Cost of upkeep	 £E.	166,218	183,142
Receipts	 £E.	23,277	18,097

Ophthalmic Hospitals.

There are eighteen ophthalmic hospitals, fourteen of which have been built by public subscription or out of funds provided by the Provincial Councils. Eleven of the hospitals are maintained by the Government and five by the Provincial Councils.

The attendances continue to be most satisfactory, and the work carried out is highly appreciated by the people. Five of the hospitals are travelling camps, which are dotted about the country and remain *in situ* for three or four months at a time, affording ophthalmic relief to quite an extended zone around them.

The annual cost of the whole system of ophthalmic hospitals, including expenses of administration, was £E. 36,107 in 1919, of this sum the Provincial Councils provided £E. 3,560.

The two chief diseases dealt with are trachoma and acute contagious ophthalmia—the latter being the chief cause of blindness in Egypt. More than 12,000 of the persons who sought treatment at the hospitals in 1919 were blind in one or both eyes, *i.e.*, 15 per cent. of new patients.

It is interesting to note that the importance of early treatment for children attacked by ophthalmia is now being recognised by the people, who readily bring their children to hospital for treatment.

A large central 100-bedded ophthalmic hospital for Cairo is sorely needed, for though several ophthalmic clinics, out-patient sections and dispensaries exist, the director of the ophthalmic section is insistent upon the need for a large central

institution to deal with the vast number of patients demanding operation. Moreover, such an institution would provide the best facilities for post-graduate instruction.

The following brief statistics will indicate the work done during the year :

Hospitals in existence—

Permanent	...	...	...	...	...	13
Travelling	...	...	...	...	...	5
New patients treated	...	...	...	...	...	76,525
Total attendances of out-patients	...	...	...	...	...	906,961
Operations performed	...	...	...	...	...	49,974
In-patients	...	...	...	...	...	3,613
Patients examined	...	...	...	...	...	83,577
Patients regularly treated	...	...	...	...	...	76,525
Incurable cases	...	...	...	...	...	4,467
Blind in one eye	...	...	...	...	...	8,537
Blind in both eyes	...	...	...	...	...	4,278

Dispensaries.

Thirty-eight dispensaries were at work during the year, and afforded gratuitous medical aid to 34,105 out-patients.

(6.) *Children's Dispensaries and Maternity Schools.*

Children's Dispensaries.

The children's dispensaries or Child Welfare Bureaux, started in 1913, and since gradually extended until at the end of 1918 they numbered 13, were all working at the beginning of 1919, but in March, owing to political conditions, only those at Port Said, Zagazig, Damanhour and Wasta remained open, as it was not considered advisable to leave the matrons and nurses in the out-lying districts.

A disposition on the part of certain Provincial Councils to close down these children's dispensaries has been recently evinced, generally on the plea of insufficient funds. This intention has been met by general opposition on the part of the public as indicated by various protests in the native and European press. It is quite necessary to point out that to close down these institutions in a country where the infant mortality is so high would be a very retrograde step, and the Provincial Councils concerned were officially expostulated with by the Central Government pointing out the retrograde nature of the step as proposed by them and emphasising the unfavourable light in which they would appear *vis-à-vis* other countries where this work, far from being reduced, is being extended and pressed forward with the greatest vigour. Stress was also laid on the educational influence exercised by those institutions on the mothers and children attending them.

The Councils in question do not appear to appreciate the fact that these institutions are teaching centres for the poorest classes, upon whom the influence exercised through the sick children and their mothers is extremely valuable. There also appears to be a desire to convert the dispensaries into hospitals in the charge of Egyptian doctors and to introduce the system of collecting a small fee from each patient in the same way as is done at the out-patient sections of the general hospitals. This innovation, if introduced, would entirely alter the function of the dispensaries and convert them from Infant Welfare Centres for teaching the clothing, feeding and general caring of children into out-patient treatment clinics. It should further be pointed out that this work as at present carried on is essentially women's work, and should continue to be so if the maximum amount of benefit is to be obtained. It is not improbable that the presence of a male doctor in these places would have the effect of frightening away a large number of mothers who now unhesitatingly accompany their children and thus obtain valuable lessons in cleanliness, personal hygiene, &c.

A generous gift of material and equipment was received from the British Red Cross Society from the articles which remained at their disposal consequent on the termination of the war. These articles were distributed equally to the different dispensaries and handed over to the women and children attending them by the president of the Provincial Council or the matron.

In addition to the matrons in charge of these dispensaries, four hospital trained midwifery nurses have been appointed for inspection duty and to replace matrons absent on leave or through sickness.

The statistics for 1919 are as follows :—

New cases	...	...	...	...	...	55,384
Old cases	...	...	...	...	...	235,831
Total attendances	...	...	...	...	...	291,215

Maternity Schools.

The seven schools for dayas and maternity homes which were working well at the beginning of the year, had to be closed on account of the March disturbances, so that only an average of 163 working days were obtained. Nevertheless, a total of 2,223 cases were attended—a larger number than in any previous year.

Fifty-nine dayas were trained and received the higher certificate; 21,209 visits were paid by matrons and pupils to patients in their own homes, but a great deal of night work was necessarily curtailed on account of the disturbed state of the towns.

By a method of selection of candidates a more receptive type of pupil has been found. The matrons report that the dayas now in possession of the higher certificate are fairly reliable midwives, but point out the necessity of constant inspection and the desirability of refresher courses. It is interesting to note that many women applied to these centres for treatment of gynæcological troubles—women who in no circumstances would seek assistance or admission to a general hospital with a male staff.

Great help could be given to the work of the schools by the formation of ladies' benevolent societies in each province, as the cases of real distress met with by the matrons are numerous, and very little can be done for them other than professional attendance. The gift or loan of suitable clothing at these times would be a most valuable aid in treatment, besides helping in many other ways, and bring these institutions more into line with the infant welfare centres in America and Europe.

The hope expressed in the 1918 report that the Maternity Home and Nurses' Training School in Cairo might be reopened without delay has not yet been realised. It is an undoubted fact that until a better class of midwives and nurses is available the high infantile mortality for which Egypt is notorious will continue. At present three classes of midwives exist in Egypt :—

1. Women in possession of foreign midwifery diploma, which can be recognised as such by the Health authority.
2. The "Hakima."
3. The "daya."

The "Hakima," or, as she is more properly styled, "Kabila," holds a licence to practice midwifery granted by the Egyptian Government after she has passed a satisfactory examination at the Medical School at Kasr-el-Aini. Although termed a "Hakima," she cannot be considered in any way as a doctor, nor is she entitled under the pharmacy law to prescribe medicines containing poisons.

The "daya," who is chosen from a lower grade of society, undergoes no practical training, but only a short three weeks' course of theoretical training at a Government hospital, and if successful in passing a somewhat perfunctory examination is given a permit to practice midwifery.

Unsatisfactory though she be, no legal powers exist at present to withdraw her licence to practise. Be she blind, deaf, ignorant or dirty, she remains a "daya" until the end of her days. It is perfectly clear that until the "dayas" schools are re-established in connection with the maternity homes in the provinces, these women are a constant means of spreading puerperal fever and death amongst the poorer classes.

A beginning has been made in this line by the establishment of midwifery schools for "dayas" under the Provincial Councils, but staffed by experienced European matrons. The "dayas" attending these schools are picked women, and pass a complete course of midwifery under the instruction of the matron, nor can they obtain the special certificate granted by these schools until they have themselves conducted, under the supervision of the matron, the prescribed number of labour cases.

It is necessary that power to withdraw the permit should be provided, and it is proposed to do this in the Midwives Act which is contemplated.

(7.) *Scientific Institutes.**Public Health Laboratories.*

The extension of these laboratories, so urgently required for the last few years, was begun in the middle of August, and it is expected that the work will be finished by the end of 1920.

The whole question of the arrangement and condition of Government laboratories is at present being studied by a small Government commission.

The military authorities have now arranged to undertake their own bacteriological work, so that, with the exception of the performance of a number of Wasserman reactions, the supply of certain chemicals, bacterial cultures, sera, &c., the laboratories will be relieved of a great deal of extra strain placed upon them by war conditions.

The travelling bacteriological railway car, which had been lent to the army, will, it is expected, be returned to the department shortly.

It is to be observed that, with the exception of the city of Alexandria, the bacteriological diagnosis for the whole of Egypt is centralised in Cairo. This is disadvantageous as regards certain bacteriological diagnoses, such as those required for the control of plague, typhus, &c., and also as regards certain chemical analyses, such as those of distant local water supplies, aerated waters and ice, on account of the time taken for the specimens to reach the Central Laboratory in Cairo. It is therefore proposed to extend the facilities for bacteriological diagnoses to certain towns in the provinces such as Suez, Port Said and Assiout. Bacteriologists are being trained at the Central Laboratory to staff these provincial laboratories, and the necessary funds for their installation and equipment are being asked for.

At the request of the Arab Bureau, a small bacteriological staff and equipment were sent to Jedda for the diagnosis of plague and cholera there during the pilgrimage.

Assistance has been given to the Minister of Agriculture in testing the strength of cattle plague serum and the examination of blood in connection with the Serum Institute at Abbassia.

The total number of analyses performed during 1919 was: bacteriological, 10,970; chemical, 3,603. In addition 477 analyses were made for the military authorities.

Of the total number of samples of milk examined no less than 21.6 per cent. were found to have been tampered with, that is, either skimmed or watered, or both.

Water Service.

The regular inspection of the drinking water supplies throughout the country has unfortunately not yet been effected. Regular bacteriological and chemical analyses of the Cairo and Alexandria water supplies are, however, being carried out, and outlying districts are visited and the supplies analysed if there is reason to suspect that this is warranted.

Aerated waters and ice factories are controlled so far as is possible with the existing staff.

Vaccine Institute.

The amount of vaccine lymph issued in 1919 was 5,645,020 doses.

A campaign of general vaccination having been decided on, heavy demands for lymph were consequently made on the Vaccine Institute, whose normal annual output has hitherto been some 2,000,000 doses—usually sufficient for Egypt and the Soudan. The general vaccination campaign, however, called for the issue of a million doses a month for a period of six months, besides extra demands for the British army, the Soudan Government, Syria, Cyprus, &c., which are constantly coming in. In order to meet these heavy demands, temporary stabling for calves had to be erected, extra staff taken on, and suitable buffalo calves procured, in spite of the difficulty as regards supply. The tubes and phials necessary for the issue of vaccine in such large quantities were not available in the country, nor could they be procured at such short notice, so that the distribution had to be effected by means of such small medicine bottles as were obtainable. It also became evident that cold storage accommodation must form part of the Vaccine Institute. The storage of sera and vaccine in extern lay establishments is unsatisfactory, and other arrangements must be provided without delay.

'Antirabic Institute.

One thousand and ten persons were treated at the institute. Of these, four ceased to attend before completion of the treatment. In 136 cases treatment was discontinued, as observation of the animals inflicting the bites showed them to be non-rabid. In ten cases, the persons bitten completed the course of treatment, though it was discovered, too late to avoid treatment, that the animal which inflicted the bite was healthy.

Serum Institute.

The manufacture, centrifugalisation, bottling and issue of cattle plague serum, which was formerly in the hands of the Public Health Laboratories, has now been transferred to the Serum Institute at Abbassia, and the work undertaken by the Ministry of Agriculture.

(8.) *Pilgrimage.*

Owing largely to the continuance of war conditions, coupled with the difficulty of procuring shipping, the total pilgrimage to the Hedjaz comprised less than 1,000 people. Of these, 444 were ordinary pilgrims, and 420 were members of the Mahmal escort and staff. All these pilgrims were inoculated against cholera. No deaths occurred, and on return to Suez only four pilgrims were found to be ill. The route of the pilgrimage was curtailed; the visit to Medina was not made.

(9.) *Dangerous and Noxious Trades.*

The inspection and control of dangerous and noxious trades has been facilitated by the publication in book form of the conditions to be laid down by licensing bodies for different types of establishments. This book has been found to be of great help to the medical, police, and other authorities whose duty it may be to deal with these trades.

Registers have been instituted in health offices of districts and provinces containing particulars of all licensed establishments, and special inspectors appointed to carry out the supervision of the establishments concerned; it is believed that this extra control will have the effect of raising the standard of cleanliness and hygienic conditions generally.

(10.) *Sanitation of Mosques.*

Steady progress has been made with the work of modernisation and repair of the ablutionary and latrine accommodation in both public and private mosques. At the end of the year, 231 mosque latrines, &c., were under repair, and the number closed on account of not coming up to the requirements was 254.

(11.) *Birkas.*

During 1919 a total of 26 "birkas" (stagnant ponds) was filled in, representing an area of nearly 5 feddans.

(12.) *Pharmacies and Narcotic Drugs.*

In the past year authorisations to practise their trade were given to nineteen pharmacists; of these, only two were holders of the diploma from the medical school of Kasr-el-Aini. It would appear necessary to afford facilities for the obtaining of local pharmaceutical diplomas in larger numbers, as there is a great shortage of properly qualified pharmacists; in fact, seven such posts are vacant in this Department and it seems impossible to find candidates to fill them.

Forty-nine new apprentice assistants have been registered, bringing the total up to 137.

The total number of pharmacies in existence at the end of 1919 was 374; of these, 152 are in Cairo, 78 in Alexandria, and 144 are distributed throughout other parts of the country.

Attention is drawn to the traffic in and smuggling of narcotic drugs which exist on a very large scale. The law at present seems powerless to stop it. The control exercised by this Administration in conjunction with the Customs Administration

in connection with the importation of narcotics has merely resulted in a decrease of imports used in legitimate medicine; but the illicit traffic still exists to a very large extent. Although a decree was published in 1915 to prohibit the cultivation of poppies, there can be no doubt that a considerable amount of opium is regularly cultivated, and the cultivators openly apply for permission to transport it for disposal in the towns. The penalties inflicted by the Courts on offenders against the law on narcotics and soporifics are ridiculously inadequate. One example will serve to illustrate this assertion. The Inspectorate of Pharmacies proved conclusively that a certain pharmacist in Cairo had disposed of a considerable quantity of cocaine and morphine illegally, and had attempted to justify his action by altering and forging doctors' prescriptions by converting grains into grammes and by altering the figure 1 into 10. After a lapse of nearly two years, a final judgment of P.T. 100 fine and costs was obtained against the delinquent.

A complete redrafting of the law dealing with pharmaceutical, chemical and analytical laboratories is now in hand, and it is hoped the new law will be promulgated without delay. The laboratories referred to constitute a danger to the public, as at present they are practising under no control, nor is there any means of guaranteeing the capability and qualifications of their owners. These laboratories perform chemical and bacteriological analyses, and frequently doctors base their treatment on the reports they furnish. Moreover, they constitute a danger, for the reason that a certain number of them exist for the sole purpose of extracting alkaloids from crude drugs, such as morphine from opium, and cocaine from coca leaves, for sale. Indeed, this may be one of the reasons for the decrease in the importation of these drugs as above noted.

(13.) *Central Medical Commission.*

The work of the Central Medical Commission, which deals with the examination of candidates for admission to Government service, for the granting of sick leave, and for invaliding from the service, steadily increases, as the following figures indicate :

							Examinations.
1915	...	...	...	...	...	...	4,684
1916	...	...	...	...	...	...	5,033
1917	...	...	...	...	...	...	6,773
1918	...	...	...	...	...	...	8,430
1919	...	...	...	...	...	...	9,028

The Branch, or Provincial Medical Commissions, dealt with 9,765 medical certificates.

(14.) *Practice of Medicine.*

Permits to practise their profession in Egypt were issued during 1919 to 79 doctors, 19 pharmacists, 5 assistant pharmacists, 3 veterinary surgeons, 9 midwives, and 10 dentists.

According to the present register, the statistics of the various professions are as follows :—

Doctors	...	...	...	...	...	2,617
Pharmacists	...	...	...	...	...	929
Assistant pharmacists	...	...	...	...	...	283
Veterinary surgeons	...	...	...	...	...	153
Midwives	...	...	...	...	...	621
Dentists	...	...	...	...	...	135

These figures can only be considered as approximately representing the real state of affairs, and by no means as representing the correct number of persons engaged in the various professions, as the Administration is rarely notified of the decease, departure, or retirement from practice of persons on the register.

The law, as it at present stands, allows the Public Health Administration to license the holders of diplomas from any recognised faculty or university to practise in Egypt, but the appreciation of the value of certain of the diplomas presented is found to be exceedingly difficult, and in some cases deliberate fraud has been brought to light. In this respect it may be of interest to quote one or two cases which have presented peculiar features.

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An Ottoman Jew, who qualified in medicine at the Constantinople Medical School during the war, was pressed by the Turkish authorities to enter the Turkish army. He demurred, whereupon his diploma was made out bearing an Osmanli name instead of his real name, and he was mobilised. In due course he arrived in Egypt and applied for permission to practise his profession; on examining his documents, it was found that the name on his identification papers differed from that on the diploma. After long inquiries the above facts were elicited.

A Persian diploma, stated in the first instance by the consular authority concerned to be valid, was subsequently stated by the same authority to be not valid.

A diploma issued by the "Anthropological University of St. Louis," Missouri, U.S.A., dated 1896, was submitted to the consular authority concerned for opinion as to its value. In 1898 it was declared invalid, but on being submitted again in 1903 was stated to be good and to confer on the holder the right to practise medicine in the United States. Finally, in 1916 the same consular authority stated that the institution in question was fraudulent, and had been closed since 1885. The diploma about which all the discussion had taken place had therefore been issued eleven years after the closure of the institution referred to. The person presenting the diploma, a European, was prosecuted for fraud, but his consular authority dismissed the case on the ground of insufficient proof!

Other cases have occurred in which the original name on a diploma has been changed after the death of its owner by the person into whose possession it has come, with the object of converting the diploma to his own use and obtaining permission to practise as a doctor on the strength of it.

Again, as a result of the peculiar conditions arising from the state of war, members of the various professions under notice, refugees from their own countries, have been unable to produce their original diplomas or other necessary documents, but have been able to prove that they are fully and properly qualified. In these cases the Administration has granted temporary permits to practise, with the proviso that the original documents must be produced as soon as the state of affairs allows, otherwise the permit to practise will be withdrawn.

The new law on the practice of dentistry, which is on the point of being promulgated, gives power to the Administration to insist that the holders of doubtful diplomas who apply for permits to practise should submit to an examination by a board of examiners appointed by the State. It is intended to insert the same powers in the projected new laws on the practice of medicine, midwifery, chemistry and pharmacy.

(15.) *Sanitary Laws and Enactments.*

The following is a record of the action taken under the various legal enactments administered by the Department:—

Total prosecutions	...	...	...	...	14,181
Convictions	...	...	...	...	12,248
Acquittals	...	...	...	...	213
Filed	...	...	...	...	626
Under consideration	...	...	...	...	1,094

A law for the regularisation and better control of the practice of dentistry has been prepared and will be promulgated early in 1920. Similar laws for controlling the practice of medicine, midwifery, pharmacy and chemistry are under study and discussion.

45. Quarantine.

The diminution during the war of passenger, animal, and cargo traffic resulted for the International Quarantine Board in a heavy loss of dues, and in 1917 the Egyptian Government was obliged to furnish financial assistance to the Board. A new lazaret suitable for the accommodation of first-class passengers is to be built at Port Said, and extensive repairs to lazarets and quarantine stations are now in progress, notably at the Gabbari lazaret in Alexandria.

The pilgrimage has been greatly interfered with in recent years. In 1914 a "fatwa" of the Grand Mufti of Egypt advised intending pilgrims to postpone their journey, and in 1915 there was no pilgrimage. In the following year 1,700 Egyptian pilgrims journeyed to the Hedjaz, but visited Mecca only. The pilgrimages of 1917 and 1918 were very small, and though there was a revival in 1919 the high cost of

travel is likely to continue to deter a large proportion of would-be pilgrims from undertaking the journey.

The following table shows the number of pilgrims who left Egypt for Mecca in the years 1914 to 1919 :—

Year.				Egyptians.	Foreigners.	Total.
1914 ..	..	..	..	3	2,986	2,989
1915 ..	..	..	..	..	..	..
1916 ..	..	..	..	1,701	758	2,459
1917 ..	..	..	..	836	81	917
1918 ..	..	..	..	628	93	721
1919 .	..	..	..	829	2,205	3,034

46. Lunacy.

In 1914 the Lunacy Division was detached from the Public Health Department, of which it had hitherto formed part, and its administration as a separate unit of the Ministry of the Interior has given satisfactory results.

The number of persons admitted into the lunatic asylums averages somewhat over 1,000 a year. The death rate in the asylums rose from 12·25 per cent. in 1913 to 21 per cent. in 1918, but fell rapidly during 1919. Pellagra remains the chief cause of insanity in Egypt.

Résumé of 25 years Work.

The following figures covering a period of twenty-five years (in 1895 the care of the insane in Egypt was first placed in British hands) may be of some interest :—

During the last twenty-five years nearly 20,000 lunatics have been treated in the asylum. 1,600 criminals have been examined and reported on to the Tribunals. The annual receipts in payment for treatment have risen from £E. 226 in 1895 to £E. 12,500 in 1919, and the annual cost of upkeep of the asylums has risen from £E. 8,000 in 1895 to £E. 106,000 in 1919. The total amount spent during this period in the upkeep of the asylums is £E. 820,000. The number of patients in residence has risen from 440 in 1895 to 2,075 in 1919, and the lunacy staff from 73 to 582.

Report on the Lunacy Division for the Years 1914–1918.

Admission.

The total number of lunatics officially registered has fallen from 1,329 in 1913 to 1,281 in 1918.

Cost of Maintenance.

The cost of maintenance in the asylums has risen from £E. 22 in 1913 per patient per annum to £E. 42 in 1918, owing to war prices.

Organisation.

The separation of the Lunacy Division from the Department of Public Health and the formation of a separate lunacy unit in the Ministry of the Interior took place in 1914. Much benefit has resulted therefrom.

Pellagra.

The scourge still remains the chief cause of insanity in Egypt.

Death Rate.

The death rate in the asylums rose during the war from 12½ per cent. in 1913 to 21 per cent in 1918.

Report for the year 1919.

Admission.

The number of lunatics admitted continues to be about 1,000 a year.

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Death Rate.

The high death rate prevailing during the war has fallen rapidly during 1919.

. 47. Municipalities and Local Commissions.

Municipal enterprise, which was entering upon a sphere of considerable activity in 1914, had necessarily to be curtailed during the war. Apart from the desire of the Ministry of Finance to reduce expenditure, the lack of building materials and the scarcity of labour precluded the putting into execution of the various large schemes at that time in contemplation.

Nevertheless, important drainage works at Port Said were continued and completed during the war, and a great improvement has thus been effected in the sanitation of that town.

The electrical installation at Damietta was completed early in 1915, and that at Damanhour is on the road to completion, while street lighting by petroleum and benzine lamps has been considerably improved in the smaller provincial towns. In the matter of provincial water supplies a certain amount of progress has been possible, and the macadamising of streets has been proceeded with to a limited extent.

The work of the "Tanzim Service" in the municipal towns has not been much interfered with by the war; it is mainly occupied in improving street alignments, opening streets by expropriation, in the exchange of land and the cleaning and embellishment of towns.

Despite the depletion of its technical staff by mobilisation, the inspection by the municipalities department of the general municipal engineering work in the provincial towns continued, though it was necessarily curtailed.

In the current financial year the Ministry of the Interior proposes to spend £E. 130,000 on installing light and filtered water in various places, in beginning the drainage of Suez and Mansura, and on other works of a municipal character; £E. 115,000 of this sum is expected eventually to be recovered from the municipalities themselves. In addition to the above works numerous improvements are being undertaken by the municipalities themselves at their own cost. Furthermore, in view of the acute need of improved supplies of drinking water, the Ministry of the Interior is asking for a credit of £1,000,000 to be devoted to this object.

The number of mixed municipalities has remained stationary at thirteen since 1914. Local commissions on the other hand have increased from thirty-five to forty-four, and whereas in 1914 there were only seven towns possessing local commissions in which the inhabitants had agreed to contribute towards town improvements, there are now only nine where the inhabitants do not so contribute. The contributions usually take the form of an addition to the house tax or an octroi duty.

In 1918 a new form of municipal institution was created under the name of "Village Council," the principal feature of which is that almost all the municipal expenditure is paid for by the inhabitants themselves. Before authority is granted for the constitution of a village council the inhabitants are required to furnish sufficient proof of their real desire for a council, of their ability to subscribe in advance £E. 500 for capital expenditure, and of their willingness to pay certain taxes. Village councils which show activity and a capacity for successful administration are, after a period of probation, transformed into local commissions and granted Government subventions. Three such transformations took place in 1919 and there are now nine village councils in existence.

It may be recalled that the first municipality in Egypt was established in the year 1890 at Alexandria, and that in 1893 municipal bodies were created in nine other towns. The situation of these bodies was at first very precarious; the population was universally hostile to their creation, and the Government constantly received petitions from different parts of the country begging that municipal bodies should not be set up there. Public opinion in this matter has undergone a complete change, and the Government is now being pressed on all sides for the creation of municipal bodies. The transformation effected in the aspect and sanitary condition of the towns where municipal bodies have been established is remarkable. The State subsidy, which formerly composed the whole, now forms but a part (and that a small one) of the municipal Budget.

The Budget of the forty-eight mixed municipalities and local commissions in 1914-15 showed the following totals :—

Ordinary Budget—				£E.
Government subvention	...	...	...	112,034
Other resources	...	...	...	189,986
Total	...	...	...	302,020
Extraordinary Budget	...	...	...	103,108

In 1919-20, the budgets of the fifty-seven mixed and local commissions showed the following totals :—

Ordinary Budget—				£E.
Government subvention	...	...	...	125,645
Other resources	...	...	...	321,964
Total	...	...	...	447,609
Extraordinary Budget	...	...	...	248,080

It should, however, be observed that among "other resources" is included in 1919-20 a sum of £E. 40,037 representing the Government donation for the year to municipal staff to meet the increased cost of living.

The provident funds for municipal staff first established in 1913 have proved a success and are now in full working order.

Alexandria Municipality.

The revenues of the Alexandria municipality have increased from £E. 325,000 in 1914 to an estimated £E. 422,000 for 1920 by the development of old sources of taxation, the imposition of new taxes on dogs and on the sale of alcoholic liquors, and the rent of the Bourse, which became municipal property in 1917. Expenditure, however, has increased, owing to the increased cost of materials and the rise in wages, from £E. 322,500 in 1914 to £E. 445,500 (estimated) in 1920. The Budget for the current year therefore shows a deficit of £E. 23,500; and it appears likely that fresh sources of revenue will have to be found if the municipal development of Alexandria, which has hitherto made creditable progress at a moderate cost, is not to be interrupted.

The construction and repair of roads was considerably reduced during the war, but drainage works continued, and the construction of a breakwater, based on Fort Kaid Bey, and designed to protect the quays of the eastern harbour, was begun in 1914 and finished in 1916. New building regulations will shortly be put into force, and a town-planning scheme is in preparation.

The development of parks and gardens in the town was also interrupted by the war, but much time and labour was devoted to the decoration of military hospitals, camps, and soldiers' clubs with plants and flowers. Mr. A. Antoniadis has generously given to the town his fine garden property which adjoins the municipal garden at Nuzha on the Mahmudia Canal.

A certain amount of excavation has been done in Alexandria and at Abukir, and the time is approaching when it will be necessary to build a larger museum.

The mortality at Alexandria has increased from 34.1 per thousand in 1915 to 42 in 1919.

48. Provincial Councils.

The financial situation in the years 1914 and 1919 was as follows :—

INCOME.

Year.				Direct Taxes.	Other Receipts.	Economies.	Total.
				£E.	£E.	£E.	£E.
1914	..	..	.	242,142	58,791	279,883	580,816
1919	..	..	..	258,338	122,245	293,279	673 862

EXPENDITURE.

Year.	Central Administration.	Public Utility.	Elementary Education.	Non-Elementary Education.	Total.
	££.	££.	££.	££.	££.
1914	33,233	26,111	165,992	76,732	302,068
1919	30,370	44,256	222,368	128,144	425,138

Income.—Whereas the receipts from direct taxes are nearly equal in each year, those obtained from “other receipts” have increased annually. This is due to the fact that greater attention has been paid to “productive” expenditure, and that with the increase in the number of educational institutions the sum obtained from fees, &c., has considerably risen.

Economies.—Between 1914 and 1918 considerable economies were effected. After that date, however, the money saved had to be devoted to war gratuities for the employees of the Councils.

When the decisions of the Council of Ministers in June and September 1919 were issued regarding the increase of salaries and the payment of war gratuities, the question as to the manner in which this extra expenditure should be met by Provincial Councils became rather an acute one, and is at present under consideration.

Expenditure.—The increase in the general expenditure noticeable in the last two years is due to the payment of the war gratuities already referred to.

Institutions of Public Utility.

The following statistics for the years 1914 and 1919 regarding institutions of public utility (responsibility for which rests on Provincial Councils) are of interest:—

—	1914.	1919.
Children's dispensaries	8	11
Dayas schools	6	8
Ophthalmic hospitals (fixed)	3	3
(moving)	2	2
Nurseries	2	14
Surgical hospitals	2	2

Children's Dispensaries.—It is regretted that the Provincial Councils are still showing a tendency to suppress children's dispensaries from motives of economy. As these institutions have proved of the greatest value in educating the mothers and affording relief to the children of the poorer classes, this Ministry has been, and is still, making every effort to convince the Councils of the benefits derived from them and of the necessity of maintaining them.

Education.

—	1914.	1919.
Grants-in-aid of elementary schools	2,684	2,804
Elementary schools councils—		
Boys	447	411
Girls	36	82
Higher elementary schools—		
Boys	2 (1915)	19
Girls	..	1
Industrial schools	11	11
Agricultural schools	11	8
Training schools—		
Men	12	13
Women	3	10
Primary schools—		
Boys	39	30
Girls	9	11
Commercial section at Mansura	1	1

Grants-in-Aid of Schools.

The grants in question amounted in 1919 to £E. 20,462. They were originally paid by the Ministry of Education, and then (in 1914) by the Councils themselves (Assouan excepted). Owing, however, to the increased expenditure incurred by Councils on account of war gratuities, the question as to whence such grants should be derived has again arisen.

Most of the elementary schools (kuttabs) were erected for boys only, but in 1918 the attention of Councils was called to the necessity of making provision for girls also. It will be observed that the number of such schools for girls has more than doubled since 1914.

In 1916 Councils were urged to increase the number of the higher elementary schools. They did so, but since that date (when the number of such schools was twenty-four) the number has fallen.

There is an industrial school in every province except four. Whereas other institutions are a loss, industrial schools are a source of revenue to Councils.

Owing to the financial condition of Provincial Councils and the expensive nature of their training schools, it is probable that the Ministry of Education will in the future assume charge.

Administration of the Provincial Councils.

The Ministry of the Interior, not altogether satisfied with the working of the Provincial Councils, had delegated certain officials from the head office to inspect the Councils' affairs from time to time. This led to the discovery that certain frauds had been committed by the Councils' officials. Two inspectors for Provincial Councils have now been appointed by the Ministry to examine the Councils' Budgets and generally to control their activities.

Sittings of the Councils.

Year.	Meetings.	Meetings adjourned.	Total.
1914	163	15	178
1919	91	56	147

VI.—JUSTICE.

49. Administration.

Many changes have taken place in the superior personnel of the Ministry of Justice and of the judiciary since the beginning of the year 1914. It will be sufficient to refer to the following:—

In the month of April 1919, Abdel Khalek Pasha Sarwat finally resigned the post of Minister of Justice, which he had held since 1914, and was replaced by Ahmed Pasha Zulfikar, one of the senior judges of the native judges of the Court of Appeal, who took ministerial office for the first time in the Ministry of Mohammed Pasha Said.

In 1916 Sir Malcolm McIlwraith, who had held the office of Judicial Adviser since the year 1898, was succeeded by Sir William Brunyate. The latter was in his turn succeeded in 1919 by Mr. M. Sheldon Amos.

In 1916 Sir Walter Bond retired from the post of Vice-President of the Native Court of Appeal, which he had occupied with distinction since the year 1899. Sir Walter Bond was succeeded by the late Judge Halton, after whose lamented death in 1919 Mr. J. Hope Percival, one of the senior judges of the Court, was appointed to fill the vacancy.

In 1916 the death of Mr. Lionel Sandars created a vacancy in the office of President of the Mixed Court of Appeal. Mr. Sandars had held the post of President of the Court for only a short time, but during his brief tenure of that office had rendered conspicuous service in assuring harmonious relations between the military and judicial authorities during a period when problems of a delicate and

difficult nature were of frequent occurrence. Mr. Sandars was succeeded in his office by Mr. Albert de Souza Larcher, the senior Portuguese judge in the Mixed Courts. Mr. Larcher was succeeded as Vice-President of the Mixed Court of Appeal by Mr. Francis Laloë, the senior French judge.

Of the three English judges of the native courts who joined the army, one, Mr. G. H. Fox, sacrificed his life, being killed in action at Katia in 1915. The judicial service lost in Mr. Fox a man of unusual promise.

Although it falls outside the period to which this report relates, I cannot refrain from referring here to the recent death of Mr. Albert Eeman, the *procureur général* of the Mixed Courts. Mr. Eeman, after a distinguished career in Belgium as an advocate and a member of the legislature, joined the Mixed Courts as a judge in the year 1897. He was endowed with exceptional qualities of mind and disposition, and had ably fulfilled the functions of *procureur général* since 1912.

The principal activities of the Ministry of Justice during the year 1919 have been of an administrative character. In the month of July the Council of Ministers promulgated a decision which involved far reaching changes in the cadre and salaries of the native courts. The decision of September, which granted substantial increases of salary, as well as temporary allowances, to all Government officials, made a further revision of judicial salaries necessary, which were only carried into effect in January 1920. It will be sufficient to record two outstanding features of the system which is the outcome of these successive measures. In the first place, with a few exceptions, the salary of each judicial post is arranged on a graduated scale, so that the occupant of the post moves from a minimum to a maximum salary by automatic increases at regular intervals of two or three years. The second feature of the reformed system is that while Europeans and Egyptians, holding similar posts, receive similar salaries (subject to the automatic increases referred to) Europeans are entitled to a further allowance of from £E. 100 to £E. 300 per annum according to age. European magistrates have always received a somewhat higher rate of pay than Egyptians in view of the greater expenses which they have to meet owing to living abroad. The effect of the new arrangements is to systematise and to render more equitable the application of this principle.

Schemes for the revision of the salaries of the Mixed Court judges and of those of the judges of the Mehkemehs, were under consideration, but were not carried into effect during the period under review.

50. Legislation.

At the outbreak of war three commissions were at work, under the auspices of the Ministry of Justice, elaborating important projects of legislative reform, namely, a revised Penal Code, a revised Code of Civil Procedure, and a revised Civil Code. Of these only the first, which was presided over by Mr. J. H. Percival, survived the second year of the war, and completed its labours. The draft which it prepared, after having been the subject of the labours of successive committees of revision, now holds the field as the draft Penal Code proposed for application to foreigners, when general criminal jurisdiction over non-Egyptians comes to be exercised by the Mixed Courts.

In the year 1917 the Ministry of Justice took up once again, and this time on very broad lines, the general problem of the legislative reforms which would be necessitated or rendered possible by the abolition of the Capitulations. The conduct of these studies were entrusted to a strong commission, which bore the title of the Capitulations Committee, and was composed of Yousef Pasha Wahba, then Minister of Finance, Chairman; Abdel Khalek Pasha Sarwat, Minister of Justice; Adly Pasha Yeghen, Minister of Education; three advisers, one judge of the Mixed Court of Appeal, and one other senior legal official. Sir William Brunyate acted as reporter to the commission, and sustained the principal burden of preparing the material for its discussions.

The commission prosecuted its inquiries with energy from the time of its creation in April 1917 until the resignation of Rushdy Pasha's Ministry in December 1918 brought its labours to an inevitable conclusion. In this period of time a large area of ground was covered and material was accumulated which for a long time to come will be of value to those responsible for the promotion of legislative reform.

Such actual legislation as was strictly necessary during the war took to a large extent the form of proclamations under martial law, and apart from assistance given in preparing proclamations the activities of the Department of Justice have been largely devoted, as indicated above, to the study of the reforms involved in the

abolition of the Capitulations. There are, however, a certain number of laws which have been passed since 1913, to which attention may appropriately be called, in view of the effect they have had in modifying Egyptian judicial institutions.

Law No. 7 of 1914 makes certain modifications in the Native Code of Criminal Procedure, and in Law No. 4 of 1905 under which the Courts of Assizes were created. The object of these changes was to put an end to conflicts which arose in practice between the committing magistrates and the summary courts, in regard to the legal qualification of offences in certain cases. The committing magistrate occasionally refused to send a case for trial to the Assizes because he considered it to be a misdemeanour, while at the same time the summary judge refused to try it on the ground that in his opinion it constituted a crime.

The law in question provided that if the summary judge holds that an offence brought before him as a misdemeanour constitutes a crime, the *parquet* shall bring it before a committing magistrate, who may either commit it for trial before the assizes or dismiss the case. If he differs from the summary judge as to the qualification, and considers that the offence constitutes a misdemeanour or a police offence only, he may send it for trial before the assizes with alternative charges qualifying the offence either as a crime or as an offence of a lesser degree of gravity. The law also introduced an important innovation in giving to the procurator-general and to the civil claimant the right to appeal against a decision by the committing magistrate dismissing a charge on the ground of insufficiency of evidence. It also defined the power of the committing magistrate in respect of a series of minor points which had given rise to controversy, such as the question of his right to modify or aggravate the charge as laid before him by the prosecuting authority.

Law No. 10 of 1914 was promulgated with the object of providing more effective means than already existed for punishing unlawful assemblies. With the exception of certain provisions in regard to pillage by armed bands and a section providing for increased penalties for assault and unlawful wounding when committed with the use of arms by members of a band exceeding four persons, the Penal Code contained no specific provisions for offences committed by assemblies of persons.

The necessity of such provisions had, however, become apparent, and the law in question makes it an offence punishable with six months of imprisonment or a fine of £E. 20 for any member of an assembly of a nature to endanger the peace to refuse to obey an order to disperse given by a lawful authority. The same penalties are incurred by any person who, having knowledge of the common object, joins an assembly collected for the purpose of committing an offence, of interfering with the execution of the law, of interfering with the action of a public authority, or of depriving any individual of his liberty of action.

Increased penalties are provided for the case where arms are carried or where resort is had to force or violence. The promoters of an unlawful assembly are criminally responsible for offences committed by members of the assembly in the execution of the common object, although such promoters were not actually present when such acts were committed.

Law No. 12 of 1915 had for its object to put an end to an abnormal state of things which had prevailed in the organisation of the *Mehkemehs*. This consisted in the fact that a kadi from Constantinople was president both of the Supreme *Mehkemeh* and of the *Mehkemeh* of Cairo, and enjoyed certain exceptional powers in respect to the recruitment and promotion of the subordinate kadis.

As from the date of the law, the Supreme *Mehkemeh* and *Mehkemeh* of Cairo have had distinct presidents appointed on the nomination of the Minister of Justice, and the exceptional prerogatives of the former have disappeared. The organisation of the *Mehkemehs* has thus been brought to closer conformity with that of the other judicial institutions of the country.

In the year 1915 a reform was brought about which had long been urged, and to which allusion is made in Lord Kitchener's report for the year 1911.* This reform relates to the number of judges required to make up a chamber in the Mixed Courts. This number had hitherto been eight in the Court of Appeal and five in the Courts of First Instance. These numbers were reduced respectively to five and three by Law No. 3 of 1915. This important reform has had excellent effects upon the amount of work got through and reduction of arrears.

Law No. 15 of 1916 creates for the first time a regularly organised bar for the *Mehkemehs*. It lays down the conditions required for admission to that bar, prescribes a period of apprenticeship, provides for the creation of a bar council, and lays down the disciplinary penalties to which members of the profession expose themselves in case of breach of professional duty.

* Page 44 and Appendix 2.

Law No. 5 of 1917 extends the jurisdiction of the Mixed Courts in respect of police offences. Previous to the promulgation of this law, where an European and an Egyptian were concerned together in the breach of a police regulation, while the European was prosecuted before the Mixed Court, jurisdiction over the Egyptian was in general reserved to the Native Court. The effect of the law was to authorise the prosecution of both parties in such cases before the Mixed Court. The advantage of this reform is that it avoids the necessity for separate proceedings before different jurisdictions in respect of the same matter, with the consequent danger of conflicting decisions.

The decree of the 13th April, 1918, made an important change in the conditions required for the admission to the full right to practice before the Mixed Court. This decree provides that at the expiration of the period of "stage" or apprenticeship, candidates shall be required to pass an examination both of a theoretical and of a practical character. This examination is, of course, additional to the examinations candidates have already had to pass to obtain the degree in law which is a necessary condition of their admission to apprenticeship. The examining body is composed of the President of the Court of Appeal, the Procurator-General and the Chairman and two members of the Bar Council. The subjects of examination include the writing of an opinion upon a specific case and the drafting of a contract and of three of the principal documents of civil procedure. It may be confidently expected that this reform, the adoption of which was recommended by the Bar Council, will have the best effect upon the professional education of the junior bar. A similar system was extended to the apprenticeship of the Native Bar by Law No. 12 of 1918.

The briefest mention will suffice for the following measures:—Law No. 24 of 1915 imposed a fee of 4 per cent. on all civil suits susceptible of elevation in money before the cantonal Courts. Previous to this law the fee charged on cantonal suits was at the rate of 2 per cent. only and claims of P.T. 100 or less were exempted.

Law No. 10 of 1916 (applicable to Egyptians) and Law No. 11 of the same year (applicable to foreigners) modify in a similar sense section 2 of Law No. 4 of 1913 which exempted small agricultural holdings from seizure for debt. The article in question had provided that existing debts might be renewed up to a date not later than the 4th January, 1918, without coming within the principal provisions of the law. The new legislation referred to replaces this fixed date by a period of five years from the term of the original contract.

In conclusion, I may allude to two laws relating to oaths; Law No. 1 of 1917 permits Government officials who, by reason of their technical knowledge are habitually called upon to act as experts before the Courts to take the requisite oath, once for all, before the President of the Court of Appeal. Law No. 16 of 1917 permits the country notables who compose the cantonal Courts to take their oath of office before the President of the Native Court of First Instance in whose area their cantonal Court is situated, instead of being obliged, as heretofore, to come to Cairo every year to take their oath before the Minister of Justice.

51. Jurisdiction.

The following tables give a general view of the activities of the native and Mixed Courts respectively during the period under review:—

NATIVE COURTS.

Civil Jurisdiction.

(1.) Cases entered for trial.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Court of Appeal ..	1,307	1,329	1,223	1,250	1,018	1,150	864
Central Courts—							
Appeal ..	3,777	4,787	3,863	3,910	4,327	5,430	4,004
1st Instance ..	7,207	5,763	4,729	4,601	4,993	4,810	4,183
Summary Courts ..	206,892	98,199	140,893*	127,969	114,905	101,220	89,500
Markaz Courts ..	11,928	..	..	..	..	..	..
Cantonal Courts ..	251,236	265,949	447,042	247,274†	194,602	150,793	105,787
Total ..	482,347	376,027	597,750	385,004	319,845	263,403	204,338

* The jurisdiction of the Summary tribunals was raised from £E.100 to £E.150 as from May 30, 1914.

† In 1915, Court fees were for the first time made payable on cases brought in the Cantonal Courts.

(2.) Cases disposed of.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Court of Appeal ..	1,166	1,290	1,572	1,049	962	1,125	694
Central Courts—							
Appeal ..	3,531	4,282	4,449	3,984	4,208	4,548	3,598
1st Instance ..	6,564	6,119	5,572	4,952	4,637	4,342	3,431
Summary Courts ..	207,312	108,941	140,533	131,517	114,921	102,881	83,392
Markaz Courts ..	9,956	..	..	..	..	..	..
Cantonal Courts ..	216,487	245,181	418,728	241,988	189,372	152,089	101,055
Total ..	445,016	365,813	570,854	383,490	314,100	264,985	192,170

(3.) Cases awaiting Trial at the end of the Judicial Year.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Court of Appeal ..	1,195	1,150	679	855	931	908	1,068
Central Courts—							
Appeal ..	1,828	2,236	1,714	2,037	2,366	3,281	3,375
1st Instance ..	2,980	2,745	2,317	2,620	3,174	3,618	4,220
Summary Courts ..	22,592	16,058	17,717	16,629	18,424	17,118	22,661
Cantonal Courts ..	14,676	18,471	26,147	16,261	16,125	12,014	16,095
Total ..	43,271	40,660	48,574	38,402	41,020	36,939	47,419

Penal Jurisdiction—Cases disposed of.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Assize cases ..	2,442	2,504	2,533	2,525	2,383	2,382	2,209
Misdemeanours—							
Appeal ..	22,851	24,650	25,825	24,823	23,296	22,322	18,063
1st Instance ..	68,937	73,922	72,858	67,653	70,560	66,483	63,309
Contraventions—							
Appeal ..	1,136	1,349	1,069	1,141	1,505	2,232	1,323
1st Instance* ..	72,054	77,596	78,396	73,886	95,645	62,564	54,928
Total ..	167,420	180,021	180,681	170,028	193,389	155,983	139,832

* Including contraventions tried by Cantonal Courts.

MIXED COURTS.

(1.) Civil Jurisdiction.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Court of Appeal—							
New cases ..	1,492	1,365	1,281	1,421	1,548	1,431	1,169
Decided ..	1,514	1,489	1,318	1,808	1,655	1,464	1,177
Courts of First Instance—							
Appeal—							
New cases ..	704	646	797	823	861	755	565
Decided ..	682	680	882	749	867	814	564
1st Instance—							
New cases ..	8,557	7,640	9,406	8,687	7,984	6,425	6,401
Decided ..	9,063	8,050	9,228	8,700	8,051	6,593	6,054
Summary—							
New cases ..	16,123	13,909	19,277	13,813	10,165	7,443	5,906
Decided ..	15,699	13,368	19,154	14,654	9,848	7,806	5,855
Total—							
New cases ..	26,876	23,560	30,761	24,744	20,558	16,054	14,041
Decided ..	26,958	23,587	30,582	25,911	20,421	16,677	13,650

(2.) Penal Jurisdiction.

—	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Court of Appeal—							
New cases	93	114	91	139	99	54	45
Decided	104	117	104	137	135	56	54
First Instance—							
Misdemeanours—							
New cases	254	350	295	320	261	145	88
Decided	174	247	299	419	290	227	92
Contraventions—							
New cases	3,407	3,178	2,332	1,789	1,589	1,552	1,291
Decided	3,475	3,171	2,371	1,825	1,559	1,572	1,237
Total—							
New cases	3,754	3,642	2,718	2,248	1,949	1,751	1,424
Decided	3,753	3,535	2,774	2,381	1,984	1,855	1,433

It will be observed that in both jurisdictions there has been a very marked decrease in the number of civil cases entered for trial, particularly those of minor importance. This decrease is doubtless due in large measure to the general prosperity of the country and to the rise of prices, both circumstances favourable to debtors. In the case of the cantonal Courts the diminution of business would appear to have been accelerated by the introduction in 1915 of a modest tariff of Court fees.

Leaving the latter circumstance aside, the general decrease of civil litigation appears to indicate the extent to which the lower Courts serve as a debt-collecting agency.

Though it does not appear from the preceding tables, the general figures of criminality remained fairly constant during the period under review until the latter half of the year 1919.

The following figures show the number of crimes (as distinguished from misdemeanours) reported to the native *parquet*, and treated by that body as genuine cases, during the second six months of the year 1919, as compared with the corresponding figures for the year 1918:—

—	Murder and Attempted Murder.	Robbery.	Arson.	Destruction of Crops.	Various Crimes.	Total.
1918	825	475	303	54	579	2,236
1919	1,380	1,085	587	164	872	4,088

It will be observed that during the latter half of the year 1919, as a result of the disturbed state of the country, the statistics of serious crime have approximately doubled.

52. School of Law.

Many changes have occurred in the staff of the school during the period under review, including the appointment in 1915 of Mr. F. P. Walton to be director of the school in succession to Mr. Sheldon Amos.

By the death in 1917 of Mr. Samuel Clay the Law School lost one of its most valued professors, and it has also to regret the loss by resignation of M. Henri Lamba, Mr. J. H. Scott, M. Pierre Arminjon, Mr. Norman Bentwich and Dr. Hassan Nachât. All of these gentlemen had rendered valuable services to the school.

New appointments include those of Mr. W. R. Phillips, formerly professor of law in the University of Leeds, and of Mr. F. Fitzgibbon, K.C., of the Irish Bar.

Owing to the disturbed state of the country the work of the school was seriously interfered with during the spring of 1919. In common with the students and scholars of other schools, the students of the Law School went on strike on the 9th March, 1919, and only a very small proportion of them complied with the order to be present on the 7th May. In consequence the school was ordered to be closed until the 3rd October. On the 4th October the course of study was resumed and continued

without interruption till the 12th November, when another strike occurred in the Law School as in all the other Government schools. As a result of the notice under martial law of the 19th November the students returned to their classes on the 22nd November, but further troubles arose shortly afterwards, the result of which was that 250 out of the total of 295 internal students were excluded from the examination, and thus lost a year.

It is interesting to notice that since its institution in 1892 just over a thousand students have received the diploma of the school. An attempt is made every year to trace the subsequent career of the graduates. It appears that out of a total of 1,002, since 1892, 174 found employment under the Ministry of Justice, 56 in other Ministries, and 740 became members of the bar.

VII.—COMMUNICATIONS.

53. General.

The Ministry of Communications was formed in April 1919 to include the following existing, new or proposed, Administrations: Railways, Telegraphs, Telephones, Auxiliary Railways, Post Office, Ports and Lights, Inland Navigation, Main Roads and Bridges, Mechanical Transport, and Air. The Telephone Service had recently been purchased from a private company.

54. Railways, Telegraphs and Telephones.

Military operations, first the defence of Egypt and later the advance into Palestine and Syria, made throughout the war very heavy demands upon the Railway Administration. It was unfortunate from the point of view of the railways that the decision to use the Sinai Desert and not the Suez Canal as the main defensive position was not arrived at, while American markets were open and American shipping free. The result was that a severe shortage of locomotives, rolling-stock, and track was felt throughout the period of the war, and it was necessary to develop water transport at considerable expense to deal with Egyptian traffic. No new materials of this nature, with the exception of some oil-tank waggons, were in fact obtained by the State Railways during the war; their reserve stocks were used up on military works during 1914 and 1915, and they will not recover for some years from the overwork and arrears of maintenance. In order to economise rolling-stock and coal, the ordinary train service was greatly reduced, and, though it has now been in a considerable measure restored, further improvement will not be possible for a considerable time.

Fares and freight rates have been largely increased to meet the enhanced cost of labour and fuel, but the quantity of traffic has not been appreciably reduced by this measure.

The following table shows the receipts and expenditure of the State Railways during the years 1914–15 to 1918–19 (April 1 to March 31), as well as the number of passengers and tons of goods carried, the train kilometrage, and the cost and earnings per train kilometre:—

—				1914–15.	1915–16.	1916–17.	1917–18.	1918–19.
Receipts	££			3,138,555	3,667,932	4,379,977	4,919,248	6,888,303
Expenditure	££			2,070,077	2,159,588	2,966,755	3,149,629	3,610,915
Passengers				22,424,159	25,907,831	30,867,749	26,918,964	26,931,754
Goods	Tons			5,317,248	5,284,020	6,392,965	5,726,763	5,388,226
Train kilometrage				14,636,283	15,547,882	17,172,712	15,813,527	14,923,992
Cost per train kilom. ..	milliemes			141	139	173	199	242
Earnings per train kilom.	milliemes			214	236	255	311	462

During the disturbances of March and April 1919 the railways suffered severely. The lines were cut in about 200 places and 63 stations suffered damage to greater or less extent. The cost of repairing the actual damage to works which has not been so heavy as at first expected will amount to approximately £E. 44,000, to which must be added some £E. 22,000 for repairs to telegraphs. Owing to the scarcity of materials, repairs have taken a long time to carry out, and much inconvenience has thus been caused. The actual loss to the railway receipts owing to the entire or

partial suspension of public traffic may be estimated at about £E. 400,000. The transport of the 1919 onion crop was very seriously interfered with, and a large part of the crop was lost.

A general strike took place during the 3rd, 4th, and 5th of April, and from the 7th to the 22nd of the same month, and during these periods the few trains which ran were worked by the European staff. The general unrest seriously affected the labour of the locomotive department; the workshops were practically empty during the month of April, the few workmen attending being mostly Europeans.

The attitude of the British and European staff during the troublous time was generally satisfactory, and many of them have worked loyally under very trying conditions. Inclination or intimidation caused the mass of the Egyptian staff to refuse work and participate actively in the strikes; but the Egyptian platelayers generally worked, under protection, when required to make good damages, and the upper grades usually remained at their posts and worked when called upon.

Later in the year, in anticipation of a possible renewal of strikes, the Administration published a call for volunteers, and opened a volunteer employment office. The response was good, and between the 1st and 15th November 2,339 names were registered, of which 1,953 were Egyptians. Vacant posts are now to some extent filled from these volunteers.

At the same time the Administration has made every effort to relieve the hardships caused by the higher cost of living; wages have been raised, working hours reduced, and a co-operative society formed from which the staff have been able to obtain comparatively cheap supplies of food and other necessities. The effect of these measures has been satisfactory.

The resumption of commercial relations consequent on the termination of the war has led to a large influx of imports viâ Gabbary and viâ Port Said, and much difficulty is felt in meeting demands for waggons, especially at the former port. The same difficulty was experienced in transporting the cotton crop of 1919, a large part of which was conveyed to Alexandria by water.

Owing to the shortage of materials no renewals have been effected in the permanent way, but 150 kilom. of track are now on order; orders have also been placed for locomotives and rolling-stock, and a certain amount of rolling-stock is being built locally with successful results.

The following table gives the probable financial results for the year 1919-20 for the State railways, telegraphs and telephones as compared with those of the previous year :—

—	From April to December 1919.	Approximate for January, February and March, 1920.	Total, 1919-20.	Total, 1918-19.	Difference.
	£E.	£E.	£E.	£E.	£E.
Railway earnings ..	4,919,123	1,911,701	6,830,824	6,888,303	— 57,479
Railway expenditure ..	3,491,384	1,563,795	5,055,179	3,610,915	+ 1,444,264
Railway earnings, net ..	1,427,739	347,906	1,775,645	3,277,388	— 1,501,743
Telegraph earnings ..	201,317	67,106	268,423	237,726	+ 30,697
Telegraph expenditure ..	170,195	56,732	226,927	166,676	+ 60,251
Telegraph earnings, net ..	31,122	10,374	41,496	71,050	— 29,554
Telephone earnings ..	153,823	51,274	205,097	251,005	— 45,908
Telephone expenditure ..	135,462	45,154	180,616	139,511	+ 41,105
Telephone earnings, net ..	18,361	6,120	24,481	111,494	— 87,013

The estimated capital account on the 31st March, 1920, including stores in stock will be £E. 30,188,835.

The damage done to the southern section of the auxiliary railways of Upper Egypt during the riots of 1919 was not great, but the lines in the northern section had to be closed for passenger and goods traffic from the 17th March until the 1st

July, with an estimated loss in earnings of some £E. 9,700. The estimated gross earnings for 1919 to 1920 are £E. 70,291, against £E. 97,290 in the previous year, and the estimated net earnings £E. 1,863.

The gross receipts of the Western Oasis Railway for 1919 to 1920 are estimated at £E. 5,788 gross and £E. 167 net. Only one train a week in each direction runs on this line, and goods are conveyed by special train as required.

The following table shows the estimated financial results of the working of each of the light railway systems for 1919-20 compared with those of 1918-19 :—

	Kilometres of Line open to Traffic.	Gross Receipts, 1919-20.	Gross Receipts, 1918-19.	Net Receipts, 1919-20.	Net Receipts, 1918-19.
		£E.	£E.	£E.	£E.
Egyptian Delta Light Railways, Limited	901	390,000	356,892	160,000	172,845
Société anonyme des Chemins de Fer de la Basse Égypte (old system)	102	73,250	63,621	30,302	24,470
Société anonyme des Chemins de Fer de la Basse Égypte (new system)	104	44,535	37,109	26,586	18,520
Fayyûm Light Railway Company ..	158	55,000	50,061	16,500	22,203

55. Post Office.

The amount of correspondence handled by the Post Office declined gradually from 81 million letters, &c., in 1914, to 72 million in 1917, but rose to 84 million in 1918 and 91 million in 1919. Security was on the whole very satisfactory, only twenty-five registered letters being lost between 1914 and 1918 out of a total of 22 million which passed through the post offices. In 1919, excluding letters pillaged in the attacks upon the railways, six registered letters were lost out of a total of nearly five million.

The number of parcels dealt with increased year by year from 890,000 in 1914 to 1,727,000 in 1918; this is attributable to the fact, which I have mentioned elsewhere, that owing to the comparative regularity and cheapness of the parcel post, many traders took to importing their goods by this means. In 1919 1,432,495 parcels were dealt with. The cash-on-delivery parcel service with Great Britain expanded throughout the period of the war, 10,742 such parcels, of a value of £E. 18,709 being received in 1914, and 44,281 of a value of £E. 179,621 in 1918. Possibly owing to the withdrawal of troops from Egypt a notable decline occurred in 1919. A direct parcels service from the United States has now been established.

In the cash branches of the post office the value of inland money orders issued increased from approximately 5 million pounds in 1914 to approximately 8 millions in 1918. Foreign money orders, after a slight decline in 1915, increased very heavily in 1917 and 1918, principally owing to remittances to India being sent through the Post Office for the sake of advantage in exchange; in 1918 they reached a value of £E. 3,374,737. The issue of British postal orders decreased until 1918, when there was a recovery, but the value in that year was only half that of 1914; the value of those received, on the other hand, was increased chiefly by remittances in favour of British troops, from £E. 15,310 in 1914 to £E. 78,328 in 1918. Egyptian postal orders were inaugurated in 1915 by His Highness the late Sultan, and have clearly supplied a want, for they increased in value from £E. 90,000 in 1915 to £E. 285,600 in 1918. In 1919 all branches of the cash service showed a decrease in the number of transactions, though the total value of the orders dealt with, £E. 14,858,215, is slightly in excess of the preceding year. While the number of British postal orders issued rose by 7,500, the number paid declined by as much as 24.6 per cent. and amounted only to 99,166.

The Savings Bank suffered in August and September 1914 from the nervousness of depositors, but this was soon allayed when it became apparent that funds were forthcoming as usual. Special arrangements were subsequently made to allow redeposits, even if they exceeded the regulation amount of £E. 50. In 1915 deposits began to exceed withdrawals; by the end of 1917 the level of pre-war deposits was passed, and in 1918 deposits reached the sum of £E. 933,826, an increase of £E. 237,182 over the previous year. In 1919 the number of depositors rose from 211,970 to 224,759, and the amount to their credit for the first time exceeded a million

pounds, the exact figure being £E.1,052,255. The rural branch of the Savings' Bank has failed to gain the confidence or interest of the peasantry, for whose benefit it was instituted, and has almost ceased to operate.

The postal staff was reduced in 1915 from 3,096 to 2,928, but numbered 3,399 on the 31st December, 1919.

The loyal behaviour of the staff during the disturbances of March and April 1919 was warmly appreciated by the public, particularly in the districts affected by the destruction of the railways. No effort was spared to carry on the distribution of mails by all sorts of means: water, wheeled transport, riding animals, farmers' carts, &c., and the energy and initiative displayed by the Egyptian district superintendents was worthy of much praise. In the face of threatening and sometimes violent opposition the staff refused to strike (except in Cairo, where after sixteen days, the majority joined the other Government employees), giving as their reason that politics were not their business, but that their work was of international importance, although they were in sympathy with the general political movement.

In the course of 1919 the pay of the staff was improved to assist them in meeting the heavy increase in the cost of all necessities of life; the wages bill was thus carried from £E. 210,820 for 1918 to £E. 235,077 for 1919, and the amount paid in war allowances from £E. 54,824 to £E. 112,072.

Budgetary receipts in 1919 amounted to £E. 415,222, to which must be added credit given to other Administrations, £E. 75,000, making a total of £E. 490,222. The expenditure, inclusive of war allowances to staff (£E. 112,072) came to £E. 507,333, which with £E. 34,000 for services rendered to the Post Office by other Administrations, made a total of £E. 541,333, being an excess of expenditure over receipts of £E. 51,111. The total of values dealt with by the Administration during the year is estimated at £E. 59,867,000.

The losses sustained in the March disturbances amounted to £E. 14,450.

At the close of the year there were 2,501 post offices and stations throughout the country.

56. Ports and Lights.

The revenues of the Ports and Lights Administration from 1914 to 1919 have been as follows:

—	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£E.	£E.	£E.	£E.	£E.
Light dues	89,049	65,171	43,516	19,461	27,898
Tonnage dues, Alexandria	82,952	45,401	30,611	15,107	19,210
Accostage dues, Alexandria	19,661	9,985	7,560	4,503	6,771
Graving dock, Alexandria	3,474	11,536	9,800	11,259	11,853
Other receipts	130,421	18,623	24,034	18,903	27,312
Total	325,457	150,716	115,521	69,233	93,044

The marked diminution of the revenues of the Administration in the year 1915-1916 was due to the transfer to the Budget of the Customs Administration of certain sources of revenue which had produced receipts in 1914-1915 as follows: quay dues (import), Alexandria, £E. 62,069; quay dues (export), £E. 43,387; lease of land, Alexandria, £E. 10,446; and storage dues (Alexandria), £E. 4,915.

During the war Ports and Lights Administration was heavily engaged in naval work. Until the end of February 1916 the Administration, whose Director-General, Admiral Robinson, had been appointed Principal Naval Transport Officer for Egypt, carried out both naval transport duties and other naval work in Egyptian ports, such as the requisitioning of merchant steamers, dealing with detained enemy shipping, and the charge and conversion into transports, &c., of enemy prizes.

During this period 1,757 transports, of 11¼ million tons, and 203 men-of-war, of 876,000 tons, entered and left Alexandria Harbour; 1,239 transports and men-of-war, totalling over 8 million tons, transited the Suez Canal, and 965 transports, 43 hospital ships, 36 store ships, and 307 Admiralty colliers were dealt with at Port Said. Fifteen merchant steamers were requisitioned and chartered through the Ports and Lights Administration, which altered and equipped them for troop and horse transport. This Administration also converted five troop ships into hospital ships, and others for horse transport, made and laid out the defence for Alexandria

Harbour, and conveyed fifteen German prize ships from Suez or Port Said to Alexandria. It may be recorded that in the month of January 1916, 204 transports, totalling over $1\frac{1}{2}$ million tons, entered and left Alexandria, while on one occasion there were in that harbour no less than 137 steamers, of a total tonnage of 700,000 tons, and 77 sailing vessels.

In the year 1916-17, the Administration's workshops at Alexandria, in addition to their usual work, supplied labour costing £E. 23,870, and handled material to the value of approximately £E. 30,000 for the Naval Transport and Ordnance Services. The work included extensive repairs to a number of sloops, tugs, and transports, small repairs to 120 different ships, an important amount of ordnance work, and the salvage of the Steamship "Irthington."

In 1917-18 the cost of labour supplied and material handled was slightly less, but a variety of valuable work was done, including the conversion of several ships to carry troops and horses, large repairs to tugs and transport, the conversion of sailing vessels into lighters, the construction of 66 surf boats, the salvage of the steamship "Quarta," and the transformation of a sliding slip into a roller slip to meet naval requirements.

In 1918-19 the workshops executed some 1,200 orders, less than half of which were placed by the Ports and Lights Administration itself; with the diminution of the requirements of the naval authorities a large amount of work was undertaken for other Government departments.

The Harbour Works Department of the Ports and Lights Administration has been able to carry out the necessary maintenance of quays by repairing and renovating pavements, executing certain minor improvements; but new works have been delayed by the difficulty of obtaining materials. The most important new works which are in progress are at Suez, where very large harbour extensions are being carried out, chiefly in order to provide for the oil trade and the bunkering of oil-burning ships. These works were begun in July 1918, and by November of that year the yards were in full activity. The northern and southern sides of the petroleum basin have now been completed, and the lower parts of the southern breakwater and the two branches of the western breakwater have been carried to the level of low tide; the dredging of the entrance channel and of its prolongation into the inner part of the harbour is approaching completion. Other new works at Suez have been the construction of a small quay near the Custom house in Suez Creek, and of a slip for hydroplanes. At Alexandria the important constructional work of Quay E and K has been continued; Quay E has now been completely filled up, the quay walls finished, and bollards and risk ladders installed; two sheds will be built on this quay in the course of the present year. The exterior breakwater has been extended and reinforced, a platform has been laid on the timber quay breakwater, and in 1914 a new quay with sheds for the storage of nitrates was completed and opened to commerce.

57. Main Roads and Bridges.

The length of roads at present maintained by the Main Roads Department is 1,484 kilom. in Upper Egypt and 2,293 kilom. in Lower Egypt. All road construction, whether of a permanent or temporary nature, is carried out by this Department, which is also responsible for the maintenance of road bridges outside municipal areas. The estimated expenditure of the Department for 1919-1920 was £E. 127,304, besides which Provincial Council funds to the amount of £E. 96,391 were available for the construction of new roads.

In December 1919 this Department took over the Bridges Service, whose functions are the maintenance and working of the Nile bridges in Cairo and the designing of road bridges throughout the country.

58. Inland Navigation Department.

The Inland Navigation Department was constituted in May 1919. In July it took over the registration of boats from the Mechanical Department of the Ministry of Public Works; the number of boats registered between the 1st April and the 31st December, 1919, was 7,942, of which 900 were registered for the first time. An improved method of registration is now being considered.

The Department has carried out the transport of 14,000 tons of goods for Government departments and the British military authorities.

Apart from these activities the work of the Department has been chiefly of a preliminary nature. A system has been devised of recording the movements of all

craft navigating the inland waterways of the country, and the information thus collected is likely to be of considerable value to Government departments and to the commercial community. Statistics have been prepared showing the quantities of goods usually transported for the Government, and recommendations made for the control of such transport by the Department and for the acquisition of various craft. A scheme is being thought out for the general regulation of water-borne traffic, which is likely to include the improvement of locks and bridges, the dredging and amelioration of waterways, and the provision of junctions at various points in order to develop thorough communication. Recommendations have been made concerning rates of freight by water, and a scheme prepared for an intensive use of water transport to meet requirements in case railway communications should be interrupted.

59. Mechanical Transport Department.

The Mechanical Transport Department was created in the summer of 1919 with a view to centralising the control of Government vehicles. In spite of difficulties encountered in engaging a competent technical staff, the Department has gradually assumed the duties of providing and repairing the transport of the various Government administrations throughout the country, and organised a system of furnishing and controlling running supplies. The Department is endeavouring by degrees to standardise the types of vehicle in use. The work of the repair shops doubled between August and December 1919, and specifications and drawings are in hand for new repair shops, stores, offices, and garages.

60. Air Service.

An air law is being drawn up on the lines of the International Air Convention. It is proposed that air police, customs guards, &c., should be provided by the Royal Air Force on repayment. There is not enough work as yet to justify the creation of a civilian service.

VIII.—WAKFS.

61. General.

Lord Kitchener, in his report on Egypt for 1913, was able to announce the conversion into a Ministry of the Wakfs Department, the maladministration of which had been a long-standing subject of controversy and anxiety. The establishment of the Ministry upon a sound financial and administrative footing has been a task of no little difficulty for successive Ministers, and it is a matter for satisfaction that the last six years have been years of gradual but solid progress.

At the end of the financial year 1914 to 1915 the Ministry was still in severe straits, and its difficulties had been increased by unavoidable delays in the collection of rents from tenants who, like all small property-owners in Egypt, were labouring under the economic stress of the earliest period of the war. At this date the liabilities of the Ministry amounted to £E. 136,784, and the necessity was foreseen of having to raise a loan of £E. 150,000 from the National Bank. But a vigorous effort was made to restore the situation, and after two and a half years' strenuous work the Ministry had not only succeeded in paying off its liabilities, but had spent £E. 120,000 in remunerative reclamation and improvement of its lands.

The Wakfs Budget for 1917 estimated for a revenue of £E. 534,000, or an excess of £E. 132 over expenditure, and since that time, aided both by the greatly increased value of land and by higher administrative efficiency, the Ministry has been distinctly prosperous.

The following tables show in a summary form the estimated revenue and expenditure of the Ministry of Wakfs for the financial years 1919 and 1920.

REVENUE.

	1919.	1920.	1919.	1920.
Revenue of wakf property—				
Rent of buildings	95,000	106,000		
Rent of fallow land	6,500	6,500		
The hikr property	4,000	3,400		
Rent of agricultural lands ..	294,909	418,200		
Crops	55,000	51,740		
Payments by the Ministry of Finance	29,800	46,360		
Transfer of revenue due to the Khairia wakfs from the Ahlia	24,000	35,000		
Transferred from the wakfs of Haramein to Khairia wakfs	7,500	7,500		
			516,909	680,000
General revenue	..	..	103,000	140,000
Amounts due from previous year ..	..	..	65,000	35,000
Grand Total		..	685,000	855,000

SUMMARY of Expenses.

Description.	Year.	
	1919.	1920.
Administrative expenses	158,775	184,000
Expenditure on lands and buildings	149,598	134,200
Expenditure on zawias, mosques, &c.	113,704	115,984
Religious and educational institutions	71,324	84,516
Kuttabs	30,000	34,800
Tikias, &c.	25,574	33,500
Charities	46,494	50,000
War allowance	87,500	200,000
Loan (from the finance)	Nil	10,000
Reserve for unexpected expenses	Nil	3,000
	682,959	850,000
Excess of revenue	2,031	5,000
	685,000	855,000

62. Preservation of Arab Monuments.

After the retirement of the late Herz Pasha in 1914, the organisation placed under the Committee for the Preservation of Arab Monuments was divided into two branches, the Arab Museum and the Works Department, and each branch has been able to devote itself with greater energy to its specialised activities.

The Budget of the Works Department has been increased, and stood in the year 1919-20 at £E. 14,600, but, as will be seen, the Department has in recent years very considerably extended its field of operations, and it is still much in need of funds. The question of personnel, which has been during the war, and still is, inadequate to the wider scope of the Department, presents difficulties which are only likely to disappear with a reorganisation of the cadre calculated to provide improved prospects for the staff, and to place at the disposal of the committee a sufficiency of scientific and archæological knowledge.

During the period under review the Committee had made an important change of policy. It had been the practice not to select as worthy of preservation any monument which, though it might be of artistic, archæological, or historical value, belonged to a private Wakf, or even to a Wakf without revenue, or was in an advanced state of disrepair. In 1918, however, a law was passed which, discarding the hitherto preponderant economic considerations, declares to be worthy of preservation all

buildings of artistic or archæological interest dating between the Arab Conquest and the reign of Mohammed Ali Pasha, and specifically includes Coptic ecclesiastical buildings, and the Roman fortress of Kasr-esh-Sham in Old Cairo. It is evident that when the actual list of selected buildings is published, and their owners see limitations imposed upon the disposal of their property, the Committee will be served with claims for indemnities which will very seriously drain their slender resources.

During the past six years the committee, working on a town-planning scheme elaborated in conjunction with the Cairo City Service of the Ministry of Public Works, has carried out a series of expropriations designed to disengage twelve important buildings.

The committee has spent in the same period £E. 40,000 on the preservation of some ninety monuments and on a large number of minor repairs. The most important work has been the restoration of the famous mosque of Ibn Tulûn (A.D. 879) which is still in progress, and an account of which may be found in the "Burlington Magazine" for November 1919. The clearance and restoration of the Mash'had of As-Sayyida Rukayya (A.D. 1133) brought to light a wooden cenotaph of remarkable beauty and a Kufic inscription and early decorations of archæological importance.

The late Sultan was particularly interested in the restoration of the mausoleum of Sultana Shagarat-ad-Durr (A.D. 1250), and the dilapidated modern oratory which adjoined it has been replaced by a small mosque, which is designed in the style of the fourteenth century, and is an elegant achievement. Other important works have been in progress at the mosques of As-Saleh Talaya (A.D. 1160); Az-Zahir Baibars Al Bundukdari (A.D. 1269), which was used as a slaughter-house by the army of Bonaparte, and recently by the British army of occupation, and where the suggestion of Mr. Stanley Lane Poole, contained in Annex No. 5 to Lord Cromer's report for 1895, that the great court should be turned into a public garden, has at last been put into execution; Sultan Kalaûn; Emir Al Malik Jawkandar; Al Moayyad; Kadi Yehia Zein ad-Din; and at the mausoleum of Zein ad-Din Yusuf.

Operations at the Kasr-esh-Sham, which had been suspended since 1904, were renewed in 1915, and important excavations have been made inside the great gate of the fortress. The Accademia dei Lincei has proposed to undertake the illustration of this monument, but it is doubtful whether the committee will be able to continue its expensive excavations in default of a special subsidy. Excavations are also being carried out at the remarkable group of tomb-mosques of Sultan Al Ashraf Inâl (A.D. 1450) and Emir Kwkumas (A.D. 1507).

Assisted by the advice of his Excellency Marcus Simaika Pasha and Mr. Somers Clarke, the committee has been engaged in important works of restoration in the Coptic churches of Amba Shenûda, Abu Sarga, Sitt Burbara, Kasriat-ar-Rihan, and Al Hadra, and has enlarged the Coptic Museum in Old Cairo. It is hoped to undertake the repair of a number of Coptic churches and convents of archæological interest throughout the country, if the resources of the committee are sufficient.

Among works of special historical interest I may mention that the committee, aided by a grant from the private Wakfs of his Highness the Sultan, has been able to save from destruction, and to restore, the Mussafir-Khana Palace. This palace, built in 1789, was purchased early in the nineteenth century by the family of Mohammed Ali Pasha, and was used for the entertainment of foreign Ambassadors and missions; it was the birth-place of the Khedive Ismail. The eighteenth-century house of Khatkhûda Ibrahim as-Sinnâri was occupied by the Commission des Arts et des Sciences of the French expedition of Bonaparte. In 1916 M. Gaillardot Bey proposed to the committee that this house should be used as a museum and library for the period of the French occupation of Egypt and Syria, and offered as a nucleus for the museum a valuable collection of objects and documents which he had formed in the course of forty years. The proposition was accepted, and the house has been adapted to its new purpose.

THE SOUDAN.

Enclosure 2 in No. 1.

Major-General Sir Lee Stack to Field-Marshal Viscount Allenby.

My Lord,

Khartoum, April 25, 1920.

I HAVE the honour to forward, for your Lordship's information, my report on the finances, administration and condition of the Soudan for the period 1914-1919.

I have, &c.

LEE STACK, *Major-General,*
Governor-General of the Soudan.

I.—INTRODUCTORY.

MUCH of the information in this report for the period of the first two years of the war is taken from reports which were supplied to Sir Reginald Wingate before his departure for Cairo in December 1916 to take up the appointment there of His Majesty's High Commissioner for Egypt.

Sir Reginald Wingate joined the Egyptian army in 1883 and served with it practically without a break until he succeeded Lord Kitchener as Sirdar and Governor-General in December 1899. Throughout this time he was closely and continuously associated with Soudan affairs, and when Lord Kitchener left for South Africa there was probably no man living with so wide a knowledge of the country and its problems. His term of office as Sirdar and Governor-General lasted till the date of his appointment as High Commissioner on the 1st January, 1917. Under his rule the Soudan developed from the state of desolation to which the Mahdist rule reduced it, into a peaceful land, inhabited by a contented people. A pre-eminent share in the credit for this transformation must be awarded to him.

His personal influence in the country was remarkable. There was hardly a man of note in the Soudan who was not well-known to him, and prepared to give him his confidence as a friend. The value of this capacity of his for getting the confidence of the people cannot be over-estimated when it is considered how newly escaped the people were from a period of degrading oppression, and how little reason they had within the memory of man to think of their rulers other than as their enemies. When he left the Soudan he carried with him the regrets and the good wishes of all. Those who have carried on the administration after him on the lines he laid down have good cause to thank him for the legacy of loyalty and tranquillity which he left behind him, and which is a convincing testimony, if any were needed, to the trust and respect which his unfailing interest in their welfare had inspired in all classes of the people.

The outbreak of hostilities between Great Britain and Austria necessarily severed the connection of Sir Rudolf Von Slatin Pasha with this country.

His unique association with the Soudan from the time he entered the Khedive's service in 1878 up to his escape from the hands of the Khalifa in 1895 is a matter of history. His intimate acquaintance with the country and of its inhabitants was of the utmost value to the Intelligence Department in Egypt after that time up to and particularly during the re-conquest in 1896-7-8. In 1901 he was made Inspector-General of the Government, and from that time until August 1914 he was the Government's principal adviser on all question that concerned native affairs. The value of his insight and experience in the establishment of a civilised Government in this country cannot be too highly estimated. It may safely be said that the task could not have been achieved with the same smoothness and facility but for his presence. His many friends feel the utmost regret at the unhappy turn of political events that made it impossible for him to return to the Soudan.

II.—GENERAL AND HISTORICAL.

The general situation in 1914 was briefly as follows:—

A territory nearly a million square miles in extent, with a scattered population of about 4,000,000, was governed by about 110 British officers and officials (excluding technical staff) distributed over fourteen provinces. The country roughly divides itself into two sections: the northern, inhabited by Arab tribes,

riverain or nomad, and the southern by negroid Central African tribes, less civilised and less closely administered. The military garrison consisted of about 14,000 men of the Egyptian army, composed of Egyptian, black and Arab regular units scattered in detachments over the country, with headquarters in Khartoum, where there was also a small British force consisting of a battalion of infantry and a detachment of garrison artillery.

From the point of view of productivity the Soudan may be described as consisting of three zones, the northern being the desert region where cultivation is confined for the most part to a strip along each bank of the Nile artificially irrigated, but where the desert pasture lands support large herds of sheep and camels belonging to nomad tribes. The central zone is the fertile belt which includes the rainlands of Kassala, the Gezira Plain, and the gum forests and pasture lands of Kordofan. This belt is watered by a regular annual rainfall, varying nevertheless greatly from year to year in amount. Through the centre of this belt flow the Blue and White Niles enclosing the Gezira or island plain. These rivers are but little used for cultivation, the people depending almost exclusively on the rains.

The southern or equatorial belt is probably the richest of the three, but its development is handicapped by lack of communication over the enormous distances to be traversed, the slender nature of the administration, and the indolence and lack of enterprise of the majority of the negroid tribes.

1914 was a bad year for the north and centre of the country. The 1913 rains were scanty and the Nile flood abnormally low, so that the supply of grain (millet) was very short, and famine conditions appeared in several districts of Dongola, the Blue Nile and White Nile provinces. In these districts, during the period of distress from May till November, the work of the administration was centred on famine relief measures. The situation was greatly restored by the importation of large quantities of millet from India. This step made a deep impression on the natives, which was not without its effect during the critical time of the war when they were called upon to produce supplies for export to Egypt for the use of the British troops.

Rains and flood, however, in the autumn of 1914 were excellent, and the people, busy with the prospect of a good season, paid little heed to the outbreak of war. Those religious and tribal leaders who were capable of appreciating the issues involved offered expressions of loyalty and confidence, and the only anxiety was to know what would be the effect of the imminent breach with Turkey on a people composed principally of Moslems.

Meanwhile several necessary precautions were taken. A censorship was established. The garrison of certain posts were strengthened and a more frequent and effective system of patrols instituted, particularly on the Red Sea Coast and the Abyssinian frontier. Martial law was reaffirmed, and legislation was introduced to strengthen the hands of the administration in dealing with emergencies, and to prevent trading with the enemy.

Any anxiety the Government may have felt proved to have been only partially founded. The actual outbreak of hostilities with Turkey caused no excitement, and messages were received from all over the country affirming the loyalty of the people and their trust in the Government.

The one region affected by the entry of Turkey into the war was Darfur. Ali Dinar, the Sultan, was persuaded that the Soudan Government was not strong enough to deal with him, and that his chance of cutting himself free from our suzerainty had arrived. After several defiant letters he formally renounced his allegiance. Further, at the direct instigation of the Turkish Mission to the Sennoussi he started to plan an invasion of the Soudan to be carried out simultaneously with the Sennoussist attack on Egypt.

It was not convenient to take action against him immediately, but the situation was secured against the Sennoussi by the establishment of a cordon of native irregular posts to prevent communications between the Sennoussi country and the Soudan, and to intercept any caravans of arms that might attempt to pass along the Arbain road to Darfur.

At the beginning of 1916 the attitude and warlike preparations of Ali Dinar were such that they could not be neglected without running the risk of alienating the loyalty of our western tribesmen, and thus starting disaffection which might run through the whole country. Accordingly a force was concentrated at Nahud, in Western Kordofan, by the middle of March, and operations were initiated which resulted in a crushing defeat to his forces on the 22nd May, and terminated in the death of Ali Dinar himself on the 6th November, 1916, and the occupation of his country.

This success led immediately to an opportunity for co-operating with the French Government in an expedition into the country north of Darfur to deal with the marauding Guraan tribe whose leader, one Mohammed Erbeimi, had been for some years a nuisance both to the French and to ourselves. Erbeimi's men were dispersed and he became a fugitive.

Good progress has since been made with the settlement of Darfur, which now ranks as one of the provinces of the Soudan. The new administration has proved acceptable to the inhabitants.

The western frontier of Darfur has been settled by the Peace Conference, but the settlement has at the moment of writing yet to be ratified. Preparations are being made for the occupation of the territory assigned to the Soudan and for the commencement of the work of the Boundary Commission which will delimit the frontier. It will be satisfactory both to the French local authorities and to ourselves to have our respective spheres finally settled. The present indefiniteness gives rise to many minor difficulties, and it speaks well for the tact and good sense of officers and officials of both nationalities that points of difference are so amicably disposed of.

Another of the side issues of the war which involved the Soudan Government was the revolt of the tribes in Arabia against the Turks. The Soudanese were interested and sympathetic, but did not seem specially concerned, looking on the Holy Places of the Hedjaz as being religious rather than political centres.

The movement broke out in 1916, and a small force of Egyptian troops was sent in June of that year to co-operate with the forces of the King of the Hedjaz.

The troops were first employed in the operations against Taif, and providing garrisons at Yembo and Rabegh. Afterwards, when these places were evacuated in consequence of the advance of the Shereefian army, they were transferred to Wejh and Akaba.

Mobile columns were also organised which carried out frequent raids on the Hedjaz railway and telegraph lines, and were successful in causing considerable damage to those services.

In addition to the above troops, the Egyptian army provided officers and non-commissioned officer instructors to assist in training the Shereefian forces, and also large quantities of supplies, guns, rifles, ammunition and other war material.

The troops were withdrawn from the Hedjaz in December 1918.

The campaign in Palestine concerned the Soudan in that it made large demands on our resources in millet, cattle and camels, which are referred to later in this report.

Certain units of the Egyptian army were lent for service in Palestine and on the lines of communication.

Externally the war did not touch the Soudan at any other point, except indirectly in the south, where a garrison was provided at one time in 1916 for the northern districts of Uganda, all the available troops in Uganda having been drawn off to the south to meet a possible menace from German East Africa.

Meanwhile the administration proceeded smoothly and without interruption. There have been local disturbances, which may have been instigated or encouraged by intrigue of enemy origin. A short account of the incidents of this nature that have taken place is given in the section on administration.

Apart from this the country has been peaceful and contented, and has made considerable progress.

The Soudan received the honour of visits from their Royal Highnesses the Prince of Wales and the Duke of Connaught in 1916 and 1917 respectively. These visits were very warmly appreciated by the people. They served once more to mark the sympathetic interest of His Majesty the King and the Royal Family in the concerns of the Soudan, and were on that account of high value to the administration.

An account of the general events of the war which affected the Soudan would be incomplete without a reference to the death of Lord Kitchener. By reason of his long connection with the Soudan, his outstanding personality, and his well-known sympathy for the country, his name was a household word among the people, and the news of his unhappy loss was received with unaffected sorrow. A memorial service was held in the Cathedral in Khartoum and was attended by a large gathering, representative of every class of the native community.

The chief preoccupation of 1919 was the unrest in Egypt, which broke into open disorder in March. For a time considerable inconvenience was caused to the Soudan. Communication with Cairo could only be effected by the Red Sea cable to Suez, and

by air from Suez to Cairo. Freight traffic by the Nile was stopped, and a considerable loss of trade was involved.

A small force, composed of detachments of British, Egyptian and Soudanese troops, was sent to assist in restoring order in Upper Egypt. Detachments of this force went as far as Keneh, and established communication with the troops sent from the north.

The first effect of these disturbances on the considerable Egyptian community in the Soudan was to make them anxious as to the safety of their families and property in Egypt. This was the predominant feeling. There were, as was only to be expected, many who sympathised with the Nationalist movement and fretted at their lack of opportunity to give some open indication of their sentiments. The bulk of them, however, had the good sense to see that they could serve no useful purpose by making demonstrations, so that the critical period passed without giving rise to any incident worth recording. Latterly a subscription was started in aid of those who had suffered during the disturbances. This was largely supported, and was an effective and reasonable method of signifying that Egyptians in the Soudan were not indifferent to the unfortunate events that had taken place in their own country.

The Soudanese themselves, except for the fact that they felt the loss in trade caused by the interruption of communication, took only a spectator's point of view in the movement, not feeling themselves concerned in the aspirations of Egyptian nationalism.

As regards internal affairs, there has been during the past year some anxiety as to the food supply; the Nile flood was poor and the rains unsatisfactory. In consequence during the summer it became very difficult to buy millet, particularly in the towns. It was also impossible to meet the shortage by import from other millet-producing countries, such as India, as there was no millet available for export. Fortunately the British Expeditionary Force in Egypt had a quantity of millet for disposal from their surplus stores. Some thousands of tons of this were purchased and distributed in the centres most in need at a moderate price. This tided over the bad time in the summer. As soon as it was seen that the autumn rains were fair and that the harvest of 1919-20 would be a moderate one, merchants and others who had been holding up grain released their stocks and the situation became easier.

Apart from this the general situation of the country has been satisfactory. The commercial people and all who have animals and produce to sell have continued to do extremely well.

Public security has been good except for three events, a fanatical outbreak at Kassala, an attempted "Mahdist" movement on a small scale in Sennar province and a condition of unrest among a section of the Dinkas in Mongalla province, in the course of which two British and one Soudanese officer unhappily lost their lives. Each of these incidents is described later on in this report in the section dealing with the province where it took place.

The victory of the allies having been regarded throughout the war by the Soudanese as a foregone conclusion, the armistice, and subsequently the signature of the peace terms caused little general comment, though a considerable number of congratulatory messages and telegrams were received. A delegation of Soudanese notabilities went to England to congratulate His Majesty on the successful termination of the war, and were greatly impressed with the welcome they received and with all that they saw in the course of their visit.

Administration has become easier. New candidates, badly needed for vacant posts, have become available, and it has been possible to replenish partly both the technical and administrative staffs. It is hoped that still further progress will be made in 1920 in this respect, but the gap of five years in which it has been impossible to train men to the service is bound to have its effect for some time to come.

Affairs on the frontiers call for little notice. I greatly regret that we have been unable to accede fully to the requests of the Eritrean Government—with whom our relations have continued to be of the most cordial nature—for supplies of millet. We have done what we could, and large quantities have been sent, but we have been from time to time obliged to refuse applications for permits to export owing to our own shortage.

Conditions in Abyssinia are still unsettled, and the state of the frontier leaves much to be desired. On the border between Kassala and Abyssinia there is nothing to complain of, but in southern Sennar certain semi-Arab chieftains who live nominally under the jurisdiction of Abyssinia are constantly embroiling themselves

with and harassing the villages on our side, while in Mongalla a succession of elephant-hunting parties are a constant menace. On one occasion a small party even penetrated to the west bank of the Nile. The difficulty of dealing with these people by military action is very great.

An important step was taken last winter when His Majesty's Government sent a mission under Majors Darley and Athill to Maji to enquire into the responsibility for these raids, and the information which they obtained has been of great value in assisting our representations to the Abyssinian Government.

Ultimately, however, the only sound method of preserving order on the frontier is to have a close administration established in even the remotest districts. But for a variety of reasons, which need not be detailed at length here, progress is bound to be slow in this respect. Little by little our control is extending itself eastwards from the Nile in the southern Soudan, but for the present, unless the Abyssinian Government can exercise a more active control over their frontier chiefs, we cannot expect an entirely satisfactory state of affairs.

III.—FINANCE AND ECONOMICS.

1. General.

The Financial Secretary (Colonel Sir E. E. Bernard, K.B.E., C.M.G.) in his note on the financial situation, has taken 1913 as the most convenient year with which to begin his account of the financial development of the Soudan during the war, because apart from the special conditions of that period, in that year the Egyptian Government ceased to make any subvention to the Soudan in aid of its civil expenditure, and the Soudan Government has since had to rely on its unaided resources to make both ends meet.

The amount of this subvention, which started at £E. 156,000 in 1899 and rose to £E. 268,000 in 1902, had gradually been reduced until it stood at £E. 163,000 in 1912. In 1913 a new settlement of the financial relations between Egypt and the Soudan was arrived at. It was decided, on the one hand, to discontinue the contribution paid by the Egyptian Government to the Soudan, and on the other to credit the Soudan with the Customs dues collected in Egypt on goods coming to and going from the Soudan which had previously been collected and retained by Egypt.

The effect of this settlement was that the contribution by Egypt for civil and military expenditure which in 1912 stood at £E. 335,000, of which £E. 163,000 was on account of civil expenditure and £E. 172,000 on account of the army, disappeared from the Revenue side of the Budget, while the Customs receipts were increased by £E. 85,000, this being the figure then estimated as the equivalent of the duties collected in Egypt. At the same time the sum of £E. 172,000 paid to the Egyptian Government for the maintenance of the army in the Soudan was removed from the expenditure side of the Budget, since it was recognised that the method of accounting, by which the sum of £E. 172,000 appeared on both sides of the Budget in order to bring out the fact that a part of the Egyptian military expenditure was properly chargeable to the Soudan, was complicated and liable to misapprehension.

The suspension of the Egyptian contribution could not have taken place at a more inopportune time. 1913 was the second year in succession in which the Soudan had suffered from low floods and poor rains. Business suffered from the general depression and from the feeling of unrest brought about by the war in the Balkans, and the value of exports fell from £E. 1,373,000 in 1912 to £E. 1,185,000 in 1913. The year 1914 was worse. In fact from the point of view of revenue and of the economic situation, it was perhaps the most difficult year experienced in the history of the Soudan. The Nile flood of the previous year had been one of the worst on record, and the rains, which had completely failed in several districts, were scanty in almost all the provinces. In August of that year the war in Europe broke out, and trade, which had been suffering from the effects of the prolonged agricultural depression, received a further set back. The year 1915 was generally not much better, though the country was well stocked with food and agricultural produce consequent upon the abundant rains of the previous autumn and a high Nile flood. Owing to war conditions and the scarcity of shipping, there was at first little demand for produce for export, and the cultivators, who form the bulk of the

population, while they had enough to eat, were short of ready money. The settlement of arrears consequent on the previous bad years and the payment of current taxes constituted a heavy strain upon their resources.

Nevertheless, in spite of all these adverse conditions and the cessation of the payment of any subvention by Egypt, it was possible, through the adoption of stringent measures for the reduction of expenditure, to close the accounts without a deficit, and in fact with small surpluses, as shown in the following table :—

Year.				Revenue.	Expenditure.	Surplus.
				£E.	£E.	£E.
1913	..	..	..	1,568,352	1,533,065	35,287
1914	..	..	..	1,543,549	1,531,346	12,203
1915	..	..	..	1,495,227	1,463,934	31,293

It should be mentioned, in connection with these figures, that the expenditure of the Government, which had been growing steadily with the development of the country, and rose from £E. 230,000 in 1899 to £E. 1,533,000 in 1913, had to be curtailed in 1914 and in 1915 to a greater extent than would appear from the above figures. The great rise in the price of labour, coal, and all necessary material constituted a heavy and unavoidable strain on the Budget, and curtailment could only be effected by reductions amongst the staff, the suspension of all promotions and increases of pay in 1915, the cessation of all new works and the retrenchment of expenditure in all directions possible.

In 1916 a period of comparative prosperity set in. The rains of the previous autumn were again abundant, the flood was good and the country practically immune from insect pests. Moreover, the influence of the war, which had such a depressing effect on trade in 1914 and 1915, began to operate in the reverse direction, and a great impetus was given to the export trade of the country through an unprecedented demand for Soudan products. The presence of a large body of British troops in Egypt requiring grain and livestock, the demand created on the Arabian coast for Soudan millet, and in England and Allied and neutral countries for cotton and gum, enabled all these commodities to be disposed of freely to the great advantage of the country as a whole.

These favourable factors continued to operate in 1917 and 1918, and although the rains in 1918 were indifferent and the Nile low, the economic conditions of the country did not suffer any real setback in 1919, and the people have been able to draw on the wealth accumulated during the previous three years.

The following table* of the value of the external trade of the country, exclusive of specie, since 1915 shows the extent of the revival which took place after 1915.

	£E.					
1913	...	...	...	...	...	3,388,617
1914	...	...	...	...	...	2,999,740
1915	...	...	...	...	...	3,412,556
1916	...	...	...	...	...	5,176,983
1917	...	...	...	...	...	6,831,298
1918	...	...	...	...	...	8,234,966
1919	...	...	...	...	...	7,835,314

The falling off in 1919 is due, as already mentioned, to the decline in the export trade consequent upon the low Nile and the poor rains of the previous autumn, and also the dislocation of communications with Egypt during the disturbances in the spring.

* The table at the beginning of the section on trade shows how these figures are made up.

The following table shows how this revival in the prosperity of the country has affected the various heads of revenue:—

Classification.	Receipts.						
	1913.	1914.	1915.	1916.	1917.	1918.	1919.
<i>1. Provinces.</i>	£E.	£E.	£E.	£E.	£E.	£E.	£E.
Land Tax—							
(a.) Taxed land ..	45,078	30,447	29,219	46,564	59,000	63,247	42,650
(b.) Ushur (Tithe) ..	122,430	104,922	123,321	99,930	131,087	183,362	170,100
Date tax ..	16,380	17,692	12,361	22,718	25,706	22,703	21,300
Animal tax ..	81,599	92,335	79,108	105,774	116,619	141,848	148,950
Tribute from nomad tribes	30,059	24,147	22,918	36,918	39,167	42,667	36,100
Traders' tax ..	7,906	7,622	6,258	8,086	10,292	26,911	36,250
Royalties ..	89,897	70,733	68,252	82,093	104,126	144,442	128,300
Timber and firewood ..	31,273	30,295	24,686	17,314	19,464	66,973	79,100
Rent from Government lands and properties	31,701	20,918	33,077	22,843	61,540	41,259	32,000
Miscellaneous ..	54,805	60,923	56,821	57,616	64,850	80,630	76,000
Total ..	511,128	460,034	456,021	499,856	631,851	814,042	770,750
<i>2. Departments and Services.</i>							
Customs ..	186,837	189,864	174,932	233,243	220,236	249,095	328,000
Posts and Telegraphs ..	63,607	69,276	65,915	91,641	91,952	117,978	118,400
Railways and Steamers ..	701,389	726,555	689,518	902,479	1,078,275	1,256,516	1,278,000
Agriculture and Forests ..	723	397	1,149	19,858	30,330	4,245	7,100
Legal. ..	10,555	9,431	9,379	8,746	12,636	12,738	14,180
Veterinary ..	9,255	10,217	13,454	13,452	18,585	35,377	25,600
General Central Services	39,685	29,508	42,633	44,336	59,869	224,963	341,500
Other Departments and Services	45,173	48,267	42,226	44,245	51,621	59,735	66,970
Total ..	1,057,224	1,083,515	1,039,206	1,358,000	1,563,504	1,960,647	2,179,750
Grand total ..	1,568,352	1,543,549	1,495,227	1,857,856	2,195,355	2,774,689	2,950,500

It should be explained, however, that the increase in revenue is also due to various measures that have been adopted since 1916 to meet the increased cost of administration.

The expenditure on the railways, which is the largest revenue-earning department, rose in 1916 from £E. 382,300 to £E. 522,200, the cost of coal alone being £E. 182,600 as against £E. 74,800 in 1915. The price of Welsh coal reached in that year £5 10s. c.i.f. Port Soudan as against a pre-war price of £1 7s. In order to provide for a portion of the increased expenditure of the Government in that year a surtax of 10 per cent. on all goods rates was introduced, and the freight rates for animals on the Shellal-Halfa Reach and the railways between El Obeid and Khartoum were increased. The import duties on tobacco, tombac and alcohol were raised, as also the royalties on gum and senna Mecca. The additional revenue derived from all these measures amounted to about £E. 70,000, the remainder of the increased revenue in 1916 being due to the general expansion of trade.

The steady rise in the cost of all materials and stores and in the cost of living since 1916, has entailed increased provision for expenditure on all services, the grant of assisted passages and transport facilities to enable officials to take leave, the issue of war gratuities and improvement in the conditions of service and rates of pay. A war gratuity on a small scale applicable to junior officials only was first introduced in 1917. As time went on and the cost of living increased this war gratuity proved inadequate, and had to be gradually increased and extended to all officials of the Government. A permanent improvement in pay was found to be inevitable and an increase of 20 per cent. on all salaries, with certain reservations, was sanctioned with effect from the 1st October, 1919. The war gratuity at present is 40 per cent. of the official's salary, subject to a maximum of £E. 120 per annum, and the increase on salaries and war gratuity combined is limited to a maximum of £E. 300.

The expenditure incurred on war gratuities amounted to £E. 21,000 in 1917, £E. 144,000 in 1918, and £E. 316,000 in 1919. In 1920 the expenditure under this head is estimated at £E. 470,000, and the increase of 20 per cent. at £E. 220,000.

The following table, giving the index number of prices of certain articles at Khartoum for November 1919 as compared with the pre-war standard of prices, may be of interest in this connection :—

Classification.	Pre-war Standard.	Average Price in November 1919.
Dura	100	281
Butter (Samn)	100	234
Mutton	100	171
Beef	100	167
Coffee (Abyssinian)	100	204
Rice	100	300
Wheat flour	100	373
Tea	100	225
Sugar (quality "Ras")	100	344
Cotton fabrics	100	365
Petroleum	100	381

In order to meet the heavy increase in expenditure referred to above, additional revenue has had to be raised. The measures adopted in 1916 became totally inadequate, and fresh sources have had to be tapped.

The animal tax, which had been raised in 1916, was again increased in 1919, as was also the traders tax. The expansion of trade, the high prices obtained for camels, cattle and sheep and the large profits made by the trading community, fully justified the increased rates decided upon.

The traders tax was introduced in 1913, and until 1919 the rates had undergone no change in spite of the fact that they were admittedly low. Even now as amended they are still very moderate, being 4 per cent. on profits below £E. 100 per annum, 5 per cent. on profits exceeding £E. 100 but below £E. 500, and 6 per cent. on profits above £E. 500.

Nothing further could be done in the domain of direct taxation. Besides the animal tax and the traders tax, the Ushur (tithe) and land tax are the most important items of direct taxes. The yield from land tax is comparatively small, and where the tax is levied it is recognised to be sufficiently high. As to Ushur, the percentage of 10 per cent. is a recognised one, established by usage and tradition. For political as well as financial reasons, therefore, it is not considered advisable to introduce any change in these taxes.

In the domain of indirect taxation the field was wider. The excise duty on sugar introduced by Egypt in 1917 was levied on sugar exported to the Soudan, and the Soudan Government was credited with the duty on all such sugar. The amount derived from this duty amounted to about £E. 180,000, and was a great relief to the Soudan Treasury. In addition to this, and as the need for further funds was pressing, the Soudan Government constituted itself in 1919 the sole importer of sugar, leaving the distribution throughout the country in the hands of middlemen and retailers. This measure has enabled the Government, by a system of licences, to control the price of this commodity and effectually to prevent profiteering on the part of traders.

This arrangement on the whole worked satisfactorily, and in addition to the excise duty referred to above, it enabled the Government to make a further profit of about £E. 70,000 in 1919.

The permanent increase of 20 per cent. on salaries, however, and the raising of the war gratuity from 30 to 40 per cent., which involved an additional expenditure of about £E. 500,000 per annum, created a very difficult situation, and threatened to result in grave embarrassment to the Treasury. These measures had to be introduced with effect from 1st October last consequent upon similar action taken by Egypt. The difficulties of the situation were further increased by the abolition of the excise duty on sugar by Egypt, which involved a loss of £E. 180,000 to the Soudan Government. In these circumstances the fact that the Government was the sole importer of sugar proved of incalculable value. By adding to the sale price of sugar P.T. 2½ per kilog. the Treasury was able to recoup its loss over the excise duty and realise some £E. 157,500 in addition.

The second important measure adopted in the way of indirect taxation was the further increase in the railways and steamers rates. A surtax of ten per cent. on goods and animals had been introduced, as already stated, in 1916. This surtax was gradually raised with the rise of the cost of all materials, and especially of

coal. On the 1st January, 1917, it was raised to 20 per cent., on the 1st October of the same year it was raised to 30 per cent., and in September 1918 it reached 40 per cent. On the 15th January, 1920, it was increased, with certain reservations in favour of essential foodstuffs, to 100 per cent. The surtax on passenger fares was likewise raised from 50 per cent. to 100 per cent. from the same date. The amount anticipated to be derived from this last increase in 1920 is estimated at £E. 300,000.

Another measure which resulted in immediate and direct addition to the revenue was the increase in the tobacco duties.

In September 1919 the Egyptian Government revised the rate at which the duty was leviable, by raising them to P.T. 50 per kilog. on tobacco in leaf and P.T. 60 on manufactured tobacco and cigars. The duty on tombac was likewise raised from the same date. The rates in the Soudan in accordance with the procedure hitherto followed, were revised accordingly. The increased revenue anticipated to be derived from these rises is estimated at about £E. 40,000 in 1920.

The Soudan Budget in 1920 benefits also by the profits accruing from the note issue of the National Bank of Egypt, and credit has been taken for the sum of £E. 35,000 in the Budget for 1920 on this account.

The Soudan Government has thus managed to find funds for all the increased expenditure thrown on the Treasury during the period under review, in spite of the suspension of the contribution by Egypt. The annual budgets have been balanced without imposing hardships on the population or impairing the prosperity of the country, and since 1916 the final accounts have been closed with substantial surpluses. These surpluses have been passed to the Reserve Fund and utilised to meet some of the many and urgent demands for capital expenditure.

It must not be overlooked that a very large proportion of the additions made to the revenue, as described above, are of a more or less transitory nature, and that the annual budgets during the whole period have been framed on a war basis.

The Government has therefore considered it wise to strengthen its financial position by increasing the unpledged balance of the Reserve Fund to the maximum amount possible, and by setting aside out of the surpluses realised the largest possible amount towards the working cash balance required by the Treasuries.

The unpledged balance of the Reserve Fund has accordingly been raised to £E. 119,500, and a sum of £E. 100,000 has been set aside with a view to building up a working cash balance of at least £E. 450,000 as soon as the situation permits.

With a view to increasing production the Government have continued the allotment of funds for the completion of the scheme embarked upon in 1909 in the Dongola province for the irrigation of some 100,000 feddans by annual flooding on the basin system. The amounts allotted since 1913 amount to £E. 27,000.

In 1917 the urgent need to increase supplies of food in Egypt and the Soudan led to an understanding by which it was decided to combine the resources of both countries. In order to increase production as rapidly as possible in the Soudan, which depends mainly on rainfall, a number of areas in the Berber and Dongola provinces, amounting to about 19,000 feddans, were prepared and put under cultivation by means of pump irrigation. The money for this scheme, estimated at £E. 400,000, was advanced by Egypt on certain conditions as to repayment.

Of the various projects which have been studied for increasing production and developing the resources of the country the most important are the following:—

1. The irrigation of the Gezira Plain.
2. The irrigation of the Tokar cotton producing area.
3. The extension of the Soudan railway system.

With a view to carrying out the above works the Soudan Government have raised a loan of £E. 6,000,000.

It will be of interest to recapitulate here the history of this loan and the efforts made to bring the schemes to a successful issue.

In 1911 experiments in cotton growing were started at Tayiba on the Blue Nile near Wad Medani by the Soudan Plantations Syndicate acting on behalf of the Soudan Government. The object of the experiments was to ascertain, before the Gezira Canal project was embarked upon, whether cotton could be profitably grown on the land coming within the scope of the Gezira Canal project by local cultivators with the water which is available during the period of high Nile, viz., between the 15th July and the 30th March, or at the latest the 15th April.

The area on which the experiment was conducted amounted to 3,000 feddans, and was carefully selected as being as representative as possible of the soil which the Gezira scheme would eventually irrigate.

These experiments having proved conclusively that Egyptian cotton of the best quality could be grown commercially in that district, the execution of the Gezira irrigation scheme was sanctioned by Lord Kitchener and approved by Sir William Garstin, Sir Arthur Webb and Mr. McClure, who were appointed to advise on the proposals.

Work was accordingly commenced early in 1914 with funds advanced for the purpose by the National Debt Commissioners with the sanction of the British Treasury. This temporary accommodation of £500,000 was arranged in order that there might be no delay in proceeding with the work pending the flotation of a Guaranteed Loan.

In 1913 the British Parliament passed "The Government of the Soudan Loan Act, 1913," by which the British Treasury guaranteed interest at a rate not exceeding $3\frac{1}{2}$ per cent. on any loan raised by the Government of the Soudan for the purposes set out in the schedule to the Act, not exceeding in the aggregate an amount sufficient to raise £3,000,000.

The schedule to the Act, as subsequently amended in 1914, was as follows:—

	£
1. Works for the purpose of irrigating the Gezira Plain	2,000,000
2. Extension of the Soudan Railway system ...	800,000
3. Other irrigation works and contingencies ...	200,000
Total	3,000,000

The outbreak of the war, however, put an end for a time to the prospects of floating a loan and obtaining the further funds necessary for the prosecution of the work, and it was decided to proceed slowly with the excavation of the main canal, the levelling survey, and the erection of the various buildings necessary for the undertaking.

On the representations made by the Soudan Government delegates to London in 1917, further assistance by the National Debt Commissioners was sanctioned, in certain contingencies, to enable the work to be carried on during the war, as the Treasury could not permit the raising of a Soudan Loan until after the cessation of hostilities.

Soon after the armistice was declared, the Soudan Government Commission was appointed and proceeded to London in April 1919 to discuss and settle with His Britannic Majesty's Treasury the amendment to be made in the provision of the Government of the Soudan Loan Acts, 1913-14, and in the items of the schedule to the latter Act.

In August 1919 the British Parliament passed "The Government of the Soudan Loan Act, 1919," by which the British Treasury guaranteed the payment of the interest on a loan not exceeding in the aggregate an amount sufficient to raise £6,000,000 for, or in connection with, the purposes set out in the schedule to this Act which is as follows:—

	£
1. Works for the purpose of irrigating the Gezira Plain, including the repayment of any temporary loan raised for those works under the Government of the Soudan Loan Acts, 1913 and 1914	4,900,000
2. Extension of the Soudan Railway system ...	700,000
3. Tokar irrigation and railway extension ...	400,000
Total	6,000,000

Item 1.—The sum of £500,000, advanced by the National Debt Commissioners and referred to above, had been reduced by £13,000, refunded in January 1919.

In August, 1919, however, a further sum of £250,000 was advanced by the National Debt Commissioners to enable the work to be continued, pending the flotation of a loan.

Further study of the scheme in view of the altered conditions attributable to the war showed that the area to be irrigated had to be increased to make the scheme a financially safe enterprise for Government, and at the same time not to be too large for the population and resources available. These considerations fixed the area to be irrigated at 300,000 feddans instead of the 100,000 feddans originally contem-

plated. Owing to the immense increase which war conditions have produced in the cost of all materials and labour and to the higher interest charged on loans, the estimates for the scheme, including interest during construction, were raised to £4,900,000. This sum includes provision for the repayment of the advances made by the National Debt Commissioners, and another provision of £1,000,000 for interest during construction of the works and until the time when it is anticipated that the receipts derived by the Government from the scheme will be sufficient to support the annual charges. It also includes £400,000, being the estimated cost of the erection and equipment of ginning factories, building of offices, warehouses, residential quarters for the managerial staff, &c., and the purchase of farming implements and machinery.

Item 2.—The second item in the schedule to the Act of 1914, viz., “Extension of the Soudan railway system, £800,000” was intended to provide for the repayment to the National Bank of Egypt of the advance of £E. 800,000 which they had made to the Soudan Government for building the extension of the Soudan railways from Khartoum through the Gezira to El Obeid. Since that time the Soudan Government has been able to make provision out of its revenue for the reduction of the above advance to £E. 700,000, and this constitutes the second item in the schedule to the 1919 Act.

Item 3.—A sum of £400,000 includes the estimated cost of the line from Suakin to Tokar, a distance of about 60 miles, £140,000 for irrigation works at Tokar, and £60,000 for interest during construction, and for contingencies.

In 1916 the Egyptian Government found itself unable to supply the Soudan with its requirements of silver. The Soudan Government, therefore, with a view to meeting the increasing demand of trade and averting a critical situation, authorised the free circulation of British silver florins and shillings, in all towns and districts in the Soudan.

Since 1916 a sum of £E. 800,000 in florins and shillings has been imported

In fiscal and currency matters the action of the Soudan Government is necessarily largely governed by the action of Egypt. Consequently the currency measures taken by the Egyptian Government at the outbreak of the war by conferring inconvertibility on the Notes of the National Bank of Egypt and by making them legal tender were adopted in the Soudan, and met with success.

In like manner the currency notes of P.T. 10 and P.T. 5, subsequently issued in Egypt by the Egyptian Treasury, have been introduced into the Soudan.

In 1919 the public finances have continued to improve, and the revenue has reached a figure never before attained.

The accounts for the year are not yet closed, but the results, as nearly as can be at present estimated, will be as follows:—

---					Budget Estimates 1919.	Anticipated Amounts.
					£E.	£E.
Revenue	..	..	..	..	2,685,000	2,950,500
Expenditure	..	..	..	..	2,685,000	2,683,000
Surplus					..	267,500

This result is eminently satisfactory, but the sum of £E. 267,500 cannot be looked upon as a real surplus. The Soudan Budget only provides for services of a recurring nature, demands for capital and extraordinary expenditure being met out of such funds as may be available in the Reserve Fund. The amount of the surplus will therefore be passed to this fund to meet some of the many and urgent demands that have to be financed in this manner.

2. Revenue for 1919.

The figures for 1919, which are included in the previous table of revenue returns, are repeated here for convenience of reference :—

Provinces—	1919.
Land Tax—	£E.
(a.) Taxed land	42,650
(b.) Ushur	170,100
Date tax	21,300
Animal tax	148,950
Tribute from nomad tribes	36,100
Traders tax	36,250
Royalties	128,300
Timber and firewood	79,100
Rent from Government lands and properties	32,000
Miscellaneous	76,000
Total	770,750
Departments and Services—	
Customs	328,000
Posts and telegraphs	118,400
Railways and steamers	1,278,000
Agriculture and forests	7,100
Legal	14,180
Veterinary	25,600
General Central services	341,500
Other departments and services... ..	66,970
Total	2,179,750
Grand total	2,950,500

The following are remarks on some of the items in the above table :—

3. Provincial Revenue.

Land Tax.

The land tax has realised £E. 42,650 against an estimate of £E. 43,900. The deficit is due to arrears outstanding at the end of the year and to remissions.

As regards the “ Ushur ” or tithe, a tax equivalent to 10 per cent. of the value of the crops assessed, the receipts amounted to £E. 170,000, viz., about £E. 41,000 in excess of the estimates, and only about £E. 13,000 less than the sum realised in 1918, which was a record year. This was due to the high prices prevailing on which the rates for the collection of the tax were assessed.

Animal Tax.

The receipts derived from the animal tax amounted to £E. 149,000 as compared with a Budget estimate of £E. 139,395 and £E. 141,848 realised in 1918. The excess is due partly to closer and more accurate counting of the animals, and partly to an increase in the rates at which the tax is levied.

Tribute.

The decrease of about £E. 6,600 in the receipts from “ Tribute ” as compared with the amount collected in 1918 is due partly to remissions made in Dongola and other provinces affected by the low flood, which resulted in the mortality of animals owing to lack of grazing, and partly to the transfer of certain tribes from taxation by tribute to taxation by animal tax.

Traders Tax.

The receipts from the traders tax in 1919 were the highest on record, viz., £E. 36,250 as compared with £E. 26,911 in 1918. This is due to the general expansion of trade, the higher profits made by the trading community, and to the increase of the tax.

The traders tax was introduced in 1913. Prior to its introduction all direct taxation was borne by cultivators, land and house proprietors, and cattle owners. The trading community as a class contributed nothing to the cost of the Government by way of direct taxation. The traders tax ordinance remedied this defect in the system of taxation.

The experience of the previous six years having shewn that the rate of the tax and the method of its assessment were capable of improvement without hardship to traders, and with advantage to the Treasury, the ordinance was amended and the rates raised in 1919. At the same time the Auctioneers, Brokers and Pedlars Ordinance was amended so as to include small traders whose profits were below £E. 50 a year. These are now charged £E. 1 a year for a licence, and such licence holders are exempted from assessment to traders tax.

Traders are now divided into three classes, and the tax is collected at the following rates:—

Class.	Assessed Annual Profits.	Tax Payable.
3	Not exceeding £E. 100	£E. 4 per centum with a minimum of £E. 1 on the assessment.
2	Exceeding £E. 100 but not exceeding £E. 500.	£E. 5 per centum on the whole assessment.
1	Above £E. 500.. ..	£E. 6 per centum on the whole assessment.

By eliminating from the tax small traders whose profits were below £E. 50 a year, the assessment work has been considerably reduced, and a number of small so-called traders who do not find it worth their while to pay a pound a year for a licence are obliged to look for more profitable employment in manual work on the land or elsewhere, to the general benefit of the community.

Royalties.

The total revenue from royalties in the provinces amounted to £E. 128,300 as compared with £E. 144,442 in 1918 and an estimate for 1919 of £E. 120,570.

The gum crop of 1919 was much smaller than that of 1918, and this accounts mainly for the drop in the amount of royalty collected.

Royalty is also taken on ostrich feathers, rhinoceros horn, rubber, senna, dom palm fruit and other minor products.

Timber and Firewood.

The receipts are chiefly derived from royalty on timber, firewood, charcoal and other forest produce, and from the sale of wood to Government departments and to the public. The amount realised in 1919 was £E. 79,000 against a Budget estimate of £E. 61,212 and £E. 66,973 collected in 1918. Large quantities of firewood have been cut for various public purposes, particularly for the Government steamers all along the river and for works at Gebel Aulia and Sennar. The difficulty of importing timber from abroad has also given a stimulus to the use of local timber for many purposes. In the Bahr-el-Ghazal alone 50,000 cubic feet of mahogany were cut in 1919 as against 11,000 in the preceding years.

Rents from Government Lands.

Rents from Government lands and properties contributed about £E. 32,000 to the revenue as compared with a Budget estimate of £E. 39,070 and £E. 41,259 realised in 1918.

The remainder of the provincial revenue recorded under "Miscellaneous" is derived from the house tax, the road tax, liquor and other licences, ferries, market fees, court fees, and other smaller sources which do not call for any special comment.

4. Departmental Revenue.

The total anticipated revenue from the departments is approximately £E. 2,179,700 as compared with estimated receipt of £E. 1,994,150 and £E. 1,960,647 realised in 1918.

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The receipts from Customs, railways, and the excise duty on sugar are the predominating factors in the increase. The receipts derived from the latter are recorded under the Item "General Central Services."

Customs.

The greatly enhanced value of all imports and exports and the increase in the import duty on tobacco during the past year account for the increase of about £E. 79,000 in the Customs receipts over the revenue realised in 1918, the figures for these two years being £E. 249,000 and £E. 328,000 respectively.

Railways and Steamers.

The railways and steamers' receipts were estimated in the Budget for 1919 at £E. 1,233,700. The total receipts realised show an excess of £E. 44,300 over the estimate and of £E. 21,500 over the amount realised in 1918.

Veterinary Department.

The receipts for 1919 amount to £E. 25,600 against a Budget estimate of £E. 26,000 and £E. 35,377 collected in 1918.

These receipts are derived chiefly from quarantine fees on exported cattle and sheep, fees for inspection of hides and skins, and charges for loading and unloading of animals.

The decrease in the receipts is due partly to the falling off in the export trade of cattle, sheep and goats consequent on the dislocation of communication with Egypt after the disturbances in that country in the spring, and partly to the shortage of grazing as a result of the indifferent rains and low Nile of the preceding year.

General Central Services.

The chief items of revenue recorded under "General Central Services" are the amounts derived from contributions towards pension, the excise duty on sugar, and the profits derived from the control and sale of sugar in the Soudan by the Government.

In addition to the benefit which the public derived from this latter measure, the Treasury benefited to the extent of about £E. 95,000, and was thus able to meet part of the increased expenditure thrown on the Budget of 1919 through the increased freight rates on the Egyptian State railways, the enhanced cost of labour, and the grant of war gratuities and transport facilities to officials. This profit accounts for the increase of revenue under the item "General Central Services" as compared with 1918.

The increased receipts in other departments are the result of normal development, and require no particular comment.

The following statement showing the ordinary revenue and expenditure of the Government since 1913 is of interest:—

Year.				Receipts.	Expenditure.	Budget Surplus.
				£E.	£E.	£E.
1913	..	..	..	1,568,352	1,533,063	35,289
1914	..	..	..	1,543,549	1,531,346	12,203
1915	..	..	..	1,495,227	1,463,934	31,293
1916	..	..	..	1,857,856	1,745,532	112,324
1917	..	..	..	2,195,355	1,901,941	293,414
1918	..	..	..	2,774,689	2,336,315	438,374
1919	..	..	..	2,950,500	2,683,000	267,500

5. Reserve Fund.

The unallotted balance of the Reserve Fund on the 31st December, 1918, stood at £E. 585,005. The credits sanctioned against the Reserve Fund in 1919 amounted to £E. 465,500, and were opened for the following services :—

	£E.
Rolling-stock and renewals (railways and steamers)...	145,000
Working cash balance	100,000
Public works	49,500
Electricity, water and ice supply plant, Khartoum ...	29,600
Reserve stores	30,000
Pearl fishery service	7,000
Flood protection works	4,500
Amortization of overdraft	20,000
Protection works, Gambeila	5,000
Erection of oil tank, Port Soudan... ..	5,000
Water supply scheme	10,000
Re-arming Soudan Government Police	10,000
Various other services	49,900
Total	465,500

The balance remaining unpledged was £E.119,500. During the year the balance has been increased by the proceeds of sales of Government land and other receipts, and on the 31st December, 1919, it was approximately £E. 158,500. To this will have to be added the sum of £E. 267,500, representing the estimated surplus of 1919, making the total sum available in the Reserve Fund on the 1st January, 1920, £E. 426,000.

The allotment of this sum is still under consideration, but owing to the fact that the Budget surplus is not the result of normal expansion of the revenue, but is mainly due to sources which are temporary, such as the receipts derived from the control and sale of sugar by Government and to the abnormal economic conditions prevailing, it is a matter of paramount importance that a considerable sum should be left unallotted to meet emergencies.

6. Budget for 1920.

The following table gives a summary comparison of the Budget of 1919 and 1920 :—

---	1920.	1919.
	£E.	£E.
Estimated expenditure	3,500,000	2,685,000
Estimated receipts	3,500,000	2,685,000

The increase in the estimates of expenditure is made up as follows :—

New appointments (including appointments suspended in 1919 and restored in 1920)	£E.
Promotions and increases of pay affecting the Budget	44,927
Allowances and services	33,932
	209,235
	288,094
General increase of pay and war gratuity	526,906
Total	815,000

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7. Trade.

The following table shews the progress of imports and exports since 1913 :—

IMPORTS and Exports since 1913.

Year.	Imports.			Exports.			Transit.	Specie.	
	Public.	Government.	Total.	Exports.	Re-Exports.	Total.		Imports.	Re-Exports.
	£E.	£E.	£E.	£E.	£E.	£E.	£E.	£E.	£E.
1913 ..	1,605,600	504,176	2,109,776*	1,185,186	93,655	1,278,841	69,150	32,037	171,297
1914 ..	1,400,333	491,161	1,891,494*	1,020,260	87,986	1,108,246	56,790	38,162	154,795
1915 ..	1,359,364	344,886	1,704,250	1,577,991	130,315	1,708,306	86,275	277,418	153,762
1916 ..	1,905,561	755,907	2,661,468	2,288,403	227,112	2,515,515	77,104	753,575	208,244
1917 ..	2,195,777	906,840	3,102,117	3,490,565	238,616	3,729,181	58,145	758,064	11,083
1918 ..	3,036,403	988,179	4,024,582	3,923,771	286,613	4,210,384	13,955	618,495	160,189
1919 ..	3,000,947	1,804,798	4,805,745	2,740,759	288,510	3,029,569	42,911	23,803	541,875

* In the annual statement of trade for 1914 these figures appear as £E. 2,075,298 and £E. 1,870,532 respectively. The difference is due to the deletion of certain items by order of the Central Government.

The following notes show the progress of some of the chief products :—

Cotton.

Year.	Bales of 400 lb.							
1913 ..	..	..	..	..	..	..	..	12,830
1914 ..	..	..	..	..	..	..	..	9,435
1915 ..	..	..	..	..	..	..	..	23,965
1916 ..	..	..	..	..	..	..	..	16,219
1917 ..	..	..	..	..	..	..	..	22,971
1918 ..	..	..	..	..	..	..	..	11,263
1919 ..	..	..	..	..	..	..	..	12,325

The fluctuation is due mainly to the variation in the crop of flood-grown cotton in the Tokar District of the Red Sea Province.

Cattle and Sheep.

The number of cattle, sheep and goats exported since 1913 and their values are as follows :—

Year.	Cattle.		Sheep and Goats.	
	Number.	Value.	Number.	Value.
		£E.		£E.
1913 ..	10,532	74,664	99,174	97,059
1914 ..	11,390	99,868	87,569	85,975
1915 ..	23,882	170,400	87,730	89,526
1916 ..	15,304	104,186	74,051	74,353
1917 ..	26,286	255,783	133,353	234,490
1918 ..	39,205	516,920	208,805	651,257
1919 ..	24,904	357,936	144,626	352,703

Hides and Skins.

Year.				Hides.	Skins.
				Tons.	Units.
1913 ..	..	..	..	403	371,453
1914 ..	..	..	..	794	469,323
1915 ..	..	..	..	1,148	265,982
1916 ..	..	..	..	744	361,797
1917 ..	..	..	..	937	302,230
1918 ..	..	..	..	1,236	173,485
1919 ..	..	..	..	845	448,946

The Railways Department has recently carried out some tanning experiments satisfactorily, but apart from this all tanning is done by native methods.

Some experimental shipments have been made by the Forests Department of a tanning material consisting of powdered grains of sunt pods (*Acacia Arabica*).

It is to be hoped that in the course of time the existence of the necessary raw material in the Soudan will lead to the introduction of capital into the tanning industry enabling it to be carried on on up-to-date lines.

Millet (Dura).

							Tons.
1913	...	...	...	...	...	...	2,080
1914	...	...	...	...	...	...	532
1915	...	...	...	...	...	...	46,117
1916	...	...	...	...	...	...	56,784
1917	...	...	...	...	...	...	84,779
1918	...	...	...	...	...	...	54,945
1919	...	...	...	...	...	...	1,656

The amount of millet exported varies, of course, with the harvest, which depends on an uncertain rainfall. Nevertheless, by means of special arrangements much larger quantities were exported during the war to meet the demands in Egypt and Palestine than would have been made available in normal years.

In 1915 and 1916 the Soudan exported 46,000 tons of food grains to Arabia and 40,000 to Eritrea. In 1917 and 1918 they were reduced to 14,000 and 13,000 respectively, owing to the fact that from 1917 onwards Egypt had to be given priority of claim on all surplus foodstuffs that the Soudan could produce.

Gum Arabic and Ivory.

Gum arabic is the only Soudan product in which Germany had a direct interest before the war. Great Britain now has the largest share in the trade. In 1918 Great Britain imported 8,000 tons, the United States 2,600, France 1,500, and other countries 4,000 tons.

The following table shows the total quantity of gum and ivory exported since 1913 :—

Year.								Gum.	Ivory.
								Kantars.	Kantars.
1913	..	..	..	..	..	..	..	336,728	2,792
1914	..	..	..	..	..	..	..	275,875	2,054
1915	..	..	..	..	..	..	..	258,519	1,341
1916	..	..	..	..	..	..	..	299,563	1,741
1917	..	..	..	..	..	..	..	369,639	1,389
1918	..	..	..	..	..	..	..	368,787	872
1919	..	..	..	..	..	..	..	344,652	1,105

It will be of interest to compare the volume of this trade with that which existed prior to the Dervish rebellion. The following figures are taken from the well-known report of Colonel Stewart :—

							Gum Exported. Kantars.
1879	...	...	...	...	...	...	144,706
1880	...	...	...	...	...	...	135,646
1881	...	...	...	...	...	...	150,861

The amount of gum exported in 1919 was therefore about 194,000 kantars in excess of the largest amount exported in the years which immediately preceded the rebellion.

Supplies of ivory appear to be falling off. Prices have recently risen to the very high figure of £140 per kantar (45 kilog).

The following table, which deals with quantities of articles exported, shows roughly a comparison of exports between five years of war conditions and five years preceding the war :—

Article.					1905-09.	1910-14.	1915-19.
Cotton	..	..	..	bales of 400 lb.	30,000	75,000	86,000
Cattle	..	..	..	.. number	1,271	64,428	129,577
Sheep	..	..	..	.. "	111,465	459,231	648,565
Millet	..	..	..	 tons	41,716	53,577	245,310
Gum	..	..	..	 "	47,115	75,050	73,503
Sesame	..	..	..	 "	11,358	26,986	39,699
Hides	..	..	..	 "	479	1,499	5,010
Skins	..	..	..	.. number	680,563	1,928,662	1,552,440

The statistics for 1905-09 are approximate.

The following table shows the source of Soudan imports in 1918 :—

							Percentage.
Great Britain	...	...	...	...	...	...	29
Egypt	...	...	...	...	...	...	30
India and Aden	...	...	...	...	...	...	16
South Africa	...	...	...	...	...	...	8
Abyssinia	...	...	...	...	...	...	5
Eritrea	...	...	...	...	...	...	1
Italy	...	...	...	...	...	...	5
Japan	...	...	...	...	...	...	1½
Other countries	...	...	...	...	...	...	4½

It is an indication of the greatly increased prosperity of the native that whereas in 1914 imports of cotton fabrics, sugar, coffee, tea and spices were valued at £E. 684,320, the value of these imports in 1918 was no less than £E. 2,062,631.

All the principal food products of the country at one time or another during the past five years have been placed under varying degrees of control both as regards direction or quantity of export.

On the whole, however, Soudan trade has been freer from restrictions than that of most other countries.

IV.—AGRICULTURE AND IRRIGATION.

8. Agriculture.

The agricultural situation during the period of the war has been on the whole satisfactory.

As must always be the case in a country where such a great proportion of the cultivation is dependent upon variable rains and fickle and uncontrolled floods, the areas cropped and the average and total yields of various agricultural products have shown wide differences from year to year.

The rainfall, upon which the most important agricultural provinces are so dependent, is at the best generally deficient in amount and unsatisfactory in its distribution, while the areas inundated by the annual floods of the Nile, the Gash, and the Baraka are a constantly varying quantity.

Fortunately the period of the war has been coincident in the Soudan with a cycle of better than average agricultural seasons.

The period opened with excellent rains in 1914, which broke a cycle of very bad years and put an end to what were practically famine conditions in certain districts.

The following year the rains could only be described as fair, but in both 1916 and 1917 they were distinctly favourable, while the Nile flood in these years was well above the average.

In 1918 the flood was poor, while the rains were indifferent for the early part of the season and a complete failure at the end.

Three good rains and two high floods in five seasons may, however, be regarded as a more fortunate coincidence than the Soudanese cultivator is accustomed to expect.

The areas cultivated are returned as follows:—

						Feddans.
1915	...	...	...	...	...	2,463,972
1916	...	...	...	...	...	1,489,574
1917	...	...	...	...	...	2,084,785
1918	...	...	...	...	...	2,200,811
1919	...	...	...	...	...	1,669,810

The area of land cultivated during the last two years is analysed as follows:—

	1919.	1918.
1. Irrigation by artificial means from the river	Feddans. 111,065	Feddans. 114,781
2. Irrigation by natural agency—		
(a.) By flood or rise of river	102,545	225,030
(b.) By rain	1,456,200	1,861,000
Total	1,669,810	2,200,811

The area shown as irrigated by artificial means is made up as follows:—

	By native methods.	By pumps.
1919	83,553	27,512, including 10,400 feddans summer water.
1918	88,121	26,660, including 10,200 feddans summer water.

The very large increase in the area cultivated in good seasons is a most valuable index of the productive capacity of the native cultivator, when conditions are favourable, and the strongest possible argument in favour of schemes of development designed to make such conditions permanent, by the provision of irrigation to supplement rainfall, or the construction of control works to regulate the inundation of areas affected by the floods referred to.

Cotton.

The high prices which have prevailed for all kinds of agricultural produce have had a stimulating effect in various directions, and particularly in regard to cotton.

Although the difficult situation due to the war has prevented any large extension of the area under cotton, steady progress has been maintained in regard to this crop.

At Tayiba and Barakat in the Gezira area, the Soudan Plantation Syndicate has continued to cultivate a considerable area successfully. The average yields and the quality of the cotton produced during the period under review have been considerably better than the figures on which the financial results of the Gezira irrigation project were estimated. This, and the higher range of prices ruling, and likely to continue, combine to make this scheme of development a very promising proposition, and its early operation a matter of great importance to the Soudan.

Other important schemes for the development of cultivation are the building of the Tokar Railway, the control of the Baraka flood, and the Kassala Railway.

The Tokar Railway is already provided for financially, as mentioned above. This line will give direct and rapid access from Tokar to the sea-coast, and should prove an immense saving of time and expense.

The control of the Baraka flood, whereby the cotton-growing area at Tokar is irrigated, is receiving close attention, and an expert has been sent to report on the possibility of control works; but it is a difficult problem, and it will probably take some time for an adequate scheme to be devised. Makeshift schemes have been tried and have met with partial success from time to time, but for proper development a comprehensive project is necessary.

If the railway to Kassala could be built there is every reason to believe that some 200,000 acres of land, suitable for cotton cultivation in the Gash Delta could be cheaply developed in a comparatively short space of time. This railway would have to be extended southwards so as to tap the areas suitable for the cultivation of rain-grown cotton. It would also add greatly to the output from the Soudan of cattle, sheep, gum arabic, grain, sesame and other agricultural products.

Cotton of the long staple American type is being successfully grown in Berber province, and an extension of the area under this crop will materially improve the agricultural situation.

Food Grains.

As indicated above the yield of food grains has varied considerably in the different seasons under review, but generally the crops have been sufficient to meet the requirements of the population, and in the good years to allow of a very considerable export.

The poor rains of 1918 resulted in a deficiency of the dura crop in the succeeding year, which, though not sufficient to produce anything approaching famine conditions, necessitated action on the part of the Government in the direction of regulating distribution and the provision of supplies for certain urban areas.

Insect Pests and Plant Diseases.

There has been no serious trouble from these sources. The usual toll has been taken from certain crops by locusts, asal (aphis), cut-worm, and boll-worm, and the study of the life history of the various pests, and of the measures for dealing with them, has been carried on steadily by the Entomological Section of the Wellcome Tropical Research Laboratories.

A satisfactory feature in connection with this subject is the success of the measures adopted to control the pink boll-worm which was found to be attacking the cotton crops.

More favourable climatic conditions for dealing with this pest are found in the Soudan, and a greater freedom of action is possible to the Government than in Egypt.

Agriculture in 1919.

The year 1919 may be summarised briefly as one of small crops and good prices.

Poor rains and a very low Nile flood during 1918 restricted both the areas under cultivation and the average yields of the staple products.

The total area returned as cropped during the year shows a decrease of just over 600,000 feddans on the figures for the previous season.

As is generally the case, the decrease in area is found in the provinces depending on rainfall, and dura is the crop chiefly affected.

The dura crop was found to be barely sufficient to meet local requirements, and prices rose considerably during the year.

Cotton 1919.

The total area of cotton in round figures is returned at 56,000 feddans, as compared with 64,000 in the previous year and 88,000 for 1917.

The decrease in area is confined to rain and flood-grown cotton, and is chiefly accounted for by the very poor Baraka flood at Tokar.

The area of cotton grown by means of artificial irrigation showed a slight increase.

The quality of cotton generally grown was such as to maintain the high reputation of Soudan cotton.

At Tokar, as a result of the poor Baraka flood, a very small area was irrigated.

Trying winds in the autumn and deficient winter rainfall militated against a high yield, and the crop marketed amounted to only 30,400 kantars (100 lb.) of seed cotton.

The crop of the present 1919-20 season is estimated at approximately 120,000 kantars.

Remarkable prices are being realised, the higher qualities having sold in some instances for ££. 8 and ££. 9 per kantar of 100 lb., unginned, at Tokar market.

The cotton growing industry in the Gash Delta (Kassala) showed further steady expansion under the stimulation of high prices.

A crop of 22,780 kantars of seed cotton was produced and was purchased, ginned, and forwarded to England for sale on behalf of the Government with excellent results.

No legislation of a serious nature particularly affecting agriculture was undertaken during the year.

9. Irrigation Works.

Work on the Blue Nile Dam at Makwar had to be practically shut down early in the war owing to the shortage of staff and the difficulty of obtaining plant and machinery.

A fresh start was made in 1917 and 1918 with revised estimates, owing to the greatly increased cost of all materials, and considerable progress was made with preliminary building.

The work at Jebel Aulia on the White Nile was confined during the war to the collection of data and the preparation of the site.

10. Forests.

The Sub-Department of Forests was of necessity greatly limited in its activity during the war owing to the necessity of diverting its staff to the control and organisation of the fuel supply.

Early in 1918 the demand for wood fuel, owing to the high price of coal, became so great that considerable difficulty was experienced in obtaining adequate supplies from the forests on the White and Blue Niles. The question is largely one of transport, and the control of the whole supply of firewood was therefore placed by Government in the hands of the Railway Department. The forests in the immediate vicinity of Khartoum had been extensively cut since the re-conquest, and it was found necessary to make a survey of the remaining forest areas within 200 miles of Khartoum, both on the White and Blue Niles, and also in the Berber province. This was completed during 1918, and a careful allocation was made to meet the requirements of the various interests during the present emergency.

Apart from this there has been a certain amount of progress in the exploitation of forest produce which has been regulated by licence since new Forestry Regulations were put into force in 1918.

The following paragraphs deal with the principal items of forest produce, including fuel:—

Timber.—The total quantity obtained in the period amounted to 108,000 cubic feet, from the forests of the Bahr-el-Ghazal and the Lado.

Firewood.—The total quantity consumed was:—

				Kantars of 100 lb.
By Government departments ...	...	...	...	4,773,760
Private purchasers...	...	...	...	6,642,000
Total ...	...	...	...	11,415,760

Charcoal.

		Tons.	Value in £E.
Exported to Egypt ...	...	17,680	176,800
Used in the Soudan ...	...	4,320	25,920
		22,000	202,720

Gum.—The total value of gum exported amounted to 82,790 tons valued at £E. 3,311,600.

Senna.—The export trade in senna during the war amounted to 39,600 cwt., valued at £E. 114,446.

Tannin.—Owing to the supply of tannin being cut off from Asia Minor, Egypt was obliged to turn to the Soudan for her needs. The total quantity of "garad" (pods of acacia arabica) exported to Egypt amounted to 86,306 cwt., valued at £E. 33,260.

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Kagelu Farm.

The management of the farm at Kagelu in the Lado was taken over in March 1915, principally as a rubber plantation and demonstration area.

The following is a résumé of the work :—

Rubber.—The total area planted is 340 acres, and there are now 50,000 well established trees. In 1919 the 8,000 trees planted in 1915 were tapped for the first time and yielded 2 tons of dry rubber.

Coffee.—By the end of 1919 there were 4,200 bushes planted, chiefly of Liberian and Arabian varieties. Results show that coffee of good quality can be cultivated in the Lado on a commercial scale.

Cassava or tapioca.—This has been adopted as the chief food crop for the labour on the farm. The total area under this crop is 150 acres.

The following timber trees have been planted :—

Lado mahogany.

Eucalyptus, several species.

Indian teak, seed from Burmah.

Indian red cedar, seed from India.

A great variety of fruit trees have been planted and have done well. All kinds of English vegetables have been cultivated with success.

Experiments have been made with tobacco, cinchona, cocoa, camphor, ginger, &c. The tobacco experiments have been a decided success. Cinchona is also likely to do well.

11. Veterinary.

On the outbreak of the war in 1914 the needs of the Army Veterinary Corps for trained officers were so urgent that ten officers (including the director) of a total strength of nineteen in the Soudan were at once reabsorbed into the British army.

The director returned to the Soudan before the end of the year, but it was not until the second half of 1918 that it was found possible to increase the British Veterinary Staff in this country.

During that interval the director, Lieutenant-Colonel F. U. Carr, died in Egypt after an illness of some months, an event which was both on personal and official grounds a very serious loss to the country.

This curtailment by half of the staff necessitated a modification of the activities of the Department.

This took the form of the withdrawal of officers from the outlying provinces, and the almost complete abolition of the Veterinary Survey Section. Efforts were, in fact, confined to the control of the animal export trade, and to the protection, as far as possible, of the nearer sources and arteries of this trade. Such was the position of affairs in the second half of 1914 and in 1915.

During the Darfur campaign in 1916 heavy demands for Soudan camels were made by the Egyptian Expeditionary Force. This meant the utilisation of veterinary officers not only for the veterinary services of the campaign, but also as purchasing officers to supply the requirements in camels of the Darfur expedition and of the Egyptian Expeditionary Force. These urgent services naturally resulted in a certain loss of control over animal diseases.

At the end of 1917 the services of six Egyptian veterinary officers were secured, and by the aid of these it was possible to establish a certain degree of control of animal diseases along the main trade routes, but the situation was not well in hand until near the end of 1918 when six British veterinary officers joined the Department.

As the war progressed the world shortage of meat became more acute, with the result that the demands of the civil population of Egypt and of the Egyptian Expeditionary Force for Soudan meat became more and more insistent. Every endeavour was made to collect and export cattle and sheep for Egypt to the utmost carrying capacity of the Egyptian State railways, and these efforts were most successful, the exports in 1918 exceeding the most optimistic forecasts.

In 1919 cattle plague (rinderpest) was very prevalent in the southern provinces. Outbreaks were reported in the Bahr-el-Ghazal, Mongalla, Sennar, Upper Nile, and the disease was prevalent to a milder extent in Berber, Blue Nile, and Kassala. It has become evident that successful dealing with this disease depends

very largely on adequate civil administration, and that it is a waste of time to send veterinary inspectors to districts which are only very loosely controlled.

On the whole the number of deaths from this disease was less than usual.

Other diseases reported were pleuro-pneumonia, East Coast fever, piroplasmosis, and foot-and-mouth disease.

The quarantine stations passed 25,888 cattle and 179,021 sheep for export, a decrease of 11,000 and 14,000 respectively on the figures for 1917-18, accounted for partly by the interruption to traffic early in the year and partly by shortage of grazing, due to the indifferent rains of 1918.

All these were absorbed by the Egyptian market and the British army in Egypt.

V.—PROVINCIAL ADMINISTRATION.

12. Introduction.

Provincial administration has been carried on successfully, though considerably handicapped by the difficulty of obtaining staff.

For the first two years of the war this shortage caused a certain amount of anxiety, as vacancies occurred which could not be filled, and the strain on the experienced officials who remained was considerable.

From the latter part of 1916, however, it began to be possible to obtain a regular supply of officers mainly invalided from the various theatres of war for service with the Egyptian army. Many of these were lent to the Soudan Government for work in the administration, and have rendered valuable services.

Administrative work cannot be said to have been wholly normal owing to the exceptional demands made on the Soudan on behalf of the British forces, mainly for the supply of foodstuffs and animals. The burden of organising the purchase and delivery of these supplies fell principally on the province officials, and made a great addition to their ordinary work.

The success with which it was carried out is due to the efforts of the officials and the loyal co-operation of the Sheikhs and Chiefs of tribes.

These remarks apply chiefly to the northern and central provinces, which are closely administered, in touch with the chief communications of the country, and contain the chief productive districts. They include Halfa, Dongola, Berber, Red Sea, Kassala, Khartoum, Blue Nile, White Nile, Kordofan and Sennar provinces, those provinces, in fact, where the population is mainly Arab.

In the negroid provinces, where the natives are far more primitive and the administrative control is much looser, the main problems have been the maintenance of public security and the extension of Government control over the remoter tribes. Both these objects have been successfully followed. The rectification of the frontier between the Soudan and Uganda in the year the war broke out gave a large tract of country to the Soudan. A new district, called the Latuka district, was formed in the Mongalla province and the tribes still further East have been visited.

The case of Darfur province is slightly different from both of the above, as it is entirely new country taken over from Ali Dinar's Government by conquest in 1916. The problem has been to obtain the confidence of the natives and, with a very inadequate staff, to lay down the framework of a proper Government. This is being successfully accomplished, but it is an enormous territory, and some time must elapse before it can be fully administered and become a paying unit in the administration.

A satisfactory start has been made in the training of native civilian administrators, to act as assistants to the British inspectors in the provinces. A school has been started at Khartoum where youths selected either from respected and influential native families or from promising members of the Government service are being trained in general administrative work. A considerable number have been sent out to the provinces, and excellent accounts have been received of their energy and usefulness.

13. Military.

The numbers and disposition of the troops in the Soudan have remained substantially the same. A few alterations have been made in organisation, and a new unit, the Western Arab Corps, has been raised for service in Darfur.

The following is a list of the principal patrols and military operations it has been necessary to undertake during the period up to the end of 1918. Those that have taken place during 1919 are referred to in the notes on individual provinces.

1914.

A small patrol in Kassala province was sent out to arrest an outlaw who had collected a following of brigands. A fight took place in which Major J. L. J. Conry (Connaught Rangers), who was in charge of the patrol, was unfortunately killed. The enemy were practically annihilated.

Zeraf River patrol. To put down unrest among the Gaweir Nuers.

Nuba Mountains province. A patrol to restore Government authority in Tira-el-Akhdar.

A patrol to put down disorder and brigandage in the Sabai and Mandal hills.

1915.

A small patrol in the Mongalla province to punish acts of hostility by the Lokoia tribesmen.

In Nuba Mountains province a certain Fiki Ali set himself up against the Government. Attempts to capture him lasted through the year till November, when he surrendered himself and was put in detention.

1916.

The occupation of Darfur was undertaken and concluded during this year.

After these operations a Soudanese force, in conjunction with a French force from Wadai, took action against the tribes who had for some years persistently raided Northern Darfur. These operations lasted till well into 1917.

A small punitive patrol took place in the Latuka district of Mongalla province.

A detachment of Soudanese troops was sent to assist the Government of the French Congo in putting down the revolt of a certain Chief Mopoi, which was successfully accomplished.

Considerable unrest was caused in the Upper Nile province by inroads of the Nuer on the Dinka tribe. On one occasion a native officer with fifteen men of the 9th Soudanese moved out to assist a Dinka chief against a superior raiding force of Nuers. The party was surrounded and all were killed with their officer. The continued unrest led to the Nuer patrol of 1917.

1917.

A small patrol was sent to punish brigandage in the Tabai hills in the Sennar province.

Unrest was prevalent in the Nuba Mountains province among the Nyima hills, instigated by a certain chief named Agabna. After a number of collisions with Government troops, in the course of which Captain R. W. Hutton (Royal Marine Artillery) was unfortunately killed in April 1917, a considerable force was sent in the autumn to reduce the hills. This object was successfully achieved after a somewhat arduous campaign in February 1918.

A patrol was sent against the Nuers to punish them for their raids on the Dinkas of Mongalla province. Operations ceased towards the end of April.

1918.

A force of Soudanese troops assisted the troops of the British East Africa Protectorate in a punitive patrol against the Turkhana tribe on the Soudan-Uganda border. In the course of this our troops came into conflict with an Abyssinian force. Operations were concluded by June 1918.

A patrol was despatched to deal with the unrest among the Dinkas in the Bahr-el-Ghazal which had arisen in 1917. The two principal rebel chiefs surrendered in May.

In addition to these there have been many occasions not important enough to mention when the local disturbances have been dealt with by small parties of police or military. A whole class of such incidents persisting continuously throughout the war consisted of collisions with poaching and marauding bands of Abyssinians along the Eastern border of the Soudan, and especially in the Mongalla province.

The following are summaries of the Governors' reports for 1919:—

14. Bahr-el-Ghazal.

The Governor reports steady but slow progress in this province and a good state of public security.

Much is hoped from the cattle-producing potentialities of this province if veterinary staff can be made available to deal with cattle plague. As the director of the Veterinary Department reports, however, adequate control of disease among savage tribes is only possible when the people are closely administered and sufficiently intelligent to understand and fall in with the instructions of the veterinary authorities.

The main obstacle to development is lack of communications.

The Governor gives a good account of the Church Missionary Society and the Italian Catholic Mission in this province. The work is mainly educational, and the results are encouraging.

15. Berber.

This province has responded very satisfactorily to the schemes of agricultural development which were undertaken during the last two years of the war, and which have been referred to earlier in this report. These schemes apply to areas watered by pumps from the Nile and cultivated by native owners under Government supervision. There are five of these areas at present in this province containing a total of something over 12,000 feddans. The Governor describes them as centres of prosperity, and remarks that they were of the greatest value in affording grazing ground at a time when the Nile flood was very low and there was practically no rain crop in the desert.

The nomad Arabs in this province had a less prosperous year owing to the lack of rain, which affected both their grazing and their food supply. Those tribes that were almost exclusively camel-owning tribes have done well owing to the demand there has been for camels.

There is little crime in this province apart from camel stealing in the out-districts, and petty crime in the towns.

16. Blue Nile Province.

This province is the principal grain producing province in the country. The Governor reports that the harvest in 1918-19 was about 25 per cent. below the average, but in spite of this the general condition of the people has been satisfactory. Money is plentiful and merchants continue to make large profits.

A Boy Scout movement has been started in the province. It is proving attractive, and is a valuable supplement to the Government schools.

17. Darfur.

The administration of this new province continues satisfactorily. The shortage of staff makes it impossible to deal with the immense area involved, but the Governor remarks that the condition of the people is steadily improving, and that a general settling down is noticeable. The fixed system of taxation is fully appreciated by the people, who have suffered so long from the corrupt and oppressive methods of the Fur Government. A certain amount of extortion still goes on, and it will be impossible to eradicate this until the staff is increased sufficiently to be able to administer the country closely and get into touch with the people.

The year has been a peaceful one. In December 1918 the notorious leader of the Guraan tribe, Mohammed Erbeimi, who had been a thorn in the side of the French in Wadai for many years, and had been responsible for many raids into Northern Darfur, gave himself up to us. He was tried in El Fasher for offences committed in Soudan territory, and having been convicted, is now serving his sentence in Khartoum.

The future development of this province depends on communications, and until other means of transport beside the camel can be made available, the main export of the province will be livestock, and even this trade cannot flourish until the route from El Fasher to rail head, some 300 miles, can be properly developed.

18. Dongola.

The Governor reports that the poor flood of 1918 led to famine conditions in certain districts in the spring, which were to a certain extent mitigated by two new pumping stations started in the same way as those in Berber province. He thinks that pumping installations, such as those already created, will prove the best safeguard against famine, which is an ever-present danger in this rainless province. Another good sign for the future freedom of the province from the fear of distress is the great increase in the date crop. This increase has been 50,000 tons in the last three years, and there are now half a million trees growing in the province. Further, the natives have shown a greatly improved spirit in meeting the bad times of the last few years in which the Nile has been low. It has become evident that the presence of British inspectors has a great moral effect in stimulating the willingness to work, and that the villages which are most backward and improvident in this respect are those which are furthest removed from contact with the administration.

19. Halfa.

The Governor reports with regret that the general condition of the people has not been satisfactory of late. There has been much sickness in the province, which has reacted very unfavourably on the cultivation of the district. This has been coupled with the failure of crops on account of the low Nile, and has resulted in inadequate forage, death of animals used for agriculture, and consequent failure of cultivation in certain places. This has been to a certain extent balanced by the date crop, but the people are thriftless, and would rather spend the profit they make on their dates than use it to recoup their agricultural losses by replacing their lost cattle.

The province is arid, and the cultivable area is confined to a thin strip on each bank of the Nile; consequently, there is little room for agricultural development. The conditions would be greatly improved by the establishment of better communications between Halfa town and the southern districts, possibly by motor transport.

The province produces to a large extent the servant class of the general community, earning fixed wages, and consequently is particularly affected by the rise in prices.

20. Kassala.

The Governor reports well of the general conditions of the people in Kassala province. Those who have had agricultural produce to dispose of have been able to take advantage of the very high prices obtaining. On the other hand the rains in the south of the province have been almost a complete failure, and the tribes have suffered in consequence; while at the same time cattle plague and pleuro-pneumonia have taken a heavy toll of the herds. The Governor outlines certain measures which in his opinion would assist the trade on the lines of better veterinary control and improvement in the water supply.

The Governor deals at some length with the control of the River Gash, which runs past Kassala, irrigates a large and valuable millet-growing area above the town and five miles below, and then splits and forms a delta containing perhaps 300,000 cultivable feddans. Various experiments have been made with a view to controlling the Gash flood, but the full value of the land has not yet been obtained. As it is a cotton-producing area of value I trust it will be possible in the next few years to make an irrigation scheme which will deal adequately with the problem.

An incident of no political significance, but illustrative of the sporadic outbursts of fanaticism to which parts of the country are liable, occurred in Kassala at the end of 1918. Without a word of warning and in the dead of night, a band of some forty fanatics, led by a religious lunatic, suddenly rushed the guard and inlying picket furnished by the Egyptian unit on the fort and then proceeded to attack the lines of the Camel Company of the Eastern Arab Corps. No longer aided by the element of surprise, the band suffered heavily in killed and wounded at the hands of the latter unit. The leader was amongst the killed, and the few that escaped were ultimately accounted for by the Camel Company and the police.

21. Khartoum.

The bulk of the administration of this province consists in the work of the three towns, Khartoum, Khartoum North and Omdurman, and this fact renders the

province dissimilar from all others in the country. At the same time the facts that the greater part of the business of the country centres in these towns, and that there is a greater body of intelligent and instructed opinion here than elsewhere, render the material conditions and the state of feeling in these three places a very fair index of the situation in the country generally. The Governor writes most hopefully of the general tone and prosperity of the capital in the year immediately following the war.

The revenue has been more than doubled since 1914, and a large part of the increase has been due to the traders tax, a certain indication of the increased commercial activity which the war brought to the Soudan.

On the other hand the difficulty in obtaining supplies of dura has caused possibly more anxiety at Khartoum than elsewhere. The agricultural districts have for the most part been able to supply their own needs and export their surplus, but in Khartoum the whole food supply has had to be purchased. In this connection the supply of dura purchased by Government from the British army in Palestine during 1919, and distributed at a fair price under Government supervision, greatly helped to relieve the situation.

22. Kordofan.

The chief products of this province are gum, cattle, sheep, grain (millet and "dukhn") and sesame. There has been a demand and an increase of price for all these commodities (except gum), which has resulted in a state of prosperity never before approached. The actual production of gum was greater than in previous years, but as the price was much lower this year the revenue (which is taken as an *ad valorem* royalty) was much less, being £E. 58,000 as against £E. 80,000 in 1918.

The number of cattle listed for taxation was over 1,200,000. The sale in El Obeid, the chief town, reached the figure of over 17,000 cattle and 37,000 sheep, while it is estimated that 10,000 cattle and 80,000 sheep went from the province direct to Omdurman market.

About 4,600 tons of "dukhn," 3,400 tons of sesame, and nearly a thousand tons of ground nuts, were exported from the Province.

The chief drawback to development in Kordofan is lack of water. The cattle and sheep trade naturally depends for its existence on this vital factor. Every well in the province is crowded to its utmost capacity and the revenue cannot continue to increase, as it has done in the past, unless more water can be found. Moreover, with overcrowding of herds on the wells the danger from contagious diseases becomes greater. A beginning has been made with a well-boring scheme this year, and three successful wells have been sunk in El Obeid with results that were of inestimable value in view of the fact that the water supply otherwise was shorter than it had ever been. Funds for an extension of the scheme are being provided in the 1920 Budget.

23. Mongalla.

The outstanding event in this province during 1919 was the lamentable mishap by which the Governor, Major C. H. Stigand, and the Officer Commanding the District, Major R. F. White, D.S.O., lost their lives in the course of operations against the Aliab section of the Dinka tribe.

For causes which have not yet been sufficiently explained, the Aliab had last summer adopted an aggressive attitude towards the Government. A number of telegraph linesmen were murdered, and finally the small police post in the district was attacked and burnt.

In November a force of four companies of the Equatorial battalion was despatched under Major R. F. White, D.S.O., (Essex Regiment) to undertake punitive measures. The column was accompanied by Major C. H. Stigand, O.B.E. (Royal West Kent Regiment), the Governor of the province as political officer. The enemy were encountered on one or two occasions and severe casualties were inflicted on them.

On the 8th December the column was proceeding in square formation through long grass when it was suddenly attacked by a force of over a thousand native spearmen, some of whom penetrated the square before the attack could be repulsed. Our casualties were Majors Stigand and White and a Soudanese officer killed, twenty-four men killed, and thirty-two wounded. Enemy casualties were heavy. The column then returned to its base.

An expedition is now (March 1920) on the point of starting. It has been necessary to delay it until the grass was dry enough to be burned.

All who knew Major Stigand most deeply deplore the loss of a man of sterling character and a most attractive personality. The Soudan owes much to his experience and knowledge of Central African tribes, which he turned to the best account in the service of this Government. He was about to leave the Soudan, having finished his period of service with the Egyptian army.

Major White had served for nearly seven years with the Egyptian army and had done much valuable work on the southern frontier of Mongalla Province as officer commanding the district. He was in command of the mixed force of troops from the Soudan and British East Africa which went to Lake Rudolf in 1917-18 to deal with the unrest among the Turkhana tribe. His loss is severely felt by his brother officers in the Egyptian army.

Major Stigand, who reported on the condition of the province before the commencement of the operations which caused his death describes the year as a not very prosperous one in the south of the province. In some districts the rains were late and bad, and food was short. Throughout the province there were severe outbreaks of influenza in the early part of the year. Other districts were normal.

An endeavour is being made to induce all natives of the province to grow manioc, or cassava, as a stand-by in case of famine. It is not dependent on the vagaries of one season as the root remains several years in the ground. The crop can be used when required, and continues to increase if not required.

The most fertile and well-watered districts in the province are the part between Loka and the Congo border, and the forest region round the Imatong mountains. The experimental farm at Kagalu, in the former district, is making useful progress in the cultivation of coffee, tea, rubber, &c.

I have referred to the establishment of light mechanical transport on the Rejaf-Libogo road in another part of this report. The extension of the road beyond Libogo to Aba is now proceeding.

Invasions by Abyssinian raiders and poachers into the western districts still give considerable trouble.

A small operation was successfully carried out in June in which a number of poachers' rifles were captured.

I should add a word about the missions which are at present the only educational establishments in the province, and as such are of great value.

The Gordon Memorial Mission under the Rev. A. Shaw continues to do excellent work at Malek. They have also a school at Mongalla and another at Yei; the latter gives promise of success as the upland natives are more wideawake and adaptable than the riverains. Mr. Shaw has also opened a new school at Opari in the southern part of the province, and has about thirty pupils.

The Roman Catholic Mission of Gondokoro have opened a new station on the east bank of the Nile opposite Rejaf.

24. Nuba Mountains.

Colonel R. S. Wilson, who had been Governor and Sub-Governor of the province for the past ten years, retired in April last and handed over the province to Major C. S. Northcote (Bedfordshire Regiment) who had been transferred from Mongalla.

Major Northcote, who is responsible for the year's report, describes a general and steady increase in the prosperity of the natives. The crops have done well and there is ample food for all requirements, the difficulty being that of transport.

The punitive patrols that have been unfortunately necessary during the past few years, culminating in the important Dilling patrol of 1917, have induced a fairly general state of tranquillity. In one case only was a show of force necessary this year, against a group of hills called Alira, where the tribes had been defying Government for some time, making the surrounding country unsafe for travellers. A fine was paid and an administrative post formed, which should have the desired effect of keeping order.

The cattle trade may be expected to be an important factor in the development of this province when communications are improved, and provided sufficient staff can be obtained to control the cattle plague. The natives are beginning to co-operate with the Government in taking precautions and segregating their infected cattle. The good demand there has been for the export of cattle to the north has stimulated them in this respect.

Communications and water supply require attention. Roads are a great expense because the rainy season destroys all work that is not of a permanent character.

25. Red Sea.

This province has been administered during the absence of Colonel C. E. Wilson, C.M.G., C.B.E., D.S.O., on special duty at Jeddah, by Mr. J. C. Matthew, the senior inspector.

Direct shipping to Port Soudan has been generally resumed, and little difficulty is now experienced in getting stores and material by this route.

The erection by the Asiatic Petroleum Company of storage tanks for liquid fuel will be of further advantage to shipping in the Red Sea; thanks to the deep water alongside the quays, bunkering either with coal or liquid fuel is quickly and easily effected.

Homeward freights have been forthcoming and there is no congestion of goods awaiting export.

The cost of working the harbour now exceeds the revenue, owing to the rise in wages, and it will be necessary to increase the charges, as has been done in other ports. No increase was made during the war.

Tokar.

The cotton season, 1918-19, was a disappointing one, and the crop smaller than any since the 1915-16 season.

The irrigation of the area cultivated is obtained by the annual flooding of the Khor Baraka. The problem of utilising the flood to the best advantage has been referred to in the section dealing with agriculture.

The Egyptian Irrigation Department have been consulted with a view to producing a comprehensive scheme, and an irrigation official is at present studying the site.

The nomad tribes are evidently wealthy, having benefited by the high prices obtaining for cattle and camels. It has been difficult owing to shortness of staff, to bring these tribes into touch with the Government. A distinct improvement in this respect has been effected by decentralising the collection of tribute, &c., from the headquarters of the province to the several districts. Their nomad habits and independence of control in the past have rendered it easy for them in many instances to evade or postpone the payment of their taxes. This condition will not be satisfactorily improved until it is possible to increase the number of British inspectors; meanwhile a police post has been put into the country of the Gemilab tribe to the south of the province, perhaps the least amenable to Government influence of all these nomad tribes.

The province continues to be one of the main channels for African Mohammedans proceeding on pilgrimage to the Holy Places in the Hedjaz. Over 4,000 passed through in 1919.

As the province does not produce grain in large quantities, the supply of food for the urban populations became a serious question this year, but the situation was relieved by the apportionment to this province of dura purchased from the British army in Egypt.

The patrol of the coast to prevent gun and slave running has been the subject of some discussion this year. It is hoped that some measure of control from the sea may be introduced. The present land patrol is not ineffective, but owing to the nature of the country it is very hard to maintain. A naval reconnaissance visited the coast in July this year and has made recommendations.

26. Sennar Province.

The Governor reports that the prosperity which existed during the early part of the war was seriously diminished in 1919 by a combination of such circumstances as poor crops, high prices of necessaries, indifferent grazing and cattle plague.

The quantity of grain available was barely sufficient, and its distribution and sale had to be very carefully supervised. Actual famine was avoided, but there was undoubtedly hardship.

Public security was threatened in May by a fanatical outbreak on the part of a certain Mohammed Sayid Hamid, a nephew of the well-known Mahdi. He had been

suspected of a desire to attack the Government for some time and was under supervision in Singa. He escaped, and collecting a band of 150 to 200 adherents announced that he was the prophet Isa, and that he was empowered to destroy the Government and set himself up in its place.

He was pursued by a force of mounted police, who were accompanied by the inspector of Singa and the Mamur of Karkoj, and was caught up about two days south of Singa, with the result that he and his band were scattered and put to flight, and he himself and his principal followers captured two days later. About forty were killed or wounded in the fight, and about fifty were captured, tried and sentenced to various terms of imprisonment. The leader and his three principal lieutenants were hanged.

They only inflicted one casualty—the murder of a merchant who refused to hand over his rifle.

The promptness and vigour with which this affair was handled by the local authorities prevented what might have been a serious disturbance.

The southern, very-lightly administered portion of the province, has been disturbed by the continual incursions of the Nuer blacks of the Upper Nile province into the territory of the Burun tribe. A punitive patrol is now at work among the Nuers exacting reparation for the damage done by them for many years past to the Buruns, and endeavouring to ensure that the latter will be left in peace from this quarter for the future.

27. Upper Nile Province.

The main problem of this province is getting into touch with native tribes who have hitherto only been brought under a light administration. It is hoped that during this and next year the Garjak Nuer country between the Zeraf and the Abyssinian border will be successfully penetrated and controlled.

The Governor, Mr. K. C. P. Struve, who took over from Major Stigand when he went to Mongalla province in April, reports that public security is as good as can be expected except in the unadministered Garjak Nuer territory. Inter-tribal fights are still common and unlikely to die down for some time to come.

The people generally are contented, but the exceptional floods of 1917 and 1918 did much harm by destroying crops. The Government were able to provide relief by selling dura to those in want of it. This year the floods are not excessive and the rains have been good.

There is a great field for agricultural development in this province; the whole country produces a wealth of wild growth of every kind, and the rainy season is an assured one. The chief hindrance to rapid development is that the training of the people to habits of industry cannot be effective until the administration becomes much closer than it is possible to make it at present.

28. White Nile.

This province, which is in the riverain district stretching for about 250 miles south of Khartoum, roughly to the point where the negroid tribes begin, depends for its prosperity on cattle, cultivation (chiefly rain-grown) and gum.

The 1918–19 rains were poor, and the food supply consequently became a serious problem as early as July. The situation would have been serious but for the importation of dura from Egypt.

The indifferent rains were also responsible for heavy casualties in the herds owing to the lack of grazing. The export of cattle to Egypt was reduced after the severance of communications owing to the disturbances in Egypt in April, and local prices are returning to their normal level.

The same circumstances that have affected the main gum-producing centre, Kordofan province, have also operated in this province, and the output has been much less during the past year.

The greater part of the inhabited region of this province will be inundated when the White Nile Dam is built. That project, however, includes a plan for lowering the level of the reservoir slightly just before the cultivating season whereby a strip of land will be left ready for planting along the edge of the flooded area. It is estimated that the area of this cultivable area will be about 250,000 acres. A survey and settlement of the land to be inundated is now in progress.

29. Game Preservation.

The following are the figures of game killed during the years 1914–1918 :—

							Head.
1914	...	...	...	...	...	...	3,580
1915	...	...	...	...	...	...	1,017
1916	...	...	...	...	...	...	426
1917	...	...	...	...	...	...	545
1918	...	...	...	...	...	...	1,368

Returns in 1919 show a total of 1,371 head of game killed in 1919 by 130 officers, officials, residents and natives.

A number of modifications have been made in the game laws with a view to preservation of animals that are becoming scarce.

There have been one or two outbreaks of rinderpest during the period which have caused casualties among the game, but on the whole the condition and abundance of game remained satisfactory.

During the war there have been no shooting parties from outside the Soudan. In the present season 1919–20 big game hunters are beginning to return.

30. Repression of Slave Trade.

With the spread of civilisation in the country it may be said that the grosser forms of slave trading have become extinct.

The more veiled methods whereby a certain amount of traffic is carried on between West Africa and the Hedjaz by means of the Mecca pilgrimage is infinitely more difficult to deal with, but the system by which all travellers from the west must be in possession of a pass from their country of origin showing the numbers of the party and relationship to one another, coupled with the organisation of the Slavery Police in Darfur on the western frontier, and on the Red Sea littoral and the Abyssinian frontier on the east, is undoubtedly a deterrent to those who might otherwise engage in this traffic.

The ordinary police force of the country deals with any cases that occur in the interior, but it would be almost impossible for them to carry out this special work of checking attempts to use the Soudan as a slave route between West Africa and Arabia.

31. Prisons.

The average yearly number of admissions to prison during the five years of war was 615 males and seven females.

Prison workshops have done very well during the war. All clothing required by Government for police and convicts was made in these workshops.

32. Surveys.

Topographical survey has been confined to the triangulation of Darfur province, which has proceeded satisfactorily, assisted by a number of sketches received from officers and officials stationed in the province.

The principal work in cadastral survey has been in connection with the area in the White Nile province which will be inundated when the dam at Gebel Aulia is constructed.

The maintenance of existing surveys continues, but European supervision has to a certain extent been lacking during the war.

33. Lands and Concessions.

As regards town lands, the director of the Department has been gradually devolving the work of dealing with applications for allotment of lands on the local authorities. Land allotment in practically all towns and stations is now dealt with in this way, the Lands Department exercising supervision and control.

The Lands Department has the work of the following Committees to deal with :—

1. The Gezira Development Commission. This committee deals with all questions arising out of the scheme for the cultivation of the Gezira by means of the Makwar barrage.

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2. The Concessions and Projects Committee. This committee deals with all applications for concessions in the Soudan.

3. The Town Improvement and Allotment Board. This board deals with all questions regarding the disposal of land in Khartoum.

4. The Inundated Areas Committee. This committee deals with questions relating to the areas in the White Nile province which are to be inundated through raising the level of the river by the projected dam at Gebel Aulia.

34. Mining.

The Soudan Gold Fields Company (Limited) decided in September 1919 to close down the Um Nabardi mines and surrender their mining lease.

The small mine at Gebeit in the Red Sea province, worked by the Gebeit Tributing Syndicate, has made satisfactory progress.

VI.—COMMUNICATIONS.

35. Railways and Steamers.

The following table shows the progress of the main branches of these services during the years 1915–1919:—

—			1915.	1916.	1917.	1918.	1919.
			£E.	£E.	£E.	£E.	£E.
Railways—							
Total revenue ..	..	..	535,805	742,474	835,580	987,267	1,006,854
Expenditure ..	..	..	326,259	454,813	541,696	744,751	765,997
Profit ..	..	..	209,546	287,661	293,884	242,516	240,857
Steamers—							
Shellal-Halfa Reach—							
Revenue ..	..	..	32,125	51,277	67,571	84,586	102,909
Expenditure..	..	..	32,261	39,992	54,667	55,299	52,451
Profit ..	..	..	..	11,285	12,904	29,287	50,458
Steamers—							
Dongola Reach—							
Revenue ..	..	..	9,370	9,675	11,700	11,559	12,111
Expenditure..	..	..	7,025	7,049	11,654	14,853	17,201
Profit ..	..	..	2,345	2,626	46	..	..
Steamers—							
Khartoum and South—							
Revenue ..	..	..	{ (Only figures for 1918 are given, as this service was only amalgamated with the others in 1918.) }			135,069	125,651
Expenditure..	..	..				110,785	116,626
Profit ..	..	..	..	..	..	24,284	9,025
Port Soudan—							
Dockyard and harbour—							
Revenue ..	..	..	15,383	21,531	22,743	20,071	24,860
Expenditure..	..	..	16,659	20,350	21,761	22,927	32,499
Loss ..	..	..	1,276	..	..	2,856	7,639
Catering department—							
Revenue ..	..	..	..	..	..	15,418	20,446
Expenses ..	..	..	..	..	..	17,352	21,182
Loss ..	..	..	..	..	..	1,934	736
Total—							
Revenue ..	..	..	592,683	824,957	937,744	1,253,970	1,292,831
Expenditure ..	..	..	382,204	522,204	629,778	965,967	1,005,956
Profit ..	..	..	210,479	302,753	307,966	288,003	286,875

Railways.

The setback to trade, which was the first result of the outbreak of war, affected the railway traffic seriously. Much export traffic was lost, though this was in part due to the bad rains of 1913 and consequent diminution of the export of millet. The temporary suspension of the irrigation works in the Gezira also diminished the traffic receipts. By cutting down services, suspending all operations that were not absolutely essential, and by utilising reserve stores as far as possible the early and difficult period was safely tided over.

The revival of prosperity in 1916 relieved anxiety as to the financial situation, but the difficulty of getting necessary stores and material, particularly coal, persisted till the end of the war.

The services of several members of the railway staff were lent for the campaign in Palestine. A certain quantity of rolling-stock was also spared with some difficulty for the same purpose.

It is a matter for satisfaction that in spite of these difficulties not only was the ordinary traffic of the country regularly and efficiently carried, but the unprecedented demands for camels, cattle, sheep and grain for Egypt were met without hitch or failure.

The most important consideration now is to make good deficiencies in permanent way; rolling-stock and river vessels, which have seriously deteriorated during the past five years.

There is urgent need for materials to relay the line between Halfa and Abu Hamed and some little way south. It is extremely difficult to obtain sleepers at a reasonable price, but expenditure on this item must be faced.

An allotment of £E. 140,000 was made from the general reserve fund of the Government in 1919 for the purchase of locomotives and wagons.

Passenger Traffic.

Receipts have risen in 1919 from £E. 120,544 to £E. 138,564.

Goods Traffic.

The total tonnage carried has declined this year from 288,136 tons to 206,888 tons. The decline is due to the failure of the 1918-19 dura crop, the export of which declined from 87,990 tons to 13,309 tons.

Apart from this goods traffic has been satisfactory, the most noticeable feature being the unusually heavy date traffic.

Steamers.

Nile Navigation.

The Steamers Department which controlled the whole of the river traffic on the White and Blue Niles and their tributaries south of Khartoum, was incorporated with the railways on the 1st January, 1918.

The craft of the Department at the time they were taken over were in a condition which showed the strain caused by the exceptional difficulties and dangers of Nile navigation, and during the war it was impossible to undertake systematic renewals.

The plant and machinery of the Khartoum North Dockyard are inadequate, and there is a shortage of barges, specially for cattle. Twelve new barges are on order or in course of construction.

The general manager intends to proceed steadily with the renovation of craft, but anticipates that it will be some years before the service is in a fully satisfactory condition.

The traffic south of Khartoum has declined owing to the Gambela (Abyssinia) export of coffee and import of salt being below the average.

Great difficulty has been experienced in keeping the Bahr-el-Ghazal free from sudd blocks, and much delay to steamers has been caused thereby.

On the Halfa-Shellal Reach renovation was undertaken from 1912 onwards, and this service is now thoroughly efficient.

Port Soudan Harbour and Shipping.

The Harbours and Lights Administration at Port Soudan was passed over to the Railways Department in 1914.

A wireless station was erected at Port Soudan and the port was regularly used as a naval base and coaling station by His Majesty's ships.

Direct imports were very limited owing to the general shortage of shipping.

It is satisfactory to report, however, that adequate arrangements for homeward freights were made, and the Soudan has consequently disposed of its exports throughout the whole period of the war with no worse experience than moderate delay and partial congestion.

That such a successful result was obtained is due to the enterprise of the local shipping agents who received the assistance of the Government in securing due consideration at the hands of the shipping control authorities.

36. Roads.

Water Supply.

A certain amount of progress was made by opening new wells in Kassala, and especially Kordofan province, resulting in improving communication on the Gedaref-Mefaza, Fau-Gedaref and Obeid-Abu Zabbad road. A well of 400 feet depth at Um Ruaba struck a very useful water supply in a district which had suffered acutely from water scarcity. In 1917 this well was fitted with a Downie pump, and sales of water at reasonable rates commenced.

The uncertain well supplies, which normally kept the inhabitants and their animals alive, used at times to be sold by those fortunate enough to possess them at rates as high as 2½*d.* and more per 4-gallon tin of water, and in unfavourable seasons a portion of the population had to leave till the rainy season again came round. The Government supply at Um Ruaba will not only obviate this but also enable the people to be supplied throughout the year at a more reasonable cost.

The development of the cattle trade during the war and the increased export to Egypt drew attention forcibly to the importance of endeavouring to improve the water supply in certain provinces, and especially improving waterless roads by which cattle have to be brought into the railway for transport north.

A small technical committee for roads and communications was established early in 1918 under the presidency of the Director of Works. The opportunity was taken also to appoint an expert consulting engineer in connection with matters relating to obtaining water supplies, &c.

Owing to the war it was impossible to obtain plant and personnel promptly, but steps were taken to ensure a start on active experimental well boring early in 1919. El Obeid and the surrounding district were selected for first attempts. The town of El Obeid itself requires a largely increased supply of water, and in addition it is desired to provide for the cattle which concentrate there from the west and south-west to be exported by rail.

Rejaf-Libogo Road.

The construction of this road was in charge of the administrative staff of the province until the war. In 1915 it was decided to replace the existing bullock transport by mechanical transport, and to place the road under technical supervision.

An engineer and working party from the Public Works were sent up to Rejaf after the rains of that year.

During 1916 fair progress was made, but the tractors that were to have been placed on this road and which should have transported the bridging materials were diverted to the Darfur military operations, and progress was therefore much handicapped. The section of the road, Rejaf to Yei, was, however, completed. The work to make this road practicable for use during the long rainy seasons which obtain in these southern latitudes is very considerable; there are eighty water courses to be crossed in the first 200 kilom. alone.

In 1917 a single span steel bridge 193 feet long was erected over the river Yei. For lack of other mechanical transport ten Ford cars and trailers commenced running at the beginning of 1918 on the Rejaf-Yei section. These are not really suitable to meet the freightage demands economically, but the importance of not delaying matters made it advisable to commence with the only running plant available. By the end of 1918 these cars were running through to Libogo.

Motors.

The heavy American wheeled tractors referred to above as having been diverted for the military operations in Darfur were not at all successful in the heavy sand dunes of Kordofan. One of them, however, had been tested exhaustively in the transport of heavy machinery in the Blue Nile province, and was found to work well on the hard black "cotton soil."

During 1916 the Public Works Department established headquarters at Rahad for mechanical transport in connection with the Darfur Expedition. With the exception of the plant mentioned above only very light plant in the shape of Ford cars and lorries was available. There can be few more unsuitable countries for motor traffic than the steep gradients of the sand dune land, west of Nahud, that lies on the direct route between El Obeid and El Fasher. On the occupation of El Fasher, however, a regular bi-weekly service was kept going for four months, though the wear and tear on both plant and personnel was very heavy. The ordinary camel journey of eight days from El Obeid to Nahud was reduced by this service to eleven hours, and the through journey from Obeid to Fasher was made in six days.

An attempt to open what might have been a more feasible route further south had to be abandoned owing to military reasons in the first instance, and subsequently was postponed on account of the very large and as yet unwarranted expenditure that would have been entailed.

In 1917 a few Ford cars were placed with selected provinces with the idea of speeding up tax assessment, &c. The year 1918 proved that the provision of a suitable type of high-powered light car for Governors of provinces and their inspectors is well worth making in parts of the country, and in consequence the supply is being increased.

Early in 1919 work on the improvement of water supplies was taken in hand. During the year thirteen borings were made.

The principal object of the preliminary scheme is to increase the water supply along the roads for the benefit of the cattle trade. Consequently the borings cannot be confined to places where there are hopeful indications of water, but experiments have to be made in places that are convenient in respect of the roads. Some disappointments are therefore inevitable. Even unsuccessful experiments, however, add to the general information, and help to show areas in which no improvement by underground supply can be expected, but where efforts should be concentrated in conserving rain water.

Unfortunately for the experiments last year, the heavy drilling plant could not be transported far over the sandy tracts of the district selected, and had to be used in the vicinity of the railway. Two wells were sunk at Rahad and Um Koeika, which are of great value to the railway and the district in the immediate neighbourhood. In the autumn a caterpillar tractor was obtained which is capable of transporting the plant, so that next year the working need not be so restricted.

The Rejaf-Libogo Road.

Heavy lorries were arranged for towards the end of the year and are expected to be operating early next year. It had been hoped to obtain these lorries earlier from the surplus stores of the Egyptian Expeditionary Force in Egypt, but their release was delayed. To make certain soft sections of this road suitable for heavier traffic, a petrol-driven road roller has been ordered. The importance of developing this line of communications cannot be questioned. At present trade in the Lado and Eastern Belgian Congo is undoubtedly waiting on its improvement, and ultimately the fine timber in the neighbourhood of Yei must be made available not only to take the place of imported timber for work in the Soudan, but for export purposes to Egypt. A light railway is required, however, for transporting timber over so great a distance.

Tonga-Talodi Road.

The usual work was carried out to make this road possible for the transport of military stores by mechanical means during the non-rainy season.

A survey was made of the Khor Gelhak with a view to constructing, when staff is available, a causeway and small bridge to keep open during the rains the direct road from Gelhak on the White Nile to Abyssinia.

37. Posts and Telegraphs.

With two exceptions there was no important extension of the post and telegraph system during the period of the war.

During the Darfur operations the head of the telegraph system was pushed 246 miles westward to El Fasher. Material for the extension was obtained by dismantling two other telegraph lines of less importance and utilising the material so obtained and all spare material in the country.

Communication by wireless was introduced into the Soudan in 1915.

In that year stations were installed at Port Soudan, Malakal, Nasser and Gambela; in 1916 at El Fasher and Kebkebia (in Darfur); and in 1918 at Kereinik (in Darfur), Wau and Mongalla.

Owing to the impossibility of obtaining material the historic Suakin-Berber desert telegraph line has had to be dismantled and the supplies so obtained utilised in maintaining other lines. The wire was run on poles alongside the railway.

The old Turkish cable connecting Suakin and Jeddah (262 miles), was taken over in 1916, the two terminals being worked by the Soudan and Hashimite Administration respectively.

Rates.

The telegraph rates remained unaltered during the war. The postal rates were altered in two small particulars only: owing to the increase in transport rates the charges for transport of parcels between Egypt and the Soudan and in the Soudan itself were slightly raised; and owing to the increase in the cost of stationery the price of stamped stationery was slightly raised.

In spite of this the revenue increased 106 per cent. from £E. 68,810 to £E. 141,597.

As a result of rigid economy, and in spite of rising prices, the expenditure only rose 31 per cent. from £E. 93,753 to £E. 122,547. The greater part of this increase was absorbed by salaries.

The indoor and outdoor staff increased from 416 to 485 and 434 to 456 respectively.

The number of post and telegraph offices permanently open for traffic and including travelling offices increased from 84 to 90.

Correspondence dealt with increased from 6,650,607 to 7,533,758.

All the mail services were maintained.

The parcel traffic increased from 115,130 to 172,297 packages, and the receipts from £E. 4,363 to £E. 10,420.

The C.O.D. parcel traffic increased from 25,304 packages, valued at £E. 33,845, to 36,477 packages valued at £E. 123,846.

Remittances by money order increased in value from £E. 1,980,171 to £E. 5,059,524, and revenue derived from the commission from £E. 7,967 to £E. 12,531.

Savings bank deposits increased from £E. 3,189 held by 707 depositors to £E. 18,831 held by 1,638 depositors. Interest at $2\frac{1}{2}$ per cent. was paid. The bank was inaugurated in October 1913.

The telegram traffic increased from 558,561 messages to 894,473 messages, and the receipts from their transmission from £E. 39,121 to £E. 95,888.

Telephones.

Owing to the difficulty in obtaining materials, the policy has been adopted of concentrating all telephones in any one building in a branch exchange in preference to making direct connections to the main exchange. By doing this the limited capacity of the main exchanges has not been exceeded, but the financial result does not represent the actual increase of the system.

The system has increased from 7 exchanges, 10 branch exchanges and 353 telephones to 7 exchanges, 18 branch exchanges and 424 telephones.

In spite of this decentralisation the number of calls dealt with by the main exchanges has increased from 2,360 to 3,274 per day.

The revenue derived from subscription has increased from £3,057 to £3,198 per annum.

VII.—PUBLIC WORKS.

Early in 1915 war conditions began to be felt, and it was considered advisable to cancel all unexpended building credits except those for work actually commenced.

In May of that year a rather severe earthquake shock occurred in Mongalla province, badly shaking the Mongalla buildings, but the damage was not irreparable. Most of the old buildings taken over from the Belgians at Rejaf, however, suffered severely, and had to be replaced by temporary structures. Earth-tremors have been frequent since this shock, and it is evident that some type of building designed to stand earth shocks will have to be adopted when erecting permanent buildings south of Bor. During 1916 but little new building work was done, the lack of funds and material causing a cessation of new work. The greater part of the Public Works Department supervising staff, however, was diverted to Kordofan and Darfur provinces for special service in road clearing, well sinking, erecting temporary buildings, &c., for the Darfur Campaign.

In 1917 and 1918 the impossibility of obtaining certain essential materials made it very difficult to carry out any programme of permanent buildings and necessitated the erection of temporary and semi-permanent buildings. This is not a satisfactory expedient, as such buildings are invariably extravagant to maintain and can only have a short life in the rainy districts of the country. The cost of carrying out works had by 1917 advanced enormously, and the scarcity of skilled labour became acute owing to the calling up of Greek reservists.

The pumping station at Tayiba and a second similar pumping station at Barakat, erected by the Director of Works in the summer of 1914 for the Soudan Plantation Syndicate, have been kept going by the Public Works Department, though in 1917 considerable difficulty was experienced owing to the long delay in obtaining essential renewals of portions of the machinery.

Buildings generally were well maintained during 1914 and 1915, but during 1916, 1917 and 1918 the shortage of paint and other materials—especially timber—normally obtained from Europe, became acute, and much work had to be postponed that should have been carried out. However, except in a few cases, dilapidations have not been severe. Efforts to adopt the use of local timber from the south to replace the imported timber always used hitherto were not very successful. There is good timber to be obtained from the Lado, but transport facilities were wanting and could not be extemporised while war conditions prevailed. The very high flood level of the Blue Nile in 1917 caused some anxiety for the foundations of the larger buildings along the river in Khartoum, but no serious damage appears to have been caused.

In 1919, as in 1917 and 1918, the difficulty of obtaining certain materials made it necessary to erect semi-permanent and temporary buildings constructed from local resources in spite of the heavier annual upkeep which such buildings are apt to entail.

In the first few years of the Government, when conditions in this country were somewhat rough and the standard of comfort more primitive than it is now, the bulk of the officials were unmarried. But the time has come when housing for married officials is essential. There is little prospect of the present demand for houses being met by private enterprise, and in consequence the Government has arranged a grant for building. With this a preliminary scheme has been started whereby some twenty-five married quarters will be erected for the use of British officials on the lower rates of pay. It is hoped that this will have a steadying effect on the upward tendency of rents for privately-owned houses, which has caused officials living in such houses to pay rents which are out of all proportion to their salaries. It is expected that this preliminary project may be completed by the end of 1920.

The provision of permanent buildings of a type suitable to ameliorate conditions of living in the southern and less healthy stations, is, however, not progressing as quickly as is desirable, owing to the difficulty of providing sufficient funds. And it is becoming more and more evident that some special means of providing such funds will have eventually to be arranged if any good progress in this direction is to be made. The increased cost of building due to enhanced cost of labour, high transport rates, and inflated prices for materials, is a severe handicap. Sums which in previous days enabled a fair programme to be taken in hand now have to be nearly doubled to provide the same accommodation.

The Burri electric light and water supply at Khartoum continued to run satisfactorily. The much-wanted extension has been arranged for financially, and the necessary plant ordered to cover estimated requirements in the way of anticipated demands for light and partially for water for the next few years. It is unlikely, however, that this additional plant will be actually installed till towards the end of 1920, as it is quite impossible to obtain prompt delivery of the machinery required.

The ice plant installed in 1917 at Burri has continuously worked at full capacity, and it is to be duplicated by the above-mentioned extension.

Buildings generally have been fairly well maintained throughout the country, though maintenance work is suffering rather from the enhanced cost of all materials and labour.

The Gezira pumping stations have run satisfactorily throughout the year.

The Public Works Department has, as usual, carried out engineer services for the British troops in the Soudan. Now that the costs of maintaining buildings are so very much higher, the allowance given to the Soudan Government for maintaining Imperial Government buildings and carrying out minor services should be augmented to prevent deterioration of the British barracks at Khartoum. A large expenditure is required on the verandahs of these buildings. The unprecedented number of sand storms experienced during the summer of this year caused an accumulation of sand drifts round the buildings, the cost of the removal of which cannot be met by the annual grant.

VIII.—JUSTICE.

The resignation of Mr., now Sir Edgar Bonham Carter, K.C.M.G., to take up the organisation of the judicial system in Mesopotamia in the Autumn of 1917 was an event which deserves notice. He had been for eighteen years in the service of the Government and was responsible for the creation and development of the whole legal and judicial system of the Soudan. He started in 1899 with himself and one clerk on the side of civil law, and seven Kadis of Mohammedan law with a staff of ten clerks. On his retirement, besides the legal secretary's own office, which dealt with the more general legal work of the Government, he left an organisation consisting of High Court, Province Courts, and District Courts for the administration of civil law; Moslem Courts, dealing with all matters of personal status of Moslems; an Advocate-General's office, dealing with the contentious and other legal business of Government departments and also with the administration of unrepresented estates of non-Moslems; a system of lands registration, and a separate department for the administration of Government lands.

Sir Edgar Bonham Carter was not only the founder of the legal system of the Soudan. He took the keenest interest in all matters connected with the administration, and the general policy of the country owes much to his wisdom, sympathy and energy. His departure is felt as a serious loss for both personal and public reasons, by all who knew him.

38. Civil and Criminal Justice.

The vacancy caused in 1914 on the High Court bench has not been filled; two district judges, lent by the Civil Service, have returned to administrative duties, two have been lent to Egypt and Mesopotamia, one province judge has retired, one has been raised to the High Court, and after the loan of temporary officers, who were barristers, we have now four new district judges and one province judge transferred from the Lands Department.

The comparative state of civil and criminal cases in the years under review is sufficiently shown by the following summarised tables:—

	1914.	1915.	1916.	1917.	1918.	1919.
Criminal cases—						
Summary	11,866	12,142	12,314	15,155	13,552	13,989
Non-Summary	1,470	1,229	1,166	1,385	1,642	1,835
Fines	£ 3,414	3,527	4,756	7,625	10,560	11,746
Civil suits	16,438	17,772	14,265	11,474	11,956	12,635
Appeals	118	105	87	88	104	134
Executions	2,212	2,206	2,214	1,595	1,739	..
Bankruptcies	14	9	1	2	2	4
Total fees	£ 4,495	4,688	4,407	3,971	7,035	5,394

39. Land Registration.

This work, the benefits of which are appreciated by the natives, has steadily increased, as is shown by the returns of deeds registered and fees taken during the last six years, namely :—

—					1914.	1915.	1916.	1917.	1918.	1919.
Deeds registered	..	..	..	..	4,955	3,337	2,558	4,063	3,619	3,994
Fees received	..	..	..	£	2,447	1,860	1,483	3,420	3,197	3,964

40. Legislation.

Apart from war proclamations and ordinances relating to contraband of war, trading with the enemy, martial law, &c., the chief ordinances of the period 1914–1919 were as follows :—

The Soudan Guaranteed Loan Ordinance, 1913.
 The Native Liquors Ordinance, 1914.
 The Customs (Duty on Alcoholic Beverages) Ordinance, 1914.
 The Foodstuffs and Necessaries (Regulation of Prices) Ordinance, 1914.
 The Government Town Lands (Native Occupation) Ordinance, 1914.
 The Courts Ordinance, 1915.
 The Civil Justice (Arrest and Attachment) Ordinance, 1915.
 The Fugitive Offenders Ordinance, 1915.
 The Soudan Non-Mohammedan Marriage Ordinance, 1915.
 The Soudan Guaranteed Loan Ordinance, 1915.
 The Harbour and Shipping Ordinance, 1916.
 The Bankruptcy Ordinance, 1916.
 The Land Acquisition (Amendment) Ordinance, 1916.
 The Locusts Destruction (Amendment) Ordinance, 1916.
 The Darfur Laws Ordinance, 1917.
 The Bills of Exchange Ordinance, 1917.
 The Pre-emption Ordinance, 1918.
 The Coinage Ordinance, 1918.
 The Native Disposition of Lands Restriction Ordinance, 1918.
 The House Tax Ordinance, 1918.
 The Soudan Guaranteed Loan Ordinance, 1919.
 The Governor General's Council (Amendment) Ordinance, 1919.
 The Soudan Government Pension Ordinance, 1919.
 The Auctioneers, Brokers and Pedlars Ordinance, 1919.
 The Agricultural Pests Ordinance, 1919.
 The Local Taxation Ordinance, 1919.

As in other countries it has been found necessary to continue some war legislation, *e.g.*, as to prices, into times of peace.

The proclamation of martial law was made in November 1914; it was not designed to supersede nor did it supersede the ordinary law, but merely afforded some assistance in dealing with censorship, alien enemies, persons trading with or suspected of trafficking with the enemy and deporting or interning undesirables.

41. Mohammedan Law Courts.

The most important event here has been the transfer to Egypt in 1919 of Sheikh Mohamed Mustafa El-Maraghi, for eleven years Grand Kadi, whose zeal, tact, energy and fair-mindedness have been invaluable, and who always most loyally co-operated with his chief and the Government.

The business of the Courts still steadily increases, and it is conducted with increased efficiency, as the more ignorant and old-fashioned kadis gradually disappear and better-trained ones replace them. This has been facilitated by the consent of the Egyptian authorities to these old gentlemen being given pensions, though more than 35 years of age when they entered the service.

A summary of the statistics for the years 1914–1919 for the Sharia Courts shows the increase of work :—

—	1914.	1915.	1916.	1917.	1918.	1919.
Suits heard	10,272	10,179	10,328	11,167	12,075	12,205
Proof of heirship	855	719	852	1,035	1,409	1,314
Ish-hadat	4,748	4,493	4,545	4,430	4,964	5,489
Total fees .. £	3,644	3,414	4,392	4,892	5,799	5,200

IX.—EDUCATION.

The director reports that work has proceeded steadily in spite of the difficulties of staff and material.

The educational work of Government has been confined to the northern half of the Soudan, in which the vast majority of the people are Muslims; the only schools among the pagan tribe of the south are those conducted by missionary societies. In the northern provinces Government is endeavouring, firstly, to spread the barest elements of knowledge among the settled inhabitants by opening elementary vernacular schools in the principal local centres; secondly, to teach English and ordinary school subjects to a limited number of the sons of officials and local notables by establishing primary schools in six of the larger towns; thirdly, to give a more advanced general course and special training of a professional character in teaching, engineering and Mohammedan law, through the agency of a small English and Egyptian staff in the Upper School of the Gordon College.

The English staff of the Gordon College, which was originally small in number, was reduced in 1914, but, though no real expansion has therefore been possible in this sphere, no ground has been lost.

The pre-war provision for primary education, which meets a limited demand only, appears to be still adequate, the number of boys in attendance has increased and the standard has been more than maintained. In the sphere of elementary vernacular education, on the other hand, a steadily increasing output of Soudan-trained teachers has resulted in real progress, both qualitative and quantitative, and this part of the work, which is the foundation of all the rest, was never so advanced as it is to-day.

Increased attention has been paid in every grade of school to the health and physical culture of the boys by way of medical examinations and treatment, by instruction in elementary hygiene and by the further development of games. The Boy Scouts movement has been started very successfully both in Khartoum and Wad Medani.

The instructional workshops in Khartoum and Omdurman for the training of artisans have had to contend with special difficulties throughout the war, both tools and raw materials having been hard to come by, but all the sections in these workshops are full.

The attitude of the people towards girls' education has changed very much for the better, but want of funds and staff has prevented Government from availing itself of this change; the Government has five elementary girls' schools in the provinces, but the only higher girls' schools are managed by missionaries, English, American and Austrian.

The educational work of the different missionary societies in the southern provinces has naturally been affected adversely by the war. The Church Missionary Society has opened two or three small district schools in Mongalla province, but has not yet been able to open the central school which has been planned for some years. The Soudan United Mission (Australian) hopes shortly to open a school in the Nuba mountains; the Italian missionaries continue to do good work in the Bahr-el-Ghazal province, and the American missionaries have a small school in the Upper Nile province.

During 1919 there has been a considerable increase in the number of pupils attending elementary vernacular schools. No new schools were opened in 1919, but four are projected for 1920.

There has been no expansion in primary education, but satisfactory progress is being made.

The proportion of boys coming from native tribes is on the increase, which is a favourable sign.

There has been since the war a considerable increase in the demand for technically and industrially-trained boys, which, owing to the reduction which had necessarily to be made during the war, it has been difficult to meet. Over 300 boys trained in the Gordon College workshops are now in Government service, and another 100 are satisfactorily employed in various posts elsewhere. The question of a further expansion now calls for careful consideration.

42. Geological Survey.

Geological work was interrupted by war duties, but the Government geologist was able to devote attention to various matters arising from the irrigation projects. Detailed reports were made on dam sites under consideration, and the proposal to manufacture cement involved surveys of the local supplies of raw materials. In this connection a most important discovery was made near Jebel Segadi, where deposits of excellent limestone were found within a few miles of the existing railway, and far more conveniently situated than any deposit previously known.

43. Wellcome Tropical Research Laboratories.

The Wellcome Research laboratories suffered very severely in the first year of the war from shortage of staff owing to the services of members of the staff being lent for various special duties connected with the war, and at the same time they were seriously handicapped by the difficulty of obtaining apparatus and chemicals. Consequently their efforts were at first confined principally to research work connected with the immediate needs of the country. Later the situation as regards staff became a little easier and more progress was made.

A good deal has been done on the entomological side in the collection of information and experiments for the purpose of dealing with agricultural pests. In 1917 a number of staff were lent from other services and appointed temporarily to infested districts for the destruction of locusts with very satisfactory results.

It is proposed to develop the work of this side of the laboratories by the establishment of field branches in the principal agricultural districts.

The director records with deep regret the death in 1919 of Dr. William Beam, a chemist of American nationality, who had been in charge of the chemical section of the laboratories since 1904, and whose exceptional attainments and skill had been of the greatest value not only in research but in its practical application to the various medical and agricultural problems with which he had to deal.

While this report has been in the course of compilation, during the first few months of 1920 Dr. A. J. Chalmers, the director of the laboratories, retired from the post which he had held for seven years, and was succeeded by Major R. G. Archibald, D.S.O., R.A.M.C.

Dr. Chalmers, on leaving the Soudan, proceeded for a tour of foreign travel. Shortly after his departure news came that he had died in Calcutta after a short illness. Although this sad event occurred after the period covered by this report, I feel I must take the opportunity to express on my own behalf and that of the Soudan Government the deep regret which is generally felt for the loss of one who has rendered such distinguished service both to this country and to the cause of science, particularly in the difficult circumstances of the last few years.

44. Archæology.

The only archæological explorer who has visited the country during the war is Dr. G. Reisner, of Harvard University, who has made exceedingly interesting and valuable discoveries at Kurru and Nuri in the Dongola province. Having practically completed the excavation of the Nuri Pyramid group in the last two seasons, Dr. Reisner turned, in the season 1918-19, to the royal cemetery at Kurru which lies a few miles down stream of Jebel Barkal on the right bank of the river. Here he discovered the family burial place of the founders of the Ethiopian dynasty and of their ancestors. From the remains discovered important deductions can be made as regards the twentieth Egyptian dynasty.

The graves, tunnels, etc., were found to have been seriously plundered in the past, and only fragments of their former treasures were discovered.

X.—PUBLIC HEALTH.

In 1915 a reorganisation of the medical work of the Soudan was carried out with the creation under its own director of an independent Civil Medical Department which had previously been under the control of the Principal Medical Officer, Egyptian army.

A new system of registration of births and deaths has been instituted, which has resulted in a considerable increase in the number of registrations.

The following is a table of registration for the five years :—

—					1914.	1915.	1916.	1917.	1918.
Births..	..	..	..	..	16,645	12,818	15,303	14,078	18,935
Deaths	..	..	..	..	12,450	16,065	9,587	9,172	14,452

These figures do not approach completeness or accuracy, as may be shown by the fact that the estimates of population from other sources give a total of over 4,000,000 as against 3,400,000 in 1914 : but the system of registration does not obtain at all in the southern Soudan.

Seven outbreaks of cerebro spinal meningitis occurred in 1914 and 1915 with a heavy mortality.

As regards small pox, the Northern Soudan is fairly efficiently protected by vaccination. Small outbreaks occurred in Khartoum and Omdurman in 1917, but were soon controlled. Vaccinating tours are arranged as far as possible during the winter months, but have had to be curtailed owing to shortage of staff. Considerable success has recently been obtained in vaccinating among nomad arabs, who had previously been strongly opposed to it.

Small pox was prevalent in certain districts in 1919, principally Mongalla, and later the Upper Nile province. There were a few cases in Omdurman and Khartoum North during the summer.

In 1918 the Sleeping Sickness Commission was considered to have completed the duties for which it was appointed, and its advisory functions were taken over by the Central Sanitary Board, the executive work being continued by the Principal Medical Officer of the Egyptian army.

In the Yei River district of the Mongalla province about 175 patients, who had been three years free from symptoms, were discharged as cured.

In the last year progress has been made in the infected areas dealt with, and no new areas of human trypanosomi infection have been discovered. The Principal Medical Officer of the Egyptian army has forwarded me the reports of Captains Spence and Simson, R.A.M.C., on their several districts, and I fully endorse his tribute to the patient steady work which these two officers and their Egyptian and Syrian staff are doing.

The influenza epidemic made its appearance in the Soudan in September 1918. It became very general throughout the Soudan, with a considerable mortality. The district which suffered the most appears to have been Berber province, north of Khartoum. It reached its most virulent stage in February 1919, and died away in April and May.

It is not possible to give more than an approximate estimate of the extent of the outbreak and consequent mortality. The Senior Medical Officer, Kassala, estimated 1,600 cases out of a population of 6,000 in Gedaref alone; thirty-five deaths from the disease were notified. The death-rate of all cases admitted to hospital was about 6 per cent.

Malaria on the whole was not severe except at Makwar in the Sennar province, where the Blue Nile dam is to be constructed.

Much work is being done in continuing the antimony treatment of bilharzia, first fully investigated and developed by Dr. J. B. Christopherson, the Director of the Khartoum and Omdurman Civil Hospitals.

Dr. E. S. Crispin, the Director of the Medical Department, reports that considerable difficulty is still experienced in respect of both staff and hospital requirements. Advertisements for medical inspectors produced few replies and there has been a similar difficulty in obtaining Syrian and Egyptian staff.

Funds were provided this year for a maternity school. The buildings are being constructed.

Dr. J. B. Christopherson, C.B.E., who has done valuable work as Director of the Khartoum and Omdurman Civil Hospitals for many years, retired on pension in May 1919.

XI.—CONCLUSION.

The war has on the whole been a period of marked economic prosperity for the Soudan. The possibilities and advantages of trade have been brought home to a larger number of the population than before, and there has been an advance in energy and initiative, particularly among those who make their living by cultivation.

Politically, also, the war has had a considerable effect. I cannot say that at the outset the issues involved were properly appreciated by the bulk of the people, but among the more intelligent and educated men there were many who realised how much was at stake. These have not ceased to identify themselves with our cause and to show their confidence in a victorious conclusion of the war by every means in their power, both by loyal messages and speeches, and by active assistance on every occasion when the Government has made calls upon their services. As time went on their sentiments communicated themselves to the mass of the people, who gave striking confirmation of their good-will and loyalty towards us by the readiness with which they responded to the demand of camels, cattle, and grain for the Expeditionary Force in Egypt.

The spirit of co-operation thus engendered has, I believe, not only drawn the people closer to the Government, but has induced a more definite sense of unity among themselves, which will, I am convinced, have a high value in their future development.

I cannot close this report without expressing my sense of the high services rendered by the whole staff of the country, both military and civil, during the past five years. When the war broke out their lot seemed a hard one. It was the first wish of probably every Briton in this country to take a more active share in the conflict with Germany than their routine of duties out here appeared to afford them. The gratification of this wish was of necessity denied them. Had resignations been permitted to take place freely the country would have been left with no British officers or officials of military age and fitness. The intimation that their duty lay in this country has been loyally accepted, and no effort has been grudged to maintain the efficiency of the administration throughout a difficult time. The burden has been increased by the addition of the numerous special duties inevitably created by the circumstances of the war, and has been accentuated by the curtailment of leave and the difficulty of filling the vacancies that the normal casualties of the service have caused. That we can look back with satisfaction on these past years, and can even record progress, is due in no small degree to the steady and conscientious work performed by all.

LEE STACK, *Major-General,*
Governor-General of the Soudan.

Khartoum, April 25, 1920.

