

Bechuanaland Protectorate report / Commonwealth Relations Office.

Contributors

Great Britain. Office of Commonwealth Relations.

Publication/Creation

London : H.M.S.O., [1960]

Persistent URL

<https://wellcomecollection.org/works/g4exj5sm>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

BECHUANALAND PROTECTORATE

Report for the Year
1960



LONDON

HER MAJESTY'S STATIONERY OFFICE

1963

79835

CONTENTS

Part I

	<i>Page</i>
General Review	1
Chapter 1 Population	
2 Occupations, Wages and Labour Organisation	9
3 Public Finance and Taxation	12
4 Currency and Banking	34
5 Commerce	34
6 Production	36
7 Social Services	
Education	51
Public Health	54
Housing and Town Planning	58
Social Welfare	58
8 Legislation	60
9 Justice, Police and Prisons	61
10 Public Utilities and Public Works	66
11 Communications	75
12 Press, Broadcasting, Films and Government Information Services	80
13 Flora and Fauna	81

Part III

Chapter 1 Geography and Climate	82
2 History	84
3 Administration	90
4 Weights and Measures	93
5 Reading List	93
Appendices: Official Publications	95

NOTE : During 1961 the currency of the Union of South Africa was changed from pounds, shillings and pence to rands and cents, and later the Union became the Republic of South Africa. Although both of these changes had taken place by the time of going to press, neither had happened during the year under review, and in consequence references in this report are to the Union of South Africa and not to the Republic, and financial information is given in pounds, shillings and pence.

PART I

GENERAL REVIEW OF THE MOST IMPORTANT EVENTS AND DEVELOPMENTS OF THE YEAR

Administration and General

In January the Prime Minister, the Rt. Hon. Harold Macmillan, was able to visit Francistown for a few hours on his way from Rhodesia to the Union of South Africa. The Prime Minister was accompanied by the High Commissioner, Sir John Maud.

The High Commissioner also visited the Protectorate in May, when he went to Kanye, in June, when he went to Maun, and in August, when he went on an extensive tour of the Northern Protectorate.

Other distinguished visitors during the year were the American Ambassador, Mr. P. Crowe, Mr. E. L. Sykes from the Commonwealth Relations Office, Mr. W. D. MacRae from the Ministry of Agriculture and Fisheries, who came to inspect the Lobatsi abattoir, and Mr. F. C. Catchpole, M.P., who came to consider and advise the Government on labour legislation.

The report of the Joint Advisory Council's Constitutional Committee, which had been submitted to the Secretary of State at the end of 1959 with the full support of the Council, was approved by the Secretary of State subject to a few minor amendments, all of which were accepted by the Constitutional Committee and the Joint Advisory Council.

A new Constitution, based on the recommendations contained in the report, was finally approved and the Order in Council by which it was made was signed by Her Majesty the Queen in December. Certain parts of the new constitution came into immediate effect, so that the necessary preliminaries could be carried out to bring it into full force on a day in 1961 to be appointed by the High Commissioner.

The new Constitution provides for the establishment of Executive and Legislative Councils as well as of an African Council which will serve as an electoral college for the African members of the Legislative Council and as a deliberative body for the consideration of matters exclusively the concern of the African population.

The Constitution is of the category giving what is usually termed "representative" government: that is, with a Legislature having an elected majority, and an Executive Council responsible to the High Commissioner, to which official and unofficial members of the Legislative Council are appointed by the High Commissioner.

Election to the Legislative Council is on the basis of communal representation, with parity of numbers of Africans and Europeans. Asians are represented by one member. Europeans and Asians will elect by direct ballot, but Africans will for the time being choose their representatives indirectly through a series of electoral colleges, thus conserving the main features of the traditional "kgotla" system, until the development of political organisations makes it practicable to operate direct elections.

The year has seen the birth of two political parties, the Bechuanaland Protectorate Federal Party and the Bechuanaland People's Party. Neither had advanced beyond the embryonic stage by the end of the year.

Control of the Lobatsi abattoir was taken over from the Colonial Development Corporation at the end of the year by a company known as Bechuanaland Abattoirs Ltd., in which the Government and the producers share control with the Colonial Development Corporation, the latter remaining the managing agents.

A new maize mill was established in Lobatsi, and came into operation in August. 1960 was a year of serious drought, so the mill has not yet been tested to capacity, but it is estimated that it will be able to process the entire maize crop of the Protectorate, and so bring down the price of maize meal to the consumer.

The report of the Economic Survey Mission was received during the year, and is being studied with a view to deciding how best to implement its recommendations.

Joint Advisory Council.

Two meetings of the Council were held during the year. The first, held in January, was a special meeting to consider the government's proposals for the expenditure of Colonial Development and Welfare Funds over the period 1960 - 1964, and certain other proposals to increase revenue originally made in the previous year by the European Advisory Council Finance Committee. At its second meeting in October the Council debated and agreed

upon more than 20 motions. Of these the most important were that the present time was the most opportune for the movement of Government headquarters to the Territory, that the Council give a mandate to the Constitutional Committee to settle with Government the draft Electoral and Powers and Privileges Laws and the Standing Orders for the Legislative Council, that Government establish a Game Reserve in the Northern Protectorate, and that Government take over the Post Office Savings Bank from the Union of South Africa Post and Telegraphs Department. The Council also considered the following draft legislation:—

Amendments to the Criminal Procedure Laws.

Amendments to the Trading Proclamation.

European Advisory Council.

This Council did not meet during the year under review because its functions had been superseded by those of the Joint Advisory Council whose membership includes all European Advisory Councillors.

African Advisory Council.

The 40th Session was held in May and June when the Council considered among other matters the need for increased medical facilities, financial responsibility for post primary education, the implementation of proposals for the decimalisation of currency and the training of students at the Veterinary Department school. The Council also considered the following draft legislation:—

Amendments to the African Immigration Proclamation.

FINANCIAL AND ECONOMIC.

The grant-in-aid from the United Kingdom for 1959/60 amounted to £650,000 as estimated. The estimated grant-in-aid for 1960/61 is £970,000. In addition Colonial Development and Welfare funds provided £284,071 in 1959/60 and £170,000 is expected in 1960/1. Details of Colonial Development and Welfare Fund schemes for 1959/60 are shown in Appendix I.

Revenue for the financial year 1959/60, excluding grant-in-aid, amounted to £1,237,190 and ordinary expenditure to £1,912,785. The total ordinary revenue plus the grant-in aid and Colonial Development and Welfare funds amounted to £2,171,261 and the total expenditure including Colonial Development and Welfare schemes to £2,187,275 resulting in an overall deficit of

£16,014. The General Revenue balance on 31.3.60 amounted to £37,784. This does not include (a) the sum of £1,631 due from the Colonial Development and Welfare fund in respect of under-issues as at 31.3.60, (b) Public Debt amounting to £1,083,838 and (c) Statutory Sinking Funds for Public Debt of £59,365.

A statement of Loan Expenditure is attached as Appendix IB.

AGRICULTURE AND VETERINARY.

The 1959/60 crop season was generally one of the poorest for many years. Except for the Bangwaketse district, where a fair crop was reaped following heavy rain in December, and the Barolong Farms, where the season was fair in spite of a heavy frost in May which damaged late crops, the season was one of high temperatures and scattered rains.

A full programme of crop and pasture experimental work was carried out at Mahalapye and Morale, and in spite of the poor season cattle at the Morale station maintained their condition remarkably well, indicating the importance of stocking pasture correctly according to its carrying capacity.

Agricultural extension work was done in all tribal areas in the eastern parts of the Territory, and has received an excellent response from most farmers. The poor season emphasised the value of proper cropping methods, which resulted in some remarkable yields in spite of the drought.

The year was not a particularly successful one for the live-stock industry. The failure of the rains during the first part of the year resulted in severe drought conditions over practically the whole territory by mid-winter with considerable mortality in the live-stock population.

In May the first of a series of outbreaks of foot and mouth disease was detected at Nata in the Northern Protectorate. Several other foci of infection were later found at different points in the northern territory. The disease gradually spread until the whole of the Northern Protectorate was infected. The export of cattle from the north to Lobatsi abattoir was stopped completely from July to the end of the year. At the end of December the whole of the Northern Protectorate was still under quarantine restrictions due to foot and mouth disease.

Despite this fact a total number of 78,839 head of cattle were slaughtered at lobatsi during the year. While this is below the

record figure of 89,569 for 1959, it still represents a reasonable take off for the year.

The Veterinary Investigational Laboratory at Ramathlabama was brought into full operation during the year with the return to duty of the Veterinary Research Officer from a training course overseas.

EDUCATION AND SOCIAL WELFARE.

The building of classrooms and hostel accommodation continued, but remains a priority matter for the next Colonial Development and Welfare period. A small boarding school for Muslim children, towards the cost of which the Indian community contributed more than £15,000 was completed at Lobatsi. Missions have been active in expanding their educational facilities.

The report of the Rusbridger Commission on teachers' salaries and conditions of service was published in July.

Tswana courses for European officers of the civil service and Police were conducted by Professor D. Cole of the Witwatersrand University assisted by the Government translator, Mr. D. M. Mokaila, in January and February and in August and September.

Work was started on a new unified syllabus for all primary schools in the Protectorate, and a handbook on the teaching of decimalised currency has been prepared by the Education Department in preparation for the change from sterling in 1961.

GEOLOGICAL SURVEY AND MINERAL DEVELOPMENT.

The mineral survey of the potential coalfield at Mamabule was completed and a report prepared. Considerable reserves of relatively good coal were found at shallow and workable depths.

Production of manganese has increased steadily, and has been greatly stimulated by the installation of heavy media separation equipment in the Bangwaketse district the Marlime Chrysotile Asbestos Corporation, which nearly doubled the company's production of manganese.

In Ngamiland a more refined technique of developing boreholes has been made necessary by the caving in of running sands constituting the aquifer with conventional techniques.

Boreholes on the line of the Ghanzi cattle export route have been drilled.

Systematic geological mapping continued in the eastern parts of the Protectorate, and reconnaissance surveys were carried out in the southern Kalahari area, the Ngamilana region, and the eastern section of the Makarikari region.

A party of geologists visited the Protectorate under the auspices of the Geological Society of Southern Africa, and made an extensive tour of the southern Protectorate.

MEDICAL.

A new medical station was opened at Mochudi with a subsidiary dispensary at Mathobudukwane to give a much needed service to the Bakgatla.

A new Health Centre was built at Rakops and the old dispensary at Kasane was replaced by a new Health Centre at Kasane. Both these centres are staffed by Africans only.

Odd cases of small pox occurred in the eastern area of the Territory but there was no epidemic. Large scale vaccination campaigns were carried out in the area.

The construction of Tuberculosis blocks at Madinare, Maun and Ghanzi were completed during the year.

African nurses homes were completed at Francistown and Serowe.

The Maternity Unit at Francistown Hospital, the laundry at Serowe Hospital, and Isolation blocks at Francistown and Maun hospitals were completed during the year.

POLICE.

Criminal statistics for 1960 disclose that 7,558 cases were reported to and investigated by the Police. This is a decrease of 21.6% compared with last year's figures, and is in consequence of African Authorities dealing with all cases arising from contraventions of the African Tax Proclamation.

The approved establishment of the Force was increased by 1 Inspector, 4 Sergeants, 6 Corporals and 55 Constables.

POST OFFICE.

Postal services developed steadily during the year. Seven

new post offices were opened, bringing the total to 56. Several of the new post offices are in remote areas of the Kalahari region. A new building was constructed at Ramoutsa station for the post office, and a building at Lobatsi for a stores section.

Good progress was made with the provision of telephone services in the villages where there are telephone exchanges, and to neighbouring farms. A trunk telephone line 65 miles long was built from Mahalapye to Machaneng and Parr's Halt as part of a scheme to extend telephone service along the whole length of the Tuli Block.

PUBLIC WORKS.

During the year the staff position did not change appreciably, recruitment being offset by officers leaving the service. Vacancies exist in all the departmental branches with the exception of the Accounts Branch.

Roads Branch:

Generally speaking, the standard and condition of the roads maintained by the Public Works Department throughout the territory have not deteriorated during the past year, although considerable increases in traffic densities have been experienced on many.

The second meeting of the Roads and Air Transport Advisory board was held during May, at which the revision of the Motor Vehicle Proclamation was discussed at length.

Amongst the more important work carried out were the reconstruction and realignment of 145 miles of existing roads, over 50 miles of gravelling, completion of the Peleng bridge at Lobatsi, completion of the site and foundation investigations for the Thamelakane bridge at Maun and construction of the Ramoutsa bridge which is proceeding.

Reorganization of the Road Branch is in hand, with the objects of improving efficiency and technical control, and providing an organization for planning, investigation and surveys for future road construction schemes.

Water Branch:

The development and betterment of Government water supplies in townships, camps and institutions continued throughout the year. The more important items being the completion of the

427,000,000 gallon capacity Notwani dam to supply both the Railways at Notwani Siding and later Gaberones township, and the completion of the first phase of the augmentation to the Mahalapye supply by extracting water in suspension from the bed of the Mahalapye river; work is in progress on the treatment works, storage, pumping and gravity main at Notwani for augmentation of the Gaberones supply some eight miles north, and the first phase of the new water scheme from Woodlands farm borehole source, Lobatsi, to augment the Lobatsi supply is complete.

Progress in the development of underground water supplies continued satisfactorily and to the extent of funds available. During the year, 92 boreholes, supplying both Tribal and Government needs, were equipped with engine powered pumping plants of varying capacities.

Building Branch:

A large number of buildings were completed by the end of the year, the most important being —

Blocks of flats at Lobatsi, Francistown and Gaberones;

Gaol at Lobatsi;

Coloured School at Kanagas;

Indian School at Lobatsi.

Other important buildings in the course of construction were:

St. Joseph's College Hostel at Khale;

Additional blocks of flats at Francistown, Lobatsi, Gaberones, Maun;

5 Division I houses	} at various centres throughout the Territory.
26 Division II houses	
100 Division III houses	

Mechanical Branch:

The mechanical section carried out the usual overhauls, repair and maintenance of Government vehicles and plant.

PART II

CHAPTER 1

Population

The census taken in 1956 revealed the following population statistics: —

Africans	....	....	....	....	....	316,578
Asians	....	....	....	....	....	248
Coloureds	....	....	....	....	....	676
Europeans	....	....	....	....	....	3,173

Total.... 320,675

During the year there were 131 births and 24 deaths registered amongst Europeans, Asians and Coloureds. Births and deaths of Africans are not registered.

The great majority of the population live in the eastern and north-western parts of the Territory. About one-half live in villages of 1,000 or more inhabitants, although many of these spend a large part of their time at outlying cattle posts. There are four towns with a population of over 10,000 — Kanye, Serowe, Molepolole and Mochudi.

CHAPTER 2

Occupations

Wages and Labour Organisations

Stock raising and agriculture occupy almost ninety per cent. of the population. Livestock are cared for largely on a family basis, and the cultivation of crops (mostly at subsistence level) is for the most part a family concern. In these respects, therefore, the vast majority of the population is self-employed, and there is comparatively little paid labour in the Protectorate.

A certain number of African and most European farmers employ labour in the form of drovers, herders, cultivators and tractor drivers.

Trade and the limited industries presently existing provide employment for the majority of Europeans who are not farmers, and for a comparatively substantial proportion of African wage earners. Apart from the posts of shop assistants, storemen,

cleaners and labourers provided by trading firms, the abattoir, maize mill and soap factory at Lóbatsi, and the creamery, hides and skins depot and bonemeal factory at Francistown constitute the only industries offering employment.

There are, however, asbestos and manganese mines in the Southern Protectorate, which employ a small proportion of the total industrial labour force.

The railways administration and the labour recruiting organisations absorb a certain amount of labour in the form of porters, labourers, vehicle drivers and clerical staff. A small amount of labour is also employed in the building trade.

The largest single employer of labour in the Territory is the Government, which employs considerable numbers of unskilled casual labourers, clerks, policemen, teachers, nurses and artisans, as well as the normal officials necessary for the administration of the Territory.

It is estimated that the numbers of persons in employment are as follows:—

Government Service	....	....	....	3,300*
Agriculture	....	....	....	3,500
Building	....	....	....	500
Trade and Industry	....	....	....	3,500
Domestic Service	....	....	....	2,000

* This figure includes approximately 1,700 casual labourers.

Because of the small demand for labour within the Territory and the needs of the mining industry in the Union of South Africa, many adult males emigrate annually to work in the Union. During 1960, 25,315 workers left the Territory for this purpose.

WAGES AND CONDITIONS OF EMPLOYMENT.

Most agricultural and domestic workers receive free rations and quarters, and the majority of workers in industry are provided with houses, some also being rationed. The normal working week is 45 hours, but agricultural workers generally have no fixed hours of work.

Recruitment of labour for mines in the Union of South Africa is strictly controlled by law, and is almost entirely in the hands of two large and well-established organisations. Virtually all workers are repatriated, and many return for second and third contracts. The usual contract period is nine months.

The average wages per month are estimated to be as follows:—

Government Service	....	....	£5—£94
Agriculture	....	....	£4
Building	....	....	£6
Trade and Industry	....	....	£6
Domestic Service	....	....	£4

COST OF LIVING.

Price indices are not kept. The average prices of the principal commodities, compared with those in 1939, are as follows:—

	1960			1939		
	£	s.	d.	£	s.	d.
	lowest			highest		
Sugar per lb.			7			10
Tea per lb.			7 9			10 —
Coffee per lb.			3 9			7 6
Salt per lb.			2			4
Tobacco per lb.			3 6			12 6
Rice per lb.			1 —			1 9
Maize meal per 180 lb.	2	4	9	3	10	—
Maize per 200 lb.	2	4	9	3	7	6
Sorghum per 200 lb.	2	15		4		
Paraffin per 4 galls.	15			1	2	6
Soap per bar	1	2		2		
Beef per lb.	1			1	9	
Mutton per lb.	1	3		2	6	
Butter per lb.	3	6		4		
Eggs per doz.	2			5		
Wheat flour per 200 lb.	4			5	2	6
Brandy per bottle	15	6		1	7	6

TRADE UNIONS AND INDUSTRIAL RELATIONS.

There are two registered Unions, both of which have a very small membership and neither of which has been active during the year. No employers' organisations exist. The comparative lack of industry and the fact that the majority of workers are self-employed has not encouraged the formation of machinery to control industrial relations which nevertheless are very satisfactory.

INDUSTRIAL TRAINING.

A limited number of artisans and mechanics are trained by Government and a small clerical training course is run by one of

the Missions. Plans to establish a Trade School were formulated during the year.

LABOUR DEPARTMENT.

The care of labour and the administration of the laws relating to labour are in the hands of District Commissioners. There is no Labour Department.

LABOUR LEGISLATION.

No labour legislation was enacted during the year.

CHAPTER 3

Public Finance and Taxation

The financial position of the Protectorate is as follows:—

General Revenue Balance on 1.4.59				£53,798
		APPROVED ESTIMATES £	ACTUAL FIGURES £	
Ordinary Expenditure ....	....	1,891,459	1,912,785	
Ordinary Revenue ....	....	1,241,459	1,237,190	
		650,000	675,595	
Grant-in-Aid from U.K. Government ....	....	650,000	650,000	
		—	£25,595	25,595
(Surplus (+)) ....	....			+28,203
(Deficit (—)) ....	....			—
Excess of C. D. & W. revenue over expenditure ....	....			9,581
Surplus on 1.4.60 ....	....			37,784
Under-issues from C.D. & W. Fund on 31.3.60 ....	....			1,631
				£39,415

REVENUE AND EXPENDITURE

Revenue for 1959/60, including receipts from the Colonial Development and Welfare Fund, amounted to £2,171,261 and the Expenditure, including that on Colonial Development and Welfare Schemes, was £2,187,275. Details are as follows:—

Revenue		Expenditure	
Head	Amount £	Head	Amount £
Customs and Ex- cise	307,168	Central Adminis- tration	142,355
Taxes and Duties	457,852	Administration of Justice	16,088
Licences	54,224	Agriculture	68,005
Fees of Court or Office and earn- ings of Depart- ments	61,899	Allied Services	102,483
Posts and Tele- graphs	184,570	Audit	6,891
Judicial Fines	9,520	Contributions to Colonial Deve- lopment and Welfare Schemes	43,944
Revenue from Gov- ernment Pro- perty ..	143,231	District Adminis- tration ..	186,680
Reimbursements ..	3,539	Education	123,430
Interest ..	1,094	Game	4,810
Miscellaneous ..	14,093	Medical	183,253
Sale of Crown Land	—	Pensions and Gra- tuities ..	65,622
Grant-in-aid from United Kingdom Government	650,000	Police	184,013
		Posts and Tele- graphs ..	77,700
	1,887,190	Prisons	25,971
Colonial Develop- ment and Wel- fare Funds	284,071	Public Debt	80,760
		Public Works De- partment	332,944
	£2,171,261	Public Works Ex- traordinary ..	48,261
		Veterinary	219,575
			£1,912,785
		Colonial Develop- ment and Wel- fare Schemes	274,490
			£2,187,275
		Deficit: £16,014	

The following reflects the total Ordinary Revenue and Ex-
penditure for the past ten years:—

REVENUE

Year	<i>Grant-in-Aid United Kingdom Treasury</i>		Total
	Revenue £	£	
1950/51	554,161	—	554,161
1951/52	770,043	—	770,043
1952/53	772,089	—	772,089
1953/54	908,255	—	908,255
1954/55	908,515	—	908,515
1955/56	970,341	—	970,341
1956/57	992,781	140,000	1,132,781
1957/58	967,434	480,000	1,447,434
1958/59	1,125,292	560,000	1,685,292
1959/60	1,237,190	650,000	1,887,190

EXPENDITURE

Year	Amount £
1950/51	569,309
1951/52	620,087
1952/53	765,311
1953/54	891,700
1954/55	945,148
1955/56	1,093,315
1956/57	1,230,714
1957/58	1,633,717
1958/59	1,612,932
1959/60	1,912,785

Expenditure on Colonial Development and Welfare Schemes during the past ten years was as follows:—

Year	Amount £
1950/51	117,413
1951/52	137,065
1952/53	182,698
1953/54	123,305
1954/55	133,587
1955/56	184,460
1956/57	417,176
1957/58	452,475
1958/59	326,831
1959/60	274,490

MAIN HEADS OF REVENUE

The main heads of revenue for 1959/60 were Customs and

Excise £307,168, Taxes and Duties £457,852, Posts and Telegraphs £184,570 and Revenue from Government Property £143,231.

PUBLIC DEBT

Public Debt amounted to £1,083,838-5s.-5d. on 31.3.60.

ASSETS AND LIABILITIES

The Statement of Assets and Liabilities as at 31st March 1960 is as follows:—

STATEMENT OF ASSETS AND LIABILITIES AS AT 31ST MARCH, 1960

LIABILITIES				ASSETS			
	£	s.	d.		£	s.	d.
<i>Deposits</i>				<i>Cash:</i>			
<i>Suspense Grain Trading</i>	74,499	19	6	Sub-Accountants	43,476	10	3
<i>Special Funds:</i>	5,544	18	11	Union Postmaster-General ...	6,571	3	6
Bechuanaland Protectorate				Rand Agent	2,644	3	0
Native Fund	48	17	1	Crown Agents — Cash ...	971	1	0
Cattle Export Levy Fund ...	24,480	2	8	— Joint Consolidated Fund	99,000	0	0
Colonial Development & Welfare Fund	37,147	15	8				
Dairy Industry Fund	13,369	5	11	In Transit	152,662	17	9
European Post - Secondary Bursary Fund	1,018	2	0		14,180	3	8
Feitelberg Bursary Fund ...	292	0	2				
Frank Pearson Legacy	930	4	6	<i>Special Funds Investments:</i>			
Guardian's Fund	16,080	10	9	Cattle Export Levy Fund ...	20,500	0	0
Ranching Settlements	8,082	15	2	Dairy Industry Fund	10,000	0	0
Police Rewards Fund	479	19	10	European Post - Secondary Bursary Fund	995	5	4
Savings Fund	89	10	1	Feitelberg Bursary Fund ...	287	6	4
	102,019	3	10	Guardian's Fund	13,156	9	10
<i>Unexpended Loan Balances:</i>				Police Rewards Fund	411	9	2
6½% Intercolonial Loan 1978 (No. 3)	4,969	18	5	Frank Pearson Legacy ...	807	0	0
6½% Intercolonial Loan 1978 (No. 4)	15,475	3	9				
6½% Intercolonial Loan 1983 (No. 4)	89,000	9	7	<i>Advances (including those pending raising of loans) ...</i>			
	109,445	11	9		46,157	10	8
<i>General Revenue Balance:</i>					116,292	12	1
Balance on 1.4.59	53,798	3	11				
Add C.D.&W. Surplus 1.4.59 — 31.3.60	9,580	13	11				
	63,378	17	10				
Less Ordinary Deficit 1.4.59-31.3.60	25,595	7	8				
	37,783	10	2				
	£329,293	4	2				
					£329,293	4	2

The above statement does not include (a) the sum of £1,630.13.0 due from the Colonial Development and Welfare Fund in respect of under-issues as at 31st March, 1960, (b) Public Debt amounting to £1,083,838.5.5 and (c) Statutory Sinking Funds for Public Debt

HEADS OF TAXATION

I. CUSTOMS AND EXCISE £307,168

In accordance with the agreement concluded between the Governments of the Union of South Africa and the Bechuanaland Protectorate the latter receives 0.27622 per cent. of the total import and excise duty collected by the former. Import duty on Union-manufactured spirits, sparkling and fortified wine and malt is collected by the Bechuanaland Protectorate on import into the Protectorate at the following rates provided for in Proclamation No. 37 of 1951 and No. 34 of 1953:—

Whisky	£4. 5. 0 per Imperial Proof Gallon
Brandy	2.12. 6 per Imperial Proof Gallon
Gin 'Class A'	2.12. 6 per Imperial Proof Gallon
Gin 'Class C'	3. 5. 0 per Imperial Proof Gallon
Liqueurs	3. 7. 6 per Imperial Proof Gallon
Sparkling Wine	9. 0 per Imperial Gallon
Fortified Wine	2.11 per Imperial Gallon
Malt	5. 3 per Standard Gallon

The total collections for 1959/60 amounted to £37,822.

The following table shows the total collections for the last seven years under the Head Customs and Excise:—

<i>Year</i>	<i>Total</i> £
1953/54	175,961
1954/55	161,988
1955/56	200,420
1956/57	202,382
1957/58	229,848
1958/59	260,428
1959/60	307,168

The estimate for 1959/60 was exceeded by £11,822.

II. TAXES AND DUTIES £457,852

(a) Native Tax

Ordinary £191,484.

Chapter 93 of the Bechuanaland Laws (1959) provides for a tax of £2 per annum payable by every male African of the apparent age of 18 years or more.

Up to 31.12.57, 35% of ordinary tax collected in respect of areas where African Administrations have been established was paid to the respective African Treasuries. From 1.1.1959 this contribution was increased to 50%.

The following table shows the total collections for the last ten years:

<i>Year</i>	<i>Total £</i>
1950/51	95,933
1951/52	103,531
1952/53	102,702
1953/54	133,818
1954/55	129,320
1955/56	135,733
1956/57	131,907
1957/58	134,780
1958/59	181,113
1959/60	191,484

Collections were £18,484 more than the estimate.

(b) Graded £937

Chapter 94 of the Bechuanaland Protectorate Laws (1959) provides for a graduated tax payable by all Africans and varying from 5/- per annum (for a taxpayer owning up to 9 head of stock or earning £48 per annum) to £10 per annum (for a taxpayer owning over 300 head of stock or earning over £500 per annum) with the exception of the Bangwaketse, Batlokwa, Bamalete, Bakgatla, Bakwena and Tati tribes who pay a tax based on the above assets, varying from 10/- per annum to a maximum of £15 per annum in respect of the former three and £20 per annum in respect of the others. Women and minors owning less than ten head of stock are not liable for tax nor is any African under the age of twenty-one years who has attended a recognised school during the year. Collections were under-estimated by £437. Government only receives Graded Tax collected in respect of districts in which there is no Tribal Treasury; in these areas the tax accrues to the African Administrations.

Non-African Poll Tax £4,119.

Chapter 90 of the Bechuanaland Protectorate Laws provides for a tax of £3 per annum payable in advance on the 1st July by all males who have attained the age of 21 years, have been resident in the Protectorate for 180 days prior to the beginning of the

tax year (1st July) and who are not liable to pay African Tax. Collections were £281 less than the estimate.

Income Tax £145,650.

The following were the rates of tax, rebates and surcharges on taxable income for the year ended 30th June, 1960, as amended by Proclamation No. 45 of 1960 and No. 60 of 1960:—

Normal Tax:

Unmarried persons: Eighteen pence for each pound, increased by one-thousandth of a penny for each pound of the taxable income in excess of one pound. If the taxable income exceeds £9,300 the rate is 3/1d. per £.

Married persons: Fifteen pence for each pound, increased by one-thousandth of a penny for each pound of the taxable income in excess of one pound. If the taxable income exceeds £9,300 the rate is 2/10d. per £.

Rebates:

	£	s.	d.
Married person	31	0	0
Unmarried person	23	0	0
First two children	15	0	0
And thereafter	17	0	0
Dependant	2	10	0
Insurance		1	3

per £ of premium with
maximum of £7.10.0d.

Medical and Dental Expenses: Every taxpayer who is ordinarily resident in the Territory or employed by the Protectorate Government may claim a deduction up to an amount of £100 of fees (net borne by taxpayer) for dental and medical services rendered to himself, his wife and children, nursing home and hospital expenses and contributions to a Medical Aid Society recognised by the Collector. (Doctors', etc. receipts must be attached).

Surcharges:

Married persons: 35% of the tax
Unmarried persons: 45% of the tax

Super Tax:

Individuals: Two shillings in the pound plus one-four-hundredth of one penny for each pound of the income subject to super tax in excess of one pound less a rebate of £285 from the tax payable. There is a surcharge of 40% in the case of married persons and 45% in the case of unmarried persons and private companies. If the income subject to super tax exceeds £9,300 the rate is 5/10d per £.

Companies: These are liable only to Normal Tax as follows:—

	per £
Public	6/-
Private — first £2,500	4/-
exceeding £2,500 ..	6/-

The following table shows the incidence of Income Tax in the Protectorate:—

NORMAL TAX

Classification of Arrear Assessments issued in respect of the years prior to that ended
30th June, 1959, during the year ended 31st March, 1960

Income Category	Number of Taxpayers			Amount of Taxable Income			Amount of Tax Payable		
	Individuals		Total	Individuals		Total	Individuals		Total
	Married	Single		Married	Single		Married	Single	
£				£	£	£	£	£	£
301-400	7	4	13	390	1,048	1,581	132	20	170
401-500	—	2	2	—	1,000	1,000	—	45	45
501-600	1	1	3	583	525	1,653	178	28	315
601-700	2	2	4	1,395	1,245	2,640	128	70	198
701-800	2	1	3	700	711	1,411	136	44	180
801-900	—	4	5	—	3,534	4,343	—	229	451
901-1,000	3	—	4	2,920	—	3,885	79	—	344
1,001-1,200	2	1	3	2,096	1,130	3,226	55	69	124
1,201-1,500	4	1	6	5,437	1,224	8,061	290	107	561
1,501-1,750	4	1	5	6,607	1,684	8,291	457	177	634
1,751-2,000	3	1	4	5,451	1,823	7,274	310	174	484
2,001-3,000	8	2	13	20,310	4,624	31,851	1,711	501	2,488
3,001-4,000	6	1	8	21,711	3,362	28,570	1,835	338	3,222
4,001-7,000	—	—	2	—	—	11,470	—	—	2,157
Over 7,000	—	—	—	—	—	—	—	—	—
TOTAL	42	21	75	67,600	21,910	115,256	5,311	1,802	11,373
						25,746			4,260

SUPER TAX

Income Category	Number of Taxpayers			Amount of Taxable Income			Amount of Tax Payable		
	Individuals		Total	Individuals		Total	Individuals		Total
	Married	Single		Married	Single		Married	Single	
£				£	£	£	£	£	£
2,001-3,000	16	2	18	22,727	3,643	26,370	1,767	66	1,833
3,001-4,000	6	1	7	21,711	3,362	25,073	1,763	163	1,926
4,001-7,000	—	—	—	—	—	—	—	—	—
Over 7,000	1	—	1	8,478	—	8,478	273	—	273
TOTAL	23	3	26	52,916	7,005	59,921	3,803	229	4,032

Cattle Export Tax £86,559:

Chapter 95 of the Bechuanaland Protectorate Laws (1959) provides for a tax of £1 upon every head of horned cattle exported from the Protectorate or slaughtered in the Colonial Development Corporation abattoir. 2s. of each tax of £1 imposed is paid into the Cattle Export Levy Fund which is used for the general benefit of the livestock industry. Collections were over the estimate by £1,559.

Transfer Duty £20,046:

Chapter 88 of the Bechuanaland Protectorate Laws (1959) provides for transfer duty on immovable property at the rate of 2%. Chapter 89 of the Bechuanaland Protectorate Laws provides for a surcharge of 1% on the dutiable amount which exceeds £1,000 but does not exceed £2,000, and 2% on the dutiable amount which exceeds £2,000. Collections exceeded the estimate by £46.

Death Duties £4,717:

The following rates are laid down in Chapter 84 of the Bechuanaland Protectorate Laws:—

(a) *Estate Duty*: Upon the first £2,000 of dutiable amount $\frac{1}{2}\%$. Upon so much of the dutiable amount as exceeds £2,000 and does not exceed £3,000 — 1%; £3,000 and does not exceed £7,500 — 2%; £7,500 and does not exceed £10,000 — 3%. Thereafter the rate of estate duty upon each pound of the dutiable amount in excess of £10,000 shall be three-ten-thousandths of a pound for every completed one hundred pounds or part thereof contained in the dutiable amount, subject to a maximum rate of six shillings and eight pence upon each pound.

(b) *Succession Duty*:

<i>Degree of relationship of Successor to Predecessor</i>	<i>Rate of duty upon dutiable amount of succession</i>
(1) Where the successor is the direct descendant of the predecessor	3%
(2) Where the successor is the brother or sister of the predecessor	5%
(3) Where the successor is the descendant of the brother or sister of the predecessor	8%
(4) Where the successor is otherwise related to the predecessor or is a stranger in blood or is in an institution	12%

Provided that —

(a) so much of any dutiable succession as exceeds ten thousand pounds in value shall be subject to an additional duty of 1% on the amount of such excess;

(b) where the successor is married to a person related by blood to the predecessor the rate of the duty chargeable shall be determined by the relationship of whichever of the two spouses is more nearly related to the predecessor;

(c) where the predecessor was married to a person related by blood to the successor the rate of duty chargeable shall be determined by the relationship of the successor to whichever of the predecessor and his or her spouse was more nearly related to the successor.

Collections were below the estimate by £2,282.

Export Duty, Ivory, Game, Hides, Skins, Meat, etc. £3,349

Chapter 114 of the Bechuanaland Protectorate Laws, as amended by High Commissioner's Notices Nos. 34 of 1953 and 3 of 1954, provides for an export tax on the skins of hoofed game, ivory, game-heads, meat, rhino horn, hippo tusks and teeth at a rate varying from 2d. per lb. in respect of hippo tusks or teeth to 5s. per lb. on unmanufactured ivory and rhino horn and 10s. per game head. Collections exceeded the estimate by £1,849.

Export Tax — Bones:

Government Notice No. 74 of 1954 provides for a tax of £5 per short ton of 2,000 lb. on bones exported from the Territory, with the exception of the Ghanzi district and part of the Kgalagadi district.

Auction Tax:

Proclamation No. 60 of 1954 provides for auction tax at the rate of £2 for every £100 on movable property and £1 for every £100 on immovable property.

Collections were below the estimate by £9.

The following table shows the total collections for the last seven years under the Head Taxes and Duties:—

<i>Year</i>	<i>Total</i> £
1953/54	330,731
1954/55	303,989
1955/56	333,975
1956/57	378,822
1957/58	324,476
1958/59	406,051
1959/60	457,852

III. LICENCES £54,224

Arms and Ammunition £1,254.

Proclamation No. 86 of 1959, as amended by Proclamation No. 52 of 1960 and Government Notice No. 16 of 1960, provides for the licence of all firearms and for the control and issue of permits for the purchase of arms and ammunition and for the dealers in arms and ammunition at the following rates:—

	£	s	d
(a) Grant, renewal or replacement of an arm certificate for —			
(i) muzzle-loader arm or Martini-Henri rifle	2	6	
(ii) any other type of arm	5	0	
Provided that no fee shall be chargeable for the grant of an arm certificate between the 1st July and the 31st December, 1960, to any person in respect of an arm possessed by that person prior to the 1st July, 1960.			
(b) Registration of an arms dealer — for each place of business in respect of which dealer registered	10	0	0
Provided that no fee shall be chargeable in respect of the registration as an arms dealer between the 1st July and the 30th September of any person who was registered as an arms dealer under the law repealed by Section 36 of the Proclamation in respect of any place or business so registered under the law repealed.			
(c) Issues of a new certificate of registration to an arms dealer for each place of business registered	10	0	0
(d) Import and Export Permit	Free		

Collections were below the estimate by £2,246.

Trading £22,897

Chapter 108 of the Bechuanaland Protectorate Laws provides for the issue of the following trading licences at the rates shown below: --

- (a) Agent or Broker: £10 p.a. (except as to diamonds)
- (b) Auctioneer: £40 p.a.; £5 weekly.
- (c) Baker: £7.10.0 p.a.
- (d) Banker: £50 p.a. in respect of each office or agency at which such business is transacted, other than any agency at which business is transacted on not more than two days in each week and which is situated in the same district as a licensed office or a licensed agency of a bank so licenced, or in a district adjoining thereto.
- (e) Blacksmith: £1 p.a.
- (f) Butcher: £7.10.0 p.a.
- (g) Chemist: £10 p.a.
- (h) Driller: £10 p.a.
- (i) External Agents: Resident £20 p.a.
Non-Resident £25 p.a.
- (j) (i) General Dealer; (ii) Motor Garage; (iii) Wholesale Distributor: £20 p.a. where aggregate sales for preceding year did not exceed £3,000 plus £2.10.0 for every £1,000 or portion thereof over £3,000 with a maximum of £65 p.a.
- (k) Hairdressing Saloon: £5 p.a.
- (l) Hawker: £5 for every 3 months plus £5 for every vehicle in excess of one for the same period.
- (m) Insurance Agent: £10 p.a. and £5 p.a. for every second or subsequent Insurance Agent's (annual) licence issued to the same holder.
- (n) Pawnbroker: £10 p.a.
- (o) Petrol Filling Station: £5 p.a.

- (p) Produce Buyer: £15 p.a.
- (q) Restaurant: £7.10.0 p.a.
- (r) Restricted Dealer: £10 p.a. whereas aggregate sales for preceding year did not exceed £1,000 plus £2.10.0 for every £1,000 or portion thereof over £1,000 with a maximum of £65 p.a.
- (s) Tobacconist: £1.10.0 p.a.

Annual licences initially issued after the 30th day of June in any year are issued for one-half of the relevant fee as set above.

In addition the following licences are provided for in the laws shown:—

- (a) Methylated Spirit Licence: £1 p.a. (Cap. 107 of the Bechuanaland Protectorate Laws)
- (b) Livestock (Cap. 109 of the Bechuanaland Protectorate Laws):
 - (i) Livestock Buyers: £20 p.a.
 - (ii) Livestock Buyers Agents: £10 p.a.
 - (iii) Livestock and Produce Buyers: £3 p.a.
- (c) Hide Buyers (High Commissioner's Notice 22 of 1955):
 - (i) Hide and Skin Buyers: £1 p.a.
 - (ii) Green Hide Buyers: £1 p.a.
 - (iii) Hide and Skin Exporters: £20 p.a.

Collections exceeded the estimate by £897.

Labour Agents and Runners £441.

Chapter 73 of the Bechuanaland Protectorate Laws provides for licences for labour recruiting agents and runners at the following rates:—

Agents	....	....	....	....	....	....	....	....	....	£25 p.a.
Runners	....	....	....	....	....	....	....	....	....	£ 1 p.a.

Collection fell short of the estimate by £209.

Motor Drivers and Vehicles £25,607.

Vehicles: Chapter 168 of the Bechuanaland Protectorate Laws, as amended by Proclamation No. 2 of 1960, provides for the registration and licensing of motor vehicles, tractors and trailers and vehicles plying for hire at the following rates:—

Motor cycle without side car	....	....	....	£1 p.a.
Motor cycle with side car	....	....	....	£1.10.0 p.a.

Motor Vehicles and Tractors:

			£	s	d	
Weighing	1500 lb. and under	....	6	0	0	p.a.
	1501 lb. to 2500 lb	....	7	0	0	p.a.
	2501 lb. to 4000 lb.	....	9	0	0	p.a.
	4001 lb. to 6000 lb.	....	11	0	0	p.a.
	6001 lb. to 8000 lb.	....	21	0	0	p.a.
	8001 lb. to 9000 lb.	....	31	0	0	p.a.
	9001 lb. and over	....	36	0	0	p.a.

Trailers:

			£	s	d	
Weighing	1500 lb. and under	....	3	0	0	p.a.
	1501 lb. to 2500 lb.	....	4	0	0	p.a.
	2501 lb. to 4000 lb.	....	7	0	0	p.a.
	4001 lb. to 6000 lb.	....	12	0	0	p.a.
	6001 lb. to 8000 lb.	....	24	0	0	p.a.
	8001 lb. to 9000 lb.	....	36	0	0	p.a.
	9001 lb. and over	....	42	0	0	p.a.

Licence fees in respect of tractors and trailers used solely for the purpose of farming and lumbering operations — NIL.

No fee is payable on bulldozers. An additional fee of £2 p.a. is payable on vehicles and trailers for hire. The registration fee is 5s. per vehicle.

Drivers: Provisional licences: Motor Cycle 2s. 6d. — period of 3 months; Motor Vehicles 5s. 0d. — period of 3 months.

Drivers' Licences: Motor Cycle 11s. 0d.; Motor Vehicle £1.1s.0d.; Certificate of Competency 5s. 0d.

Collections exceeded the estimate by £1,607.

Liquor and Hotel £550.

Cape Act No. 28 of 1883 and Chapter 84 of the Bechuanaland Protectorate Laws (1948 edition) provide for the following liquor licences:—

Retail	£40 p.a.
Wholesale	£30 p.a.
Railways	£60 p.a.

Collections were below the estimate by £25.

Game £2,463.

Chapter 114 of the Bechuanaland Protectorate Laws (1948 edition), as amended by Proclamation No. 2 of 1948 and No. 3 of 1952, provides for the issue of game licences at the following rates:—

Royal Game:

Residents:	2 months	£ 15
	Whole season	£ 30
Non-Residents:	2 months	£ 50
	Whole season	£100

Large Game:

Residents:	7 days	£2
	14 days	£4
	1 month	£8
	2 months	£12
	3 months	£16
	Whole season	£25
Non-Residents:	7 days	£15
	14 days	£25
	1 month	£50
	2 months	£75
	3 months	£100
	whole season	£125

Small Game:

Residents:	Whole season	£1
Non-Residents:	7 days	£3
	1 month	£6
	Whole season	£10

Collections were below the estimate by £1,037.

High Commissioner's Notice No. 87 of 1955: Air Transport.

(a) Licence to convey mail and cargo	£10
(b) Provisional licence to convey mail and cargo	£2

No Air Transport licences were issued.

Miscellaneous £52.

This represents the following licences and fees which are not classified:—

*Admission Fees**Chapter 146 of the Bechuanaland Protectorate Laws:*

Advocate, Attorney, Notary Public or Conveyancer: £5.5.0.

Chapter 147 of the Bechuanaland Protectorate Laws:

Medical Practitioner	....	....	....	....	....	£5	0	0
Dentist	....	....	....	....	....	£1	1	0
Chemist	....	....	....	....	....		10	0
Optician and Oculist	....	....	....	....	....		10	0
Nurse	....	....	....	....	....		10	0
Midwife	....	....	....	....	....		10	0

Collections exceeded the estimate by £27.

*Marriage £355.**Chapter 117 of the Bechuanaland Protectorate Laws:*

Collections exceed the estimate by £105.

The following table shows the total collections for the last seven years under the Head Licences:—

<i>Year</i>									<i>Total £</i>
1953/54	....	....	....	....	....	....	....	....	32,313
1954/55	....	....	....	....	....	....	....	....	37,790
1955/56	....	....	....	....	....	....	....	....	41,441
1956/57	....	....	....	....	....	....	....	....	43,364
1957/58	....	....	....	....	....	....	....	....	46,885
1958/59	....	....	....	....	....	....	....	....	48,657
1959/60	....	....	....	....	....	....	....	....	54,224

IV. FEES OF COURT OR OFFICE AND EARNINGS OF DEPARTMENTS
£61,899

Stamp duty imposed under Chapter 91 of the Bechuanaland Protectorate Laws and the Cape Colony Stamp and Offices Fees Act of 1884 accrue to this revenue head and amounted to £23,595 during the financial year 1959/60. The following table shows the collections during the last seven years:—

[illegible]

V. POSTS AND TELEGRAPHS £184,570

The following table shows the revenue and expenditure for the Posts and Telegraphs Department for the last ten years:—

<i>Year</i>				<i>Revenue</i>	<i>Expenditure</i>	<i>Surplus</i>
				£	£	£
1950/51	....	....	....	69,110	14,707	54,403
1951/52	....	....	....	70,395	14,911	55,484
1952/53	....	....	....	77,731	18,208	59,523
1953/54	....	....	....	127,627	22,388	105,239
1954/55	....	....	....	166,311	25,087	141,224
1955/56	....	....	....	152,229	31,854	120,375
1956/57	....	....	....	118,254	42,363	75,891
1957/58	....	....	....	119,438	55,827	63,611
1958/59	....	....	....	146,648	62,669	83,979
1959/60	....	....	....	184,570	77,700	106,870

Other Revenue: The following table shows collections for the last seven years in respect of other revenue:—

VI. JUDICIAL FINES

[illegible]

[illegible]

XI. SALE OF CROWN LAND

[illegible]

XII. GRANT-IN-AID FROM U.K. GOVERNMENT

[illegible]

CHAPTER 4

Currency and Banking

Union of South Africa currency is legal tender in terms of Chapter 97 of the Bechuanaland Protectorate Laws. In the Northern Protectorate Southern Rhodesia currency is used to a large extent as in the Ghanzi area where South West Africa currency is accepted at par. There are six banks in the Protectorate, two at Francistown, two at Lobatsi, two at Mahalapye, operated by the Standard Bank of South Africa, Ltd., and Barclays Bank, (D.C.O.). In addition, each of these banks operates weekly agencies as follows:—

Lobatsi: *Standard Bank of South Africa, Ltd.:* Ramoutsa, Gaberones, Molepolole, Mochudi.
Barclays Bank, (D.C. & O.): Ramoutsa, Gaberones, Molepolole, Mochudi, Kanye.

Mahalapye: *Standard Bank of South Africa, Ltd.:* Palapye, Serowe.
Barclays Bank (D.C. & O.): Palapye, Serowe, Machaneng, Parr's Halt, Martins Drift.

Barclays Bank (D.C. & O.) in Gobabis, South West Africa, also operates a monthly agency at Ghanzi.

CHAPTER 5

Commerce

The favourable trade balance of 1959 could not be maintained in 1960 in the face of a long and serious drought, and the outbreak of foot and mouth disease in the Northern Protectorate in the middle of the year. A comparison of the figures for the two years shows that, while lack of purchasing power led to a decrease of more than £650,000 in imports of general merchandise and textiles, this was in great part offset by increases amounting to over £460,000 in imports of grains, foodstuffs and cattle. An increase of nearly £142,000 in imports of motor vehicles and spares (including petrol, oil and lubricants) leaves the grand total nearly £124,000 less than in 1959.

Exports show an overall decrease of over £700,000. The principal items accounting for this are cattle and cattle carcasses (over £450,000), hides (over £270,000) and groundnuts (nearly £70,000). There were significant increases in exports of abattoir by-products, miscellaneous animal products and asbestos, but not such as to offset more than a small part of the general decrease.

Migrant workers brought over £356,000 into the country in the form of remittances and deferred pay. The greater part of this sum came from workers in the South African gold mines, the division being as follows:—

Gold mines: Workers recruited during the year: 21,711
deferred pay and remittances disbursed: £335,671.

Other Industries, farms, etc.;

Workers leaving the Protectorate during the year:
3,604 remittances: £20,749.

CHAPTER 6

Production

LAND UTILIZATION AND TENURE

(a) Crown Lands

All Crown Lands are vested in the High Commissioner by Orders in Council of the 16th May, 1904, and the 10th January, 1910. These areas remain unalienated with the exception of 164 farms in the Ghanzi District, 13 farms in the Molopo area and certain areas which have been leased to the Colonial Development Corporation.

(b) Tribal Territories

Land in each Tribal Territory is vested in the Chief and Tribe and is allocated to individuals or groups of individuals by the Chief in his discretion. Land does not pass automatically from father to son, nor can it be said to be owned by any one person although in practice, on the death of a person using land allocated, his heirs usually continue to occupy the same area. Land may not be alienated by a Chief or Tribe.

The eight major Tribes in the Protectorate each have their own Tribal Territory and the areas of these are as follows:—

<i>Tribal Territory</i>	<i>Square Miles</i>
Barolong	488
Bamangwato	45,000
Batawana	36,000
Bakgatla	2,900
Bakwena	15,400
Bangwaketse	9,352
Bamalete	229
Batlokwa	70

In the Tati District the Tati Federated Tribes have an area of approximately 320 square miles set aside for them for which Government pays a rent of £1,000 a year to the Tati Company.

In addition to the Tribal Territories mentioned above and the area occupied by the Tati Federated Tribes, some small numbers of Africans occupy certain areas of Crown Land in the Tshabong, Ghanzi and Chobe Districts.

(c) Farming Areas

Certain areas of land, known as the Lobatsi Block (approximately 214 square miles), the Gaberones Block (approximately 260 square miles) and the Tuli Block (approximately 1,930 square miles), were granted in perpetuity to the British South Africa Company, with power to sell or lease the land. The boundaries of the blocks are defined in Chapter 92 of the Bechuanaland Protectorate Laws. The blocks have been divided into farms and most of them sold with freehold titles.

(d) The Tati District

The Tati District (approximately 2,074 square miles) is owned by the Tati Company Limited, who have full power to sell or lease any portion except the area leased by Government for Africans. Right is reserved to Government to acquire sites for public buildings. The grant to the Company is governed by Chapter 90 of the Bechuanaland Protectorate Laws.

(e) Game Reserves (see Chapter 13 of this Part)

AGRICULTURE

Fairly extensive planting of crops took place in December, 1959, except in the Bakgatla and Bamangwato Tribal Territories where the percentage of lands planted was very small. January and the early part of February were characterized by extreme conditions of drought and high temperatures with only isolated showers occurring in the Barolong farms and Bangwaketse Tribal Territory. Fair general rains occurred in mid-March and crops which had survived till then improved but due to the prolonged drought after planting crops generally were extremely poor except in the Barolong and Bangwaketse Tribal Territory where small local surplusses were harvested. Grazing conditions also deteriorated especially in the north-eastern section of the Territory where lucerne was imported to keep stock alive in the Tati district.

The following table shows the seasonal rainfall at 12 centres in the Territory, compared with the mean figures:—

<i>Place</i>	<i>Mean Rainfall Inches</i>	<i>Season 1959/60</i>
Lobatsi	21.9	21.3
Kanye	20.6	17.4
Gaberones ..	20.5	11.7
Molepolole ..	19.2	13.9
Mochudi	18.2	10.9
Mahalapye	18.7	12.3
Serowe	16.9	11.9
Francistown	18.1	10.4
Maun ..	17.9	11.7
Machaneng	17.2	10.7
Ghanzi	18.3	11.3
Tsabong	11.8	9.1

Evaporation from a free water surface at the Mahalapye Experimental Station for the same period viz. July 1959 to June 1960 was 91.52 inches, compared with 72.05 inches the previous season, which indicates the arid conditions experienced.

Early in August, 1960, the Territory's first commercial maize mill financed by private enterprise came into operation at Lobatsi. Prior to this development the department purchased all maize offered by producers which was then milled on behalf of Government by millers in neighbouring territories and importation of the maize meal took place. The Lobatsi Maize Mill is now the main purchaser of maize produced in the Territory where the local crop is processed, the shortfall being imported in the form of whole maize from the Maize Industry Control Board in South Africa. Local production sold to the maize mill amounted to 10,057 bags in spite of the drought experienced and yields from Progressive Farmers in the Papatlo area of the Barolong averaged over 5½ bags per acre. Total imports of maize and maize products during the year amounted to 218,207 units of 200 lb. each plus 1,532 units being imported by seasonal farm labour returning from South Africa. Of this total, 101,232 units were imported from the Federation of Rhodesia and Nyasaland.

During the 1960 calendar year imports of grain sorghum amounted to 46,556 bags of 200 lb. each of which 10,000 were imported from Nyasaland, 210 from the Rhodesias and the balance from South Africa. Some 234 bags of grain sorghum were exported during the year. The department assisted as far as possible to regulate internal distribution of the crop from areas of local surplus to shortage areas. Due to the fact that beans deteriorate very rapidly under normal storage conditions, exports of this commodity takes place soon after harvest, a total of 5,731

bags being exported to South Africa during the year, the bulk of this crop originating from the Bamalete and Bakwena Tribal Territories. Other crops exported included millet, groundnuts, wheat, sunflowers, citrus, flower bulbs, potatoes, onions and pumpkins, mainly from the Tuli Block where irrigation farming is practised. The Mogobane Tribal Irrigation Scheme exported 400 short tons of matchwood poplar timber to Southern Rhodesia.

Only limited damage to crops was caused by insects but plant parasites such as *Striga* spp. and *Alectra* spp. were again evident.

The African tribal areas in the eastern districts of the country as well as Ngamiland now have resident agricultural extension workers and the demand for additional field staff by the people now far outstrips the availability of trained extension workers. The present approach to the farmers is still by way of visual demonstration on the farmers' own lands of improved crop husbandry methods for Pupil Farmers whereas with Progressive and Master Farmers teaching of improved farming systems including crop rotations and fertilizer and manurial rotations assumes more importance. The great advantages of winter fallowing of lands or ploughing with the first spring rains followed by moisture conservation practices such as weed control and crop espacement with fertilizer and manurial application and the planting of drought resistant varieties was most evident during this poor season and enabled farmers to reap some crops even though climatic conditions were most adverse. This was vividly illustrated in the Bangwaketse Tribal Territory where grain sorghum yields exceeding 14 bags per acre were harvested, the average yield for 151 Progressive and Pupil Farmers was $4\frac{3}{4}$ bags per acre. Farmers' days, agricultural shows and meetings are also used to stimulate interest in the extension programme. 330 bags of selected grain sorghum seed was purchased from African farmers together with 111 bags of bean seed for re-distribution and sale. Only 35 bags of good seed was produced on the Morale Experimental Station for distribution. The policy is to get as much good selected seed required for re-distribution and sale produced by Progressive and Master Farmers, thereby relieving the department of this responsibility and at the same time creating a good seed market for African farmers. The Mogobane Tribal Irrigation Scheme sold 100 bags of maize seed to the department.

A new crop experimental sub-station was established at Gaborone and a uniformity trial laid down to determine the fertility gradient. The experimental programme planned for the Mahalapye Experimental Station had to be modified during the season due to the drought conditions experienced. No significant differ-

ences were obtained from a $2 \times 2 \times 2$ factorial fertilizer experiment (N.P.K.) on cotton nor from the two other manurial trials conducted with kraal manure using maize and grain sorghum as the indicator crops due to the poor season. In a dwarf sorghum variety trial, none of the eight varieties included significantly outyielded the variety *Red Seed Combine 8D* which is the one recommended by the department. Further variety trials were carried out with ten varieties of medium tall (standard) sorghum, with eight varieties of *Hegari* grain sorghum and with eight hybrids. A 7×7 lattice square variety trial of 49 lines of bullrush millet *Pennisetum typhoides* was laid down and 95 lines were also planted under observation for selection for uniformity and heavily awned heads as protection against bird damage. A Jugo bean (*Voandzeia subterranea*) trial again indicated that variety G. was outstanding, yielding 749 lb. per acre in an exceedingly dry season. Two cotton variety trials were run with 10 and six varieties as well as a groundnut variety trial but results were not significant. The long term grass lay and rotation experiments with *Vigna sinensis* were continued. Pigeon pea (*Cajanus cajan*) appears to be a promising new introduction.

At the Morale Pasture Research Station a system of continuous grazing gave the highest percentage seasonal liveweight increases of the trials in operation since 1951. Steers which weighed an average of 494 lb. at the beginning of October, 1959, reached a peak weight of 793 lb. at the beginning of October, 1960, dropping back to 780 lb. at the end of the grazing year viz. the beginning of November, 1960. The indications are thus that under these conditions the stocking rate is just as important as the system of management within the season. Comparative figures of the mean seasonal liveweight trends expressed in lbs. per day from 1950/51 to 1959/60 show that the one-herd two-paddock split season mid-summer to mid-winter system gave the highest increase viz. 0.63 lb. per day. Further data is coming to hand indicating that the indigenous type of Tswana steer reacts most favourably to improved management practices and for animals over four years in age the indigenous steers gave a higher percentage seasonal liveweight increase than the Africander and Africander x Hereford crossbred animals. The grazing trial with cattle and goats is continuing as well as further grazing trials on debushed pasture and systems including a burn. Observations continued on the collection of 60 introduced grasses and fodder plants. Seed production pastures of the Witbank Strain of *Eragrostis curvula* and of *Panicum maximum* were extended.

The soil conservation unit financed by Colonial Development and Welfare Scheme D515 expired on the 31st March, 1960, and staff employed on this Scheme proceeded on leave in January

pending completion of their contracts. The fencing of eroded areas in the Potsani area of the Bamalete Tribal Territory was completed and the fencing of the Bamalete - Bangwaketse ceded area boundary was commenced before the Scheme expired.

At the Mahalapye Experimental Station 743 Black Australorp, Rhode Island Red and Light Sussex selected birds were sold in breeding pens. Vaccination against fowl-pox and inoculation against typhoid was carried out before disposal. The demand for selected breeding pens far out-stripped the supply.

The total quantity of butterfat purchased during the year amounted to 400,887 lb. valued at £62,735 a decrease of 127,371 lb. compared to the 1959 figures, due to the drought conditions which were especially detrimental to the dairy industry in the eastern Bamangwato Tribal Territory, the main area of production for the Tati Creamery at Francistown. The 20 cooperative milk-builing-cream-depots established in the eastern Bamangwato Tribal Territory which was financed by a £1,200 loan granted by the Tribal Administration were brought into operation but production was low due to climatic conditions.

FORESTRY

The maintenance of firebreaks and patch burning was carried out to protect the Chobe Forest but in spite of well over 100 miles of firebreaks being burned, accidental fires nevertheless caused damage to the forest. New roads are to be opened up to assist fire fighting in this 3,000 sq. mile indigenous forest. The small Government *Eucalyptus* plantation in the Southern Protectorate again supplied poles for departmental field quarters and for other Government requirements. At the Mogobane Irrigation Scheme the matchwood poplar plantation was extended and 400 tons of matchwood timber was exported. The departmental nursery at Phareng, near Kanye, again supplied ornamental trees and shrubs and timber trees for Government quarters and offices and for sale to the public.

VETERINARY AND LIVESTOCK

The failure of adequate rains during the first quarter of the year resulted in severe drought conditions over practically the whole territory by mid-winter. As conditions deteriorated and water supplies dried up, there was fairly widescale movement of stock to where grazing and water could be found. This aggravated, to a considerable extent, the adverse conditions round the main water supplies. In some of the worst hit areas, there was virtually no grazing to be seen, and stock existed mainly on

browse. There was considerable loss in livestock due to poverty particularly among old cows and young calves. A complication factor in many of the deaths from poverty was the infection of stock with a particularly virulent type of foot and mouth disease, which rendered many animals incapable of moving around in search of grazing. In Francistown a drought relief committee was formed in order to deal with the situation.

One trading concern with farms in the Tati Concession cut large quantities of grass on the unoccupied Nata Crown lands and transported it to Francistown where it was used as a supplementary feed in order to keep their cattle on a reasonable standard of nutrition during the drought.

The drought was broken by fairly general rains which fell in early November.

In late May, five cases of foot and mouth disease were diagnosed at Nata in the Northern Protectorate among a mob of cattle which had been trekked there for export to Rhodesia. The affected cattle were destroyed while the remainder of the herd was moved inland and isolated from cattle contact in Odiakwe quarantine camp. Intensive inspections, which were commenced in the area, indicated that there was no spread of the disease to in-contact cattle at Nata. Later inspections however revealed infection at two points on the Botletle River trek route. Material from these outbreaks were typed as S.A.T.3. The particular strain of virus involved was characterised by its low infectivity and avirulence. Shortly after the disease had been detected on the Botletle River, another outbreak was discovered at the Basuto area of the Nata River near the Southern Rhodesian border. This outbreak was typed S.A.T.1, which was very virulent and spread rapidly throughout both cattle and small stock. Unfortunately at this stage the Central Bamangwato fence had not been completed and a gap existed opposite the infected area. A few head of infected cattle were illegally moved through this gap before it could be closed and infected the cattle in the area east of the Central Bamangwato fence, from where the disease spread rapidly towards the railhead at Francistown. Infection with S.A.T.3 type of virus was later discovered on two farms on the Tuli Block and in the neighbouring portion of the African Reserve as well as in cattle moved into Debeeti quarantine camp from that area. These areas were cordoned off in order to limit the area infected with this type of the virus. Meanwhile the highly virulent S.A.T.1 infection was spreading rapidly south towards Serowe. The rapidity of the spread of this type of the disease was mainly due to illegal movement of infected cattle in search of grazing or for sale purposes. By the middle of October practically the

whole of the Northern Protectorate with the exception of the Tuli Block had become infected with S.A.T.1 virus. Stocks of the S.A.T.1 and S.A.T.3 virus were prepared during the outbreak in the field. The whole of the Northern Protectorate was inoculated with S.A.T.1 virus, but as the avirulent S.A.T.3 outbreak on the Botletle River appeared to die out only the farms affected with S.A.T.3 on the Tuli Block and the neighbouring area of the African Reserve were virused with this type.

At the end of December the whole of the Northern Protectorate was still under quarantine restrictions as a result of foot and mouth disease, and the area had remained closed for exports since July.

A total of 78,839 head of cattle were sent to Lobatsi abattoir for export despite the interruptions due to foot and mouth disease and the fact that the Northern Protectorate was closed for export from the end of July to December.

In addition to cattle sent to the Lobatsi abattoir, a total number of 7,375 head of live cattle were exported to the Rhodesias.

The total exports of live cattle and carcasses for the year therefore was 86,214.

Two more training courses for African field staff were held at the Ramathlabama Veterinary School.

In the Bangwaketse Reserve all the boreholes sunk under the Water Development programme have now been equipped with engines and pumps. The work of erecting reservoirs at these boreholes is being undertaken at the moment. Cattle are now being moved out to these boreholes which are fully equipped. This will have the effect of relieving the overstocking around the long established watering points.

Six new boreholes were sunk on the Ghanzi trek route to Lobatsi. This should assist the Ghanzi farmers greatly in getting their slaughter stock to Lobatsi abattoir in good condition after an arduous trek of over 400 miles through the Kalahari.

Rabies remains endemic throughout the whole of the Northern Protectorate, while in the Southern Protectorate odd localised outbreaks do occur. Control at the moment is based on the mass vaccination of all dogs within a limited area of an outbreak for a period, while stray dogs are destroyed. Proper control of this disease cannot be effected until the entire dog population can be vaccinated annually.

The Colonial Development Corporation has three large ranching projects in the territory, one in the Southern Protectorate and two in the north. On their Molopo Ranch in the south they concentrate mainly on the breeding and production of high quality slaughter stock for Lobatsi abattoir. At Panda-ma-Tenga in the north, the policy of breeding for slaughter in Rhodesia as well as growing out of immature oxen, while their main centre of operations has now been transferred to their Nata Ranch at Damdamoga. At Damdamoga considerable extension of the existing holding grounds is taking place with the fencing in of large tracts of land and the establishing of new watering points.

Trypanosomiasis remains a grave threat to the cattle industry in Ngamiland. The gross overstocking in the areas not affected by tsetse fly is leading to deterioration of the existing grazing areas and it is now becoming imperative to consider utilising the areas of low fly density for stock rearing. Prior to introducing stock into these areas, it will be necessary to carry out experiments in order to determine such basic factors as the rate and percentage of infection likely to occur and to what extent it will be necessary to rely on the use of trypanocidal drugs in order to maintain healthy stock in those areas. Most of this information will be produced by the use of test herds, which will be introduced into these low density areas.

A scheme for the treatment of cattle for trypanosomiasis and helminthiasis in the Nokaneng plain in Ngamiland was introduced during the year. Unfortunately, because of the outbreak of foot and mouth disease in Ngamiland in July, work on these trials had to be abandoned until the field staff had returned to normal duties.

The export route for live cattle from Ngamiland to the Rhodesias was changed from the traditional route via Kazungula, when a new route via Odiakwe to Francistown was opened up. The cattle were trekked from Makalamabedi quarantine camp via Odiakwe to Nata where they were loaded on to road transport cattle trucks and taken to the railhead at Francistown. From Francistown they were either railed to Bulawayo or Livingstone. Approximately 6,000 head of cattle were exported by this route when the export was stopped due to foot and mouth disease.

The remainder of the live cattle exported, came from Panda-ma-Tenga and consisted mainly of cattle which had been held back during the previous year due to an outbreak of Lumpy Skin disease on the ranch.

In the Ghanzi African farming area, the mass vaccination of

cattle against Botulism, which is very prevalent in the area, reduced the mortality from this disease from 1,526 in 1959 to 401 in 1960.

The grazing in Kuki quarantine camp was reported as very poor, partly due to the poor rainfall but also because of the destruction of grazing by harvester termites which appeared to be very numerous this year.

Excellent results were obtained by the more progressive farmers with the use of Vitamin A injections to counteract avitaminosis during the drought period. In the Ghanzi district alone several thousand doses were used by farmers.

An abnormally high rate of infection with *Cysticercus bovis* (measles) was recorded in the cattle which were exported from Panda-ma-Tenga to Livingstone. Approximately 14% of the cattle slaughtered from here were infected.

Two successful agricultural shows were held during the year at Kanye and Francistown. Both shows were well supported by exhibitions and by the public.

TSETSE FLY CONTROL

(The report on the activities of the Tsetse Fly Control Department is set out in Appendix II).

MINING

The Geological Survey Department, with headquarters at Lobatsi, is responsible for the development of the mineral resources of the Territory. The Geological Survey has three main functions which are geological mapping, mineral survey, including the preliminary examination of promising mineral deposits and the survey of the potential coalfield areas, and the development of the underground water resources of the Territory. Geophysical prospecting techniques are employed in mineral survey and hydrological work and the department owns three core drilling machines which are normally employed on mineral survey. The Geological Survey also controls the Drilling Branch, which undertakes underground water development work, and is responsible for all water borehole drilling in the Territory.

Mineral exports during the year were as follows:—

	<i>Amount</i>	<i>Value</i> £
Gold (ozs.)	203	2,496
Silver (ozs.)	25	8
Asbestos (short tons)	1,849	132,262
Manganese (short tons)	14,242	70,822
Total		£215,588

The total value of mineral exports was £15,868 higher than in 1959 in spite of a marked decrease in the export values of manganese ore. The total production of manganese ore during 1960 was 25,032 short tons, which is an increase of 4,894 short tons over the 1959 production figure. Exports, however, were 1,663 short tons less than in 1959. There was a marked increase in the export of asbestos fibre largely due to the fact that the company were exporting ore stockpiled at the time of the slump in price during 1959, but production figures decreased by 169 short tons.

The gold and silver are produced in the Tati Concession where the mineral rights are owned by the Tati Company. Only one small gold working was in operation in this district during the year. Chrysotile asbestos is all produced from the Moshaneng Mines near Kanye in the Bangwaketse Tribal Territory. The mine is operated by the Marlime Chrysotile Corporation on a royalty basis and all royalty accrues to the Bangwaketse Tribal Territory. The manganese ore was produced from two mines in the south-eastern Protectorate. At present production is confined to the Kgwakgwe Hill mine, south of Kanye in the Bangwaketse Tribal Territory. This manganese ore occurrence was located by the Geological Survey Department in 1957. The second mine is situated immediately to the west of Ootsi Siding in the south-western portion of the Bamalete Tribal Territory, but all operations were suspended there in September. As in the case of the asbestos mine these mines are worked by companies which pay royalty on all manganese ore exported to the Bangwaketse and Bamalete Tribal Treasuries respectively. The geological survey advises on the development of these mines and has rendered active assistance including geological mapping, diamond core drilling and ore analysis. The inspection of operating mines is carried out by an inspector of mines whose services are lent by the Government of Southern Rhodesia.

The Geological Survey headquarters at Lobatsi are provided with a mineralogical and chemical laboratory, drawing office facilities, a library and a small museum. The laboratory supplies chemical and petrological services to officers of the department and for other Government departments and to the public. Ore analysis is carried out and water analysis forms a major part

of the laboratory work. Information from all water boreholes drilled in the Territory as to the quantity and quality of supply and the geological strata intersected by the boreholes is collected and indexed. Sludge samples from boreholes drilled in the Territory must be submitted to the Geological Survey in terms of existing legislation and samples of these are retained and stored for reference purposes. Thin sections of rocks are prepared and polished sections of ore minerals are made for study in the optical laboratory. The section cutting machine is operated by an African technician. The drawing office section of the department provides facilities for preparing maps and plans for the various publications issued by the department as well as maps and plans for distribution to other Government departments, members of the public and for geologists' field work. The Geological Draughtsman is assisted by three African tracers who have been trained in the department.

The active interest which has been displayed over the past few years by various mining concerns in the mineral potential of the Protectorate continues to be maintained. The Rhodesian Selection Trust Exploration Company have negotiated a 10 year concession with the Bamangwato Tribe which gives them exclusive prospecting and mining rights for all minerals excluding diamonds over the whole of the Bamangwato Tribal Territory from November, 1959. They have formed a subsidiary company, Bamangwato Concessions, to carry out the prospecting work and this company has been active in the Bushman Mine Copper area and at Magogaphate, where they are investigating a nickel occurrence first located there by the Geological Survey. In the Bushman Mine area they have carried out extensive geochemical sampling along the line of the shear zone and are also carrying out geophysical prospecting using the self potential method. At Magogaphate, geochemical sampling is in progress and a certain amount of geophysical work has been carried out there. A limited amount of shaft sinking is in progress on the copper-nickel occurrence and diamond drilling was commenced towards the end of the year. Consolidated African Selection Trust, who held a short term Crown Grant for diamond prospecting rights over the Bamangwato Tribal Territory, completed their work in February and allowed their Crown Grant to lapse. During the course of their work the company recovered three small diamonds from panned samples in the upper Macloutsi river area, but concluded from their work that these diamonds were probably pre-Cambrian diamonds weathering out of Eccca Series sediments and as such of no economic interest. The Marlime Chrysotile Corporation, in collaboration with the Johannesburg Consolidated Investment Company, carried out about six months prospecting work in the Bakgatla Tribal Territory. They carried out a limited amount of

diamond core drilling to examine a certain coal area, but have considered the results disappointing and have allowed their Crown Grant to lapse. In the Bangwaketse Tribal Territory, Rand Mines, working under the auspices of Marlme Chrysotile Corporation who hold a Crown Grant there, had a team of three geologists working in the area for a period of six months examining known asbestos and manganese ore occurrences. The Crown Grant for prospecting rights for all minerals over a large area of the Batawana Tribal Territory, for a period of up to 5 years, has been signed and the grantee, Johannesburg Consolidated Investment Company, are expected to commence work in the area in January, 1961. A Crown Grant awarded for manganese rights over a large area of the southern Crown Lands was surrendered by the grantee during the year and has now lapsed. Two Crown Grants have been awarded to De Beers Prospecting (Rhodesian Areas) Ltd. for diamond prospecting rights over large areas of the northern and central (Ghanzi) Crown Lands. The same company has recently been negotiating with the Tribal Authorities in the southern and south-eastern Tribal Territories for diamond prospecting rights over the four major southern Tribal Territories.

In view of the amount of prospecting work now being carried out in the Territory by various mining organisations, the Geological Survey has been placing emphasis on the acquisition of knowledge concerning the basic geology and structure of the Protectorate which is fundamental to an assessment of the economic potential. For this reason, and because of the staff position, the department did not undertake any new major projects in direct mineral survey during 1960. The investigation of the potential coal-field areas was continued and other-mineral survey work undertaken included a further study of the brine deposits in the Nata area, a limited amount of diamond prospecting work in the Foley area, preliminary investigations into an asbestos occurrence in the central part of the Bamangwato Tribal Territory and assistance rendered to the manganese mine in the Bamalete Tribal Territory.

The detailed examination of the Mamabule coal area, which was commenced by the Geological Survey in 1957, was completed during the year. Investigation of the area around Mamabule railway siding has shown that two principal coal seams of medium-grade, non-coking, bituminous steam coal are developed at shallow depth in the arenaceous Middle Stage of the Eccia Series. During the course of the investigation a total of 10,545 feet of core drilling was completed in 39 boreholes, in an area 17 square miles, and in addition two shafts, totalling over 160 feet, were sunk by the department to obtain bulk samples of the coal for washability tests and bulk analysis. The investigation has shown that in the lower Coal seam, which averages some eight feet in thickness and

has an average calorific value of 11.08 lbs./lb. and average ash content of 14.7% (for analysis on raw coal) the total reserves of coal present on the down dip side of the limit of decomposition is of the order of 163 million tons developed over 17 square miles. The Lower Coal seam is separated from the upper carbonaceous development by an average of 59 feet of sandstone. The upper carbonaceous development averages 65 feet with an 18 feet thick coal seam at the base. The average quality of the coal in this upper seam is generally poorer and more variable than in the lower seam and the calorific value averages 10.29 lbs./lb. and the ash content 18.0% (for analysis on raw coal). The total reserves of coal present in the case of this upper seam are of the order of 245 million tons developed over 13 square miles. The main deleterious property of the coal in the Mamabule area, both in respect of the Upper and Lower coal seams is the high moisture content, which averages between 5 and 7%. A Mineral Resources Report on this coal area has been prepared and when the final results of the washability tests and bulk analysis on the bulk sample from the upper coal seam have been received the report will be printed and distributed.

Following the recovery of three small diamonds from panned samples in the upper Macloutsi river area by Consolidated African Selection Trust, and on the surrender of their Crown Grant, the Geological Survey carried out a sampling programme in this area. The Geological Survey are in general agreement with the company's findings, but in view of the possibility that kimberlite minerals might have been overlooked in the field it was considered advisable to carry out more detailed sampling in the Foley area. Examination of the heavy mineral concentrates from the samples taken by the department has not revealed any minerals of kimberlitic origin and preliminary results accord with Consolidated African Selection Trust's views.

Considerable interest has continued to be shown in the brine deposits of the Nata area. The economic interest in the brines lies not only in that they represent a source of sodium chloride, but also in that they contain sodium carbonate/sodium bicarbonate which gives rise to the possibility of soda ash production. Five boreholes have been drilled in the area by the Geological Survey, samples of brines at varying depths and at varying distances from the Makarikari pan have been taken and pumping tests carried out. The exploitation of these brines, which lie at a distance of some 110 miles from rail, depends largely on the possibility of finding an economic method of transporting the brine to railhead.

A systematic reconnaissance geological mapping programme

of the Territory is in progress and during 1960 quarter-degree square geological mapping was undertaken in the Foley area, the Topsi area, the Palapye area and the Mochudi area. The first three areas mentioned lie in the Bamangwato Tribal Territory while the Mochudi area lies in the Bakgatla Tribal Territory.

Underground water development work continues to constitute a major part of the Geological Survey's activities and during 1960 the Geological Survey continued to be responsible for all Government water borehole drilling in the Territory. From April, 1960, the Geological Survey has also exercised full financial control over the Drilling Branch and the Drill Superintendent is now directly responsible to the Director of Geological Survey. All drilling during the past year has been carried out by the Drilling Branch and no contract work has been undertaken. Geological and geophysical surveys prior to drilling have been carried out in the Baroiong, Bamalete, Bangwaketse and Bamangwato Tribal Territories, the Tati African Reserve, the northern Crown Lands, the Central Crown Lands, the Ghanzi District and the Tati Concession area. Surveys have also been carried out in the Tuli Block and the Lobatsi farming areas and for various government camps and institutions.

MANUFACTURING INDUSTRIES

The bonemeal factory at Francistown produced 1840 tons bonemeal valued at £36,800, an increase of nearly 65% as compared with 1959.

A maize mill has been started at Lobatsi, capable of milling the normal maize meal requirements of the Protectorate.

The creamery at Francistown had a bad year on account of the drought, its butter production for the year being only 210,555 lbs. at a value of £34,550, a drop of 35%. Of the total production, 136,550 lbs. (value £22,968) were exported to the Union of South Africa.

CHAPTER 7

Social Services

1. EDUCATION

Pioneering work in education in the Protectorate was begun by the London Missionary Society during the first half of last century.

One of the first schools was established in what is now the Bakwena Reserve at Kolobeng where David Livingstone lived about 1845.

By 1901 there were 20 schools in the Southern Protectorate.

Ten years later the London Missionary Society and the Chief of the Bangwaketse Tribe formed a committee to administer schools in the Bangwaketse Reserve. Other tribes followed suit and the system of committee management of schools proved so useful and popular that it was extended to cover practically all educational work being done among the tribes.

Today local tribal control is the distinguishing feature of the Protectorate educational system. Such control ensures a very large degree of genuine local interest in education and affords invaluable opportunities for training in committee work and in financial management.

Committees include representatives of the District Administration and of missionary societies in the area but tribal representatives are in the majority.

The main responsibilities of the committees are the building, upkeep and equipment of all schools within their jurisdiction and the engagement of staff for these schools.

Although teachers are employed by committees in professional matters they are directly responsible to the Director of Education to whom is entrusted the direction and professional control of all education in the Protectorate.

Obviously this system of dual control would not work without much goodwill on both sides and general preparedness to compromise for the sake of educational progress.

Almost invariably a senior officer of the now enlarged Education Department attends committee meetings and advises members. Comprehensive plans for the development of primary educational facilities in each of the tribal reserves have been drawn up and tribal school and finance committees have been most co-operative. Slenderness of financial resources is frequently a limiting factor but in most reserves considerable progress has been made in carrying out the plans.

Committees are required to meet twice annually. The minutes of meetings are submitted to the Resident Commissioner for approval, as are estimates of expenditure.

Nomination to Committees is now taking place on a basis wider than that of strict tribal seniority and recently one or two women have been appointed to represent female interests. Generally members are becoming increasingly familiar with procedure and are displaying a pleasing readiness to shoulder quite onerous responsibilities.

(a) Primary Education

There are 218 primary schools in the Protectorate: 183 conducted by Tribal School Committees, 25 by Government, 9 by Missions, and one, which caters for children of staff at Moeng, by the Moeng College Governing Council.

Enrolment increased from 33,143, in 1959 to 36,355 in 1960. This is a most remarkable increase when one realises that owing to poor rainfall starvation threatened many areas from the very beginning of the year.

Of the 36,355 pupils enrolled 21,389 were girls and 14,966 boys. The preponderance of girls is accounted for by the custom among the Bechuana of employing their sons as cattle herds until the age of about ten or eleven when they are relieved of their duties by younger brothers. The majority of parents are still loathe to depart from this practice. In the upper primary classes there are more boys than girls, the girls tending to leave school as they approach adolescence and marriageable age.

Average school going age is difficult to assess as many children do not know their ages. Age of admission varies between 6 and 16 and an average admission age of 10 years might be approximately correct.

750 candidates entered for the departmental Primary School-Leaving Certificate examination of whom 382 passed. Generally

speaking the results were somewhat disappointing, the inevitable result of improvement in conditions of teaching being unable to keep pace with increasing enrolment over a number of years.

(b) Secondary Education

Secondary school enrolment rose from 431 in 1959 to 571 in 1960: 321 were boys, 250 girls.

Two boarding schools, St. Joseph's College and Moeng College offer the full matriculation course leading to University entrance. The former is a Roman Catholic institution and the latter an independent grant-aided school which owes its existence largely to the initiative of the late Tshekedi Khama.

St. Joseph's College also offers a two years commercial course for which the entrance qualification is a pass in the Junior Certificate examinations which are normally taken at the end of the eleventh year of schooling.

Secondary day schools have been opened in the tribal capitals: Kanye, Molepolole and Mochudi. These schools offer the Junior Certificate course to students whose parents either cannot afford or do not wish to send them to boarding school. Some students on passing out of the day secondaries complete the matriculation course at one of the boarding schools but the majority proceed to some form of vocational training.

Bursaries to cover the full cost of hostel and tuition fees are awarded to all Bechuana who are admitted to post-primary institutions and who need financial assistance.

In 1960 for the last time Protectorate pupils took the Junior Certificate examination of the University of South Africa. From 1961 they will take an examination set by the High Commission Territories' Examinations Council for students in Basutoland, Bechuanaland and Swaziland.

Protectorate pupils will continue to take the matriculation examination set by the University of South Africa. This examination is open to all candidates in Southern Africa, the same standard being required regardless of race.

Outstanding results were obtained in the 1960 Junior Certificate examinations. Of the 105 candidates presented 91 passed: 17 first class, 40 second class, 34 third class.

Matriculation results were disappointing, there were no full passes but 5 of the 13 candidates obtained Senior Certificates.

(c) Vocational Education.

The Government Teacher Training College at Lobatsi offers two courses: the Primary Lower Course which is a post-standard six course of three years duration and the Primary Higher course which is a post Junior Certificate course of two years duration. In 1960 there were 39 men and 44 women taking Primary Lower and 8 men and 4 women taking Primary Higher.

The Dutch Reformed Church conducts a Homecrafts Centre at Mochudi where it caters for adolescent girls wishing to be trained in homecrafts and also for girls wishing to train as specialist teachers of homecrafts in schools. Enrolment at the centre in 1960 was 29.

Work has started on the building of a Trades School at Gaborone.

A number of Bechuana students attend Trades Schools in Basutoland and Southern Rhodesia.

(d) University and Other Post-Secondary Education

The number of students qualifying for admission to University is still very small.

In 1960 there were five Bechuana students attending Pius University College, Basutoland, and three were at universities in the United Kingdom.

(e) Finance

Under Colonial Development and Welfare Fund Scheme 4204 a grant of £18,000 was made towards the provision of improved hostel facilities at St. Joseph's College.

Estimated expenditure on education in the Protectorate during 1960 was as follows:—

From Government Sources	£137,766
From Tribal Sources	£114,769
From Colonial Development and Welfare Schemes	£ 34,479
From Missions	£ 25,000
Total	£312,014

2. PUBLIC HEALTH

Approximately 333,475 out-patients attended at Government and Mission Hospitals and Health Centres compared with 316,797 the previous year. Of this total some 211,755 were first attendances. A total of 16,709 were admitted to hospital compared with 16,967 the previous year.

Hospitals, Health Centres and Dispensaries: The total number of beds available in both Government and Mission hospitals and Health Centres is 38 for paying patients and 792 for free patients. There are also 191 cots. The accommodation is distributed as follows:—

	<i>B e d s</i>		<i>Cots</i>
	<i>Paying Patients</i>	<i>Free Patients</i>	
Francistown	7	77	21
Gaberones	—	44	3
Ghanzi	4	8	3
Kanye (Seventh Day Adventist)	4	120	6
Khale (Roman Catholic)	—	4	—
Lobatsi	13	104	60
Lobatsi Mental Home	—	30	—
Madinare	—	35	6
Mahalapye	—	18	4
Maun	5	61	5
Maun Maternity Centre (London Missionary Society)	—	13	10
Mochudi (Dutch Reformed Church)	—	37	14
Mochudi (Government)	—	8	2
Molepolole	—	78	20
Pilikwe Maternity Centre	—	2	2
Rakops	—	8	2
Ramoutsa (Lutheran Mission)	—	29	—
Serowe	5	106	33
Tshabong	—	8	—

The total number of outstation dispensaries maintained by Government is 40 of which nine have resident African staff and are visited at regular intervals by Government Medical Officers.

Missions maintain 26 dispensaries, all of which are visited at regular intervals ranging from twice weekly to once in a month.

The total 60 dispensaries form a network which covers most of the populated areas of the Territory.

One new medical district was opened at Mochudi where a Government Medical Officer is in charge of a Health Centre.

A new Health Centre at Kasane is staffed by an African and regular visits are paid by Medical Officers of the Northern Rhodesia Service. The other new Health Centre at Rakops is staffed by an African Health Assistant and a Staff Nurse who are visited regularly by the Medical Officer, Maun.

Ante-natal attendances numbered 23,066 (1959: 17,733) and 3,559 babies were born in hospital. Post natal attendances have more than doubled. During the year there were 4,352 attendances. Attendances at child welfare clinics numbered 2,983.

A total of 907 major and 2,150 minor operations were recorded. (1959: 797 and 2,276 respectively) and 3,953 X-ray examinations were conducted.

The 1960 examination results were as follows:—

	<i>Entrants</i>	<i>Passes</i>
Final Midwifery	8	7
Final Year Executive Nursing Council	13	13
Preliminary Executive Nursing Council	55	50
Preliminary High Commission Territories Nursing Council	12	8

The number of mining recruits examined was 83,361 of which 992 were rejected, chiefly because they were under age or of poor physique. The total number of recruits and repatriates air-lifted to and from Nyasaland, Barotseland and Shakawe was 111,597 (1959: 53,129 recruits only) air miles flown were 1,430,110 (1959: 1,503,802).

For the year 1959/60 provision was made in W.H.O. and U.N.I.C.E.F. budgets for assistance in tuberculosis control and a malaria survey.

Colonial Development and Welfare Schemes: Under Scheme D.3067 £593 was spent on finishing capital works and under Scheme D.3949 £3223 was spent on a Health Centre at Mochudi and a Dispensary at Mothobudukwane.

Public Health:

Epidemic and General Diseases:

Plague: No rodent plague was found and there were no cases of human plague.

Respiratory Complaints: Bronchitis, pneumonia and pulmonary tuberculosis were reported from all stations. Accommodation in most stations was adequate for cases of Pulmonary Tuberculosis but some accommodation is still lacking.

Whooping Cough: The highest incidence of this disease was in the South-eastern portion of the Territory. Four stations recorded over a hundred cases each.

Diphtheria: Cases were very few this year. Most of the cases were treated at Serowe and Francistown in the North-east of the Territory.

Records of Alimentary Diseases: Amoebic and bacillary dysenteries were most common, together with gastric-enteritis of unspecified origin.

Typhoid Fever: There was no outbreak of typhoid fever during the year.

Eye Diseases: Conjunctivitis and trachoma accounted for most of the cases.

Malaria: In the southern half of the Territory human malaria was reduced to almost zero.

In Ngamiland and the North-eastern portion of the Territory the incidence remained high.

Anti larval and anti-adult measures are routine at Francistown and North west of there. Anti-adult measures were undertaken elsewhere with the advent of the rains.

Bilharzia: Survey work continued mainly in the southern division. Urine from 411 children was tested. 4.1% showed the presence of eggs. The majority of the infected people were in the eleven to fifteen age group, a few in the six to ten group, and none in the 16 to 20 group.

Poliomyelitis: No cases of poliomyelitis have been recorded. Vaccinations continued on a small scale.

Rabies: No cases of human rabies were recorded.

Anthrax: No cases of human anthrax were recorded.

Relapsing Fever (Tick Borne): The relapsing fever carrier tick *Ornithodoros Moutaba* is spread throughout the desert and the residential villages, but caused no serious outbreaks.

Trypanosomiasis: This disease was contained in the Ngamiland and Chobe swamp areas. There were 91 cases reported and five deaths.

Cholera and Yellow Fever: These diseases were not reported.

Relapsing Fever and Typhus: These fevers of house borne origin were not recorded.

Small Pox: This was the only one of the six international conventions quarantenable diseases which was reported in 1960. There were 21 cases reported on the eastern side of the Territory. All cases were scattered widely. The source of infection in the Territory was not discovered. Every case reported was made the focus of a vaccinating drive. About 40,000 vaccinations were done during the year.

3. HOUSING AND TOWN PLANNING

The majority of people live in the traditional type of hut with mud walls and a thatched roof. The type and soundness of construction vary considerably but on the whole the huts are maintained in good condition. They are usually constructed by the owner and his family, sometimes with help from friends, on land allocated by the Chief or local headman. Even in towns there is little or no overcrowding and there are no slums.

A few of the wealthier Africans have European-type houses built. Europeans usually live in detached houses of brick and concrete.

Public Health Regulations, made under Cap.49 of the Laws of the Bechuanaland Protectorate, are administered by the Medical Officer of Health and Health Inspectors in the major centres of population. It is not always possible for the smaller centres to be inspected regularly but the absence of overcrowding makes rigid enforcement of many of the regulations unnecessary.

4. SOCIAL WELFARE

Throughout the greater part of the Protectorate social problems are satisfactorily solved according to long established tribal custom.

The sense of communal obligation is very strong, and as a result the care of orphans, the aged and infirm is voluntarily undertaken by relatives according to a definite order of responsibility which is laid down by tribal law.

Only in the detribalised centres of Francistown and Lobatsi has it become necessary for Government Welfare Officers to operate outside the tribal framework.

An annual Government provision of approximately £1,000 is available if required for the relief of destitution and Government or Mission hospitals and clinics are established at strategic points to deal with cases of serious illness or disease.

YOUTH MOVEMENTS

(a) *The Boy Scout Movement* continues to grow in strength. Statistics for 1960 are as follows: Groups 69, Packs 50, Troops 58, Rover Crews 5, Queen Scouts 12, First Class Scouts 31, total number of scouts 3,566.

Scouting in Bechuanaland has now spread as far afield as the swamp schools of Ngamiland in the North-west and the desert schools of the Kgalagadi in the South.

A Deputy Territorial Commissioner, a Deputy Camp Chief and an Assistant Deputy Camp Chief were appointed during the year. The Deputy Territorial Commissioner has taken charge since the Territorial Commissioner went to Rhodesia.

(b) *The Girl Guide Movement.* The final figures for the 1960 census were not available but an enrolment of approximately 4,700 was expected. Shortage of adult leaders restricts development.

The Guide Rally at Serowe during the visit of His Excellency, the High Commissioner and Lady Maud was outstandingly successful.

SOCIAL SERVICES

(a) *Red Cross.* Miss Nield, a Field Officer of the British Red Cross Society, visited many parts of Bechuanaland during a fact-finding mission to the High Commission Territories.

New branches have been established at Maun, Madinare, Palapye, Gaberones and Lobatsi. The group-leader of the well-established Francistown branch is acting as liaison officer for the Territory.

(b) *Gymnasium.* The Protectorate's first gymnasium was opened at Kanye, the tribal capital of the Bangwaketse.

(c) *Cultural Clubs* are active in Serowe and Lobatsi, where lectures, debates, film shows, literacy classes and arts and crafts instruction takes place and libraries are available.

(d) *Museum.* Thanks to the initiative of Chief Bathoen II, C.B.E., Bechuanaland's first museum was opened during the year at Kanye.

MOBILE CINEMA

The mobile cinema gave 169 shows during the year to average audiences of approximately 1,200 people — a total year's audience of approximately 202,800. To complete this circuit the unit travelled 12,600 miles, much of the distance over very difficult tracks.

Most of the films shown are educational or instructional and are obtained from the Information Offices of the United Kingdom and the United States.

CHAPTER 8

Legislation

The following were the principal enactments during the year:

- (1) Proclamation No. 86/1959, Arms and Ammunition: Made provision for the registration of arms and ammunition.
- (2) Proclamation No. 27/1960, Exchequer Loan: Made provision for the raising of a loan by the Secretary of State.
- (3) Proclamation No. 36/1960, Deeds Registry: Made provision for the re-organization of the Deeds Office.
- (4) Proclamation No. 47/1960, Purchase of African Produce: Made provision for prohibition against the purchasing of African agricultural produce from an African for cash.
- (5) Proclamation No. 53/1960, Development Loan: Made provision for the raising by exchequer loan of an amount sufficient to produce as nearly as may be the sum of £300,000.
- (6) Proclamation No. 55/1960, Livestock Producers' Trust: Made provision for the establishment of a trust for the livestock producers of the Territory.
- (7) Proclamation No. 57/1960, Lobatsi Abattoir (Contributions of Trust Fund): Made provision relating to the taxation of contributions to the trust fund established under the Livestock Producers Trust Proclamation (No. 55/1960).
- (8) Proclamation No. 69/1960, Liquor: Consolidated and amended the laws in force in the Territory relating to intoxicating liquor.
- (9) Proclamation No. 73/1960, Currency: Consolidated and amended the law relating to currency in the Territory.

CHAPTER 9

Justice, Police and Prisons

1. JUSTICE

In criminal matters the Court of Appeal, High Court and Subordinate Courts are governed by the Criminal Procedure and Evidence Proclamation. This Proclamation follows the criminal law in force in the Union of South Africa.

In civil matters, except where African law and custom is involved the Roman Dutch Common Law in force in the Union of South Africa is followed. This is so because in the Bechuanaland Protectorate the Cape of Good Hope laws promulgated up to the 10th June, 1891, remain in force, except where repealed or altered by Proclamation by the High Commissioner.

The Bechuanaland Protectorate Courts of Law consist of:—

COURT OF APPEAL

A Court of Appeal for all three Territories was established on the 15th April, 1955, under the Basutoland, Bechuanaland Protectorate and Swaziland Court of Appeal Order in Council, 1954. This Court is composed of the Chief Justice, who is President, and other Judges of appeal.

HIGH COURT

The High Court is a Superior Court of Record and, in addition to any other jurisdiction conferred by local law, possesses and exercises all the jurisdiction, power and authorities vested in a Divisional Court of the Supreme Court of South Africa.

Although the decision in every case, civil and criminal, is vested exclusively in the presiding Judge, he generally sits with four Assessors (two Administrative Officers and two Africans) who act in an advisory capacity.

In civil cases the practice is for the Judge to sit alone where only law, other than African law and custom, and not fact only, is involved. Where African law and custom is involved the Judge sits with four Assessors or with two African Assessors only, depending on the character of each particular case.

SUBORDINATE COURTS OF THE FIRST,
SECOND AND THIRD CLASS

In the twelve districts of the Territory there are Subordinate Courts of the First, Second and Third Class presided over by Administrative Officers.

(a) Criminal

(i) *First Class*: Can impose sentences up to a maximum of two years with or without hard labour, or a fine up to one hundred pounds, or both imprisonment and fine, provided that the maximum imprisonment of two years is not exceeded. In certain cases and subject to certain safeguards a whipping not exceeding fifteen strokes with a cane may be imposed.

(ii) *Second Class*: The maximum sentence is imprisonment with or without hard labour up to one year, or a fine not exceeding fifty pounds, or both imprisonment and fine, provided that the maximum sentence of one year is not exceeded. A whipping not exceeding eight strokes with a cane may be imposed in certain cases and subject to certain safeguards.

(iii) *Third Class*: The maximum sentence is imprisonment with or without hard labour up to six months, or a fine not exceeding twenty five pounds, or both imprisonment and fine, provided that the maximum sentence of six months is not exceeded. A Third Class Court cannot impose a sentence of whipping.

Subordinate Courts have no power to try a person charged with treason, murder, sedition or an offence relating to coinage or currency, nor can they normally try cases of rape though a Subordinate Court of the First Class has jurisdiction to try cases of rape where Africans only are concerned and the Attorney-General may, after committal for trial, remit any case of rape to a Subordinate Court of the First Class with or without increased jurisdiction as set out below. This jurisdiction of a First Class Court to try cases of rape where Africans only are concerned is peculiar to the Bechuanaland Protectorate in that the Subordinate Courts of the other two High Commission Territories, Basutoland and Swaziland, do not have such jurisdiction though the Subordinate Courts of the First Class in these two Territories will likewise have jurisdiction on remittal to try any case of rape.

(b) Increased criminal jurisdiction.

The Attorney-General may remit a case (not being treason, murder, sedition or an offence relating to coinage or currency) to a Subordinate Court for trial with or without increased jurisdic-

tion, after the holding of a preparatory examination. When so remitted with increased jurisdiction the powers of punishment are:—

(a) *First Class*: Imprisonment up to four years; fine not exceeding two hundred pounds.

(b) *Second Class*: Imprisonment up to two years; fine not exceeding one hundred pounds.

Note: There is no remittal to a Third Class Court and therefore no increased jurisdiction for such a Court.

(c) *Criminal Review*

In criminal cases all sentences by Subordinate Courts of the First Class are automatically subject to review by the High Court when the punishment imposed exceeds six months' imprisonment or a fine exceeding fifty pounds.

As regards the Second and Third Class Subordinate Courts they are also subject to a similar review by the High Court when the punishment imposed exceeds three months' imprisonment or a fine exceeding twenty-five pounds.

(d) *Civil*

In civil cases Subordinate Courts of the First Class have jurisdiction in all actions where both parties are Africans, subject to the right of such Courts to transfer cases to the African Courts for hearing, and in all other actions where the claim or value of the matter in dispute does not exceed five hundred pounds, and of the Second Class where the matter in dispute does not exceed two hundred and fifty pounds. Third Class Subordinate Courts can try civil action between Europeans when the claim is not more than ten pounds.

AFRICAN COURTS

These are governed by the African Courts Proclamation.

The total number of cases heard by African Courts during the year was as follows (1959 figures in parentheses):—

Criminal	....	....	....	....	....	....	....	2243	(2016)
Civil	....	....	....	....	....	....	....	1713	(1836)

JUDICIARY

The Judiciary is headed by the Chief Justice, who is also Chief Justice of Basutoland and Swaziland. He is resident in Basuto-

land because there is more work there than in each of the other two Territories.

During 1955 a Puisne Judge was appointed for all three Territories. Like the Chief Justice, he is stationed in Basutoland.

The Chief Justice, now that a Puisne Judge has been appointed, generally confines his activities to the Court of Appeal, Criminal Review cases, the supervision of the work of Subordinate Courts and the administrative side of the Judiciary. A practice has been arranged by which the Chief Justice visits the Bechuanaland Protectorate and Swaziland from Maseru quarterly to take civil matters and applications and if necessary civil trials; this being in addition to the normal criminal and civil sessions.

Under the Chief Justice there are Registrar, High Court, and the various Presiding Officers of the Subordinate Courts — that is the Administrative Officers in their judicial capacity.

2. POLICE

The authorised establishment of the Bechuanaland Protectorate Police is 59 European Senior and Subordinate Officers, 4 African Warrant Officers, 56 Non-commissioned Officers and 364 Constables.

Force Headquarters are situated at Mafeking, and for administrative purposes the Territory is divided into the Northern and Southern Divisions. The headquarters of these Divisions are at Francistown and Gaberones respectively, and each is commanded by a Senior Superintendent. The Police Training Depot and the Criminal Record Bureau are at Gaberones.

During the year the patrol mileage was estimated at 1,597,444 miles. Patrolling by motor vehicles, horses, mules, donkeys and bicycles. In addition, camels are still used in the Kalahari Desert and canoes are an essential means of policing the swamp areas of the Chobe in the North Western portion of the Protectorate.

The Commissioner of Police is Chief Immigration and Passport Officer for the Protectorate. All European members of the Force are appointed Immigration Officers and Public Prosecutors, and certain African Warrant Officers and Non-commissioned Officers are also appointed to the latter post.

The radio network consists of 70 stations. Of these, 35 are controlled by the Commissioner of Police. The balance, mostly mobile sets, are controlled by other Government departments (Geological Survey, Public Works and Veterinary). In addition to the above, there are 55 private radio communication and nine amateur radio experimental stations and three aircraft with ground/air communications.

During 1960 25,000 official messages were sent over the Police network, and all stations were on the air for a combined total of 30,175 hours.

3. PRISONS

There are two modern central prisons in the Protectorate, at Gaberones and Francistown, and 13 minor prisons (lock-ups) at Lobatsi, Mochudi, Tshabong, Maun, Kasane, Serowe, Machaneng, Kanye, Molepolole, Ghanzi, Mahalapye, Baines Drift and Mamona. Each of the two central prisons is in charge of a gaoler, while the minor prisons are staffed by warders; wardresses are employed at Gaberones and Francistown.

The Superintendent of Prisons is in charge of all prisons and the District Commissioner of each district maintains control of the local prison within his district.

The total number of persons in prison at the beginning of the year was 386, and at the end of the year 444. The total daily average in prison was 413.02 as compared with 390.42 in 1959.

There were 12 offences against prison discipline, as against 21 in 1959. Fifty-four escapes were made, and there were 45 recaptures. In 1959 there were 39 escapes.

The total daily average of prisoners on the sick list was 18.32, which was 4.4 per cent. of the daily average prison population; the percentage in 1959 was 4.6.

Mitigation of sentences is governed by Regulations 155 and 158 of the Prison Regulations, which provide that every prisoner serving a sentence exceeding one month shall, according to his conduct and industry, be allowed an ordinary remission not exceeding one third of his sentence. Power is also vested in the High Court to allow special remissions.

No formal arrangements exist for the after care of discharged prisoners except that they are issued with free transport warrants and rations for their journey. District Commissioners assist in finding employment for those who want it, but the majority return to their pastoral and agricultural pursuits.

Prisoners are permitted reading matter and writing materials. Educational and other training in a limited number of trades, such as brick-laying, tailoring, carpentry and gardening, is provided at Gaberones prison.

CHAPTER 10

Public Utilities and Public Works

Public utilities as such are virtually non-existent. The only exceptions are at Francistown, where the Tati Company owns and operates the electric power and water supply services. The Colonial Development Corporation at Lobatsi operates an electric power station and supplies its own works and buildings, the hotel and a number of private consumers. Water supplies are provided by Government at all district headquarters, camps and institutions. With the exception of the Railways, the water is only available to a limited extent to the public and other consumers. The Railways also have their own water supplies along the line, and allow a certain number of private consumers.

Electric generating plants are installed at each Government hospital, the workshops at Gaberones and Divisional headquarters at Lobatsi.

PUBLIC WORKS DEPARTMENT

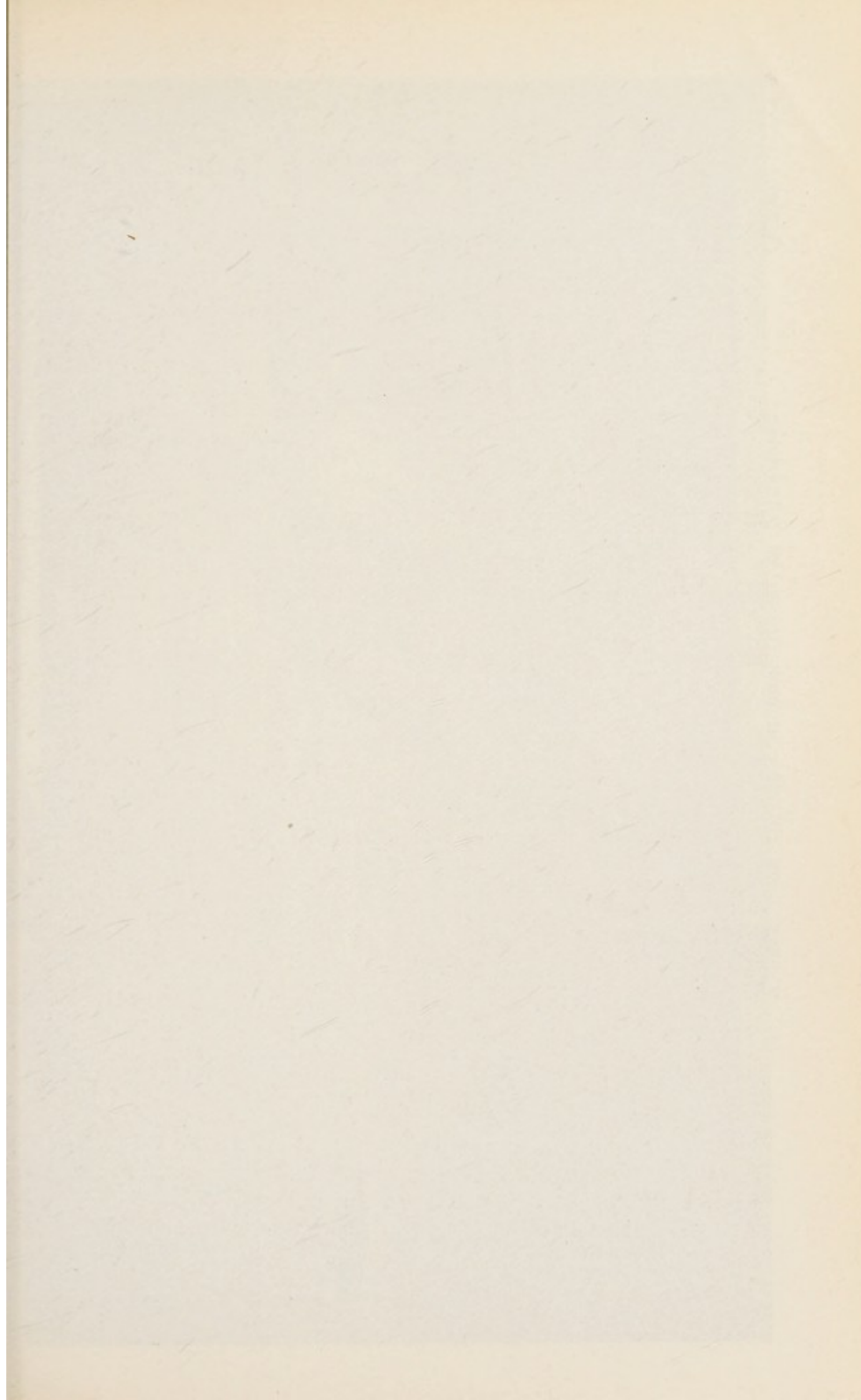
The activities of the Public Works Department covers and includes the following:—

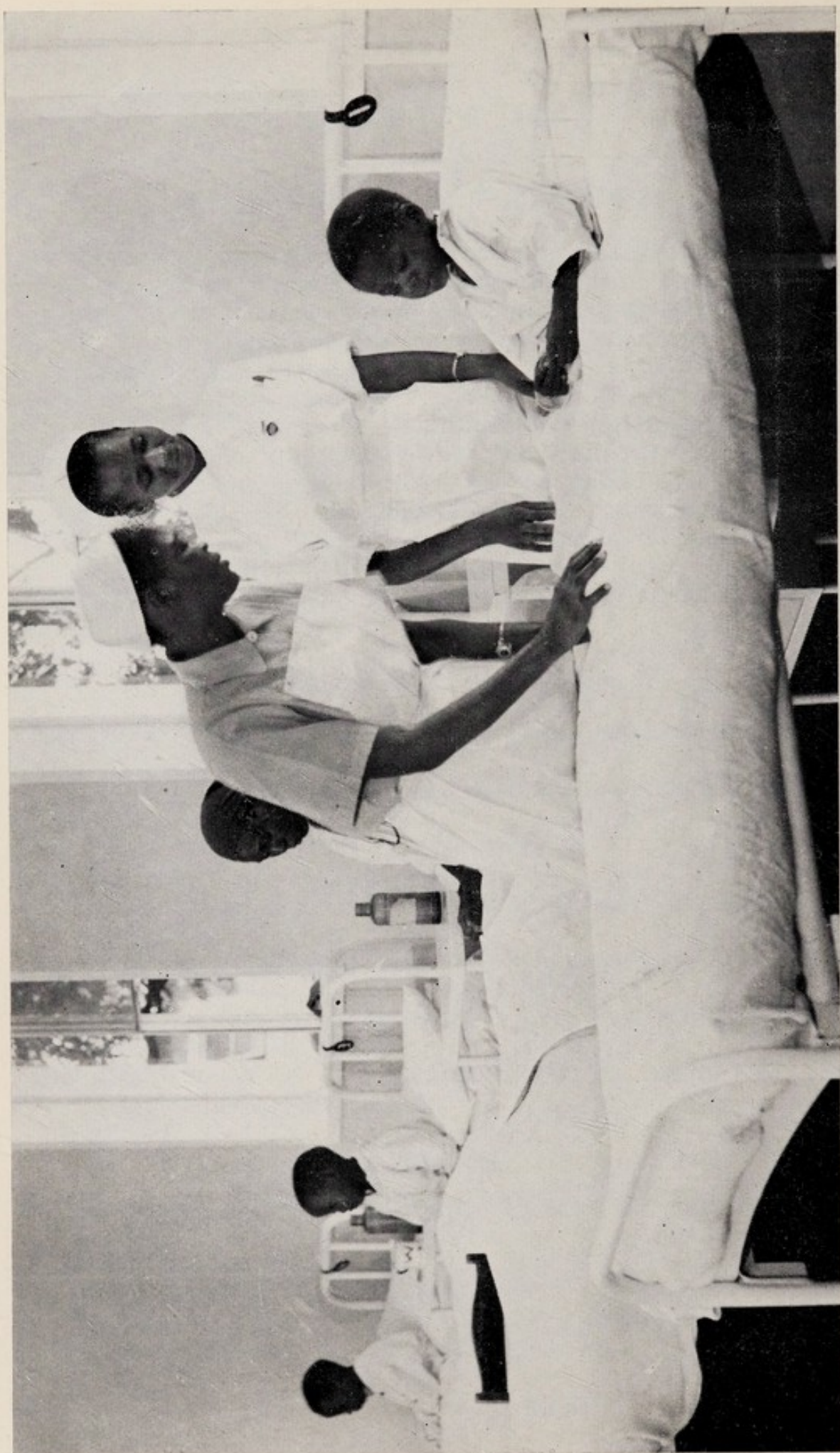
- (a) Planning, construction and maintenance of Government buildings;
- (b) Town planning and development;
- (c) Cadastral and topographical survey;
- (d) Development, planning, construction and maintenance of roads and bridges;
- (e) Control of, planning, construction and maintenance of aerodromes and emergency landing grounds;
- (f) Development, planning, construction and maintenance of water supplies;
- (g) Maintenance of Government transport, plant and electrical installations.

BUILDINGS

Funds approved for new buildings were as follows:—

	£
Public Works Extraordinary	49,050
C.D. & W. Funds (other Departments)	24,959
Loan Programme 1960/61 including carry over from 1959/60	339,732
Total	413,741





In the Jubilee Hospital at Francistown.

(Photo: C.O.I.)



A sand road through mopane forest in Ngamiland.

(Photo: C.O.I.)



Road Foremen's refresher course in road construction.

(Photo: B.P. Information Branch)



Contouring maps from aerial photographs in the Department of Geological Survey.

(Photo: C.O.I.)



*A cattleman watches out for his herdboys at a watering point.
(Photo: C.O.I.)*



(Photo: C.O.I.)

Anatomy class at the Veterinary School at Ramathlabama.

In addition, the sum of £45,806 was provided for Maintenance and Buildings.

During the year, the following more important buildings were completed or very near completion, either departmentally or by contract:—

Maun

- Sisters flat
- Staff quarters
- 1 Division I house
- 2 Division III houses

Kasane

- 1 Division I house
- 13 Division III houses
- Health Centre
- Nurses quarters

Gwetta

- Police Station
- 5 Division III houses

Francistown

- Divisional Commissioner's residence
- Block of Flats

Tonoto

- Post Office

Mahalapye

- Mortuary
- 1 Division I house
- 6 Division II houses

Machaneng

- Post Office

Martin's Drift

- Police Station
- 1 Division II house
- 5 Division III houses

Bobonong

- 5 Division III houses

Baines Drift

- 9 Division III houses

Gaberones

- 2 Division II houses
- 5 Division III houses
- Block of flats

Khale

Hostel, St. Joseph's Mission

Ramoutsa

Police Station

Lobatsi

Gaol

Post Office stores

Indian school

Block of flats

Sisters flat

6 Police Division III houses

4 Division II houses

2 Division I houses

Mafeking

2 Division II houses

10 Division III houses

Shakawe

3 Division III houses

Ghanzi

1 Division I house

Notwani

1 Division III house

Dukwe

1 Division III house

Mochudi

1 Division II house

Odiakwe

1 Division II house

Kanye

2 Division III houses

Ramathlabama

I Division II house

SURVEYS

The following surveys have been completed or in the course of completion by the departmental Surveyor:—

Lobatsi Estates water reservation area

Contour map of old Lobatsi township

New Police camp site — Ramaquabane

Quarantine camp — Odiakwe

Site for Anglican Mission School, Serowe
Site for Teacher Training Centre — Serowe
New camp site — Kanye
Site for African housing — Francistown
Proposed Tati bridge site.

WATER SUPPLIES

Surface

It is pleasing to report that the following schemes, Notwani dam, Gaberones pipe-line, augmentation of Mahalapye supply and the augmentation of Lobatsi supply, have all encouragingly progressed as described in the following resume.

Notwani dam was completed and impounds 427,000,000 gallons of water and since August it has been possible to provide the Rhodesia Railways at Notwani siding with an unrestricted supply of water for their locomotives. Further, this draw-off has made no noticeable impression on the storage. During December the dam again overflowed the crest to a depth of one foot.

Work on the construction of a water treatment plant at Notwani dam and the laying of a pipe-line to supply the township of Gaberones with up to 80,000 gallons a day, was commenced during October by a contractor under the direction of a firm of consultants. Work is in progress on the treatment plant and, by the end of the year, a good start had been made on laying the 54,000 feet of piping required to deliver the water from Notwani to Gaberones. The water treatment works now being constructed have been designed to deal with twice the capacity to cope with future expansion. Also, by arranging to pump instead of gravitate the water to Gaberones, the quantity to be delivered through the pipe-line can be increased to 120,000 gallons a day.

The first phase of the new water scheme from Woodlands borehole source to augment the inadequate Lobatsi supply position, is almost complete. Pumping plant, storage, pumping main and distribution has been installed, and it only remains to connect the remaining boreholes to the pumping reservoir. The initial pumping plant has been designed to deliver up to 3,000,000 gallons a month under normal working conditions, although this has been restricted to 1,000,000 gallons a month for the present and until the behaviour of the boreholes is known accurately.

The construction of the first phase of the longitudinal extracting and collecting drains from the sandy clay bed of the Mahalapye river to meet the demand of the Rhodesia Railways and the Mahalapye township, was completed during November.

Minor storage and/or distribution schemes were carried out at the Government camps of Mochudi and Serowe, and work is in progress at Ghanzi to increase storage and distribution facilities.

UNDERGROUND

A Government Drilling Branch of eleven drilling rigs is maintained to carry out underground water development work in the Protectorate. The Drilling Branch forms a section of the Geological Survey and the Geological Survey is responsible for all Government water borehole drilling in the Territory. Its role in this work is the siting and drilling of boreholes to the stage where productive boreholes can be passed to the Public Works Department for equipping and maintenance.

During 1960 all drilling was carried out by the Drilling Branch and no contract work was undertaken. Drilling rigs were in operation in most areas of the Territory at various times during the year. Since April 1960 work has followed a programme of priorities decided on for the 1960/63 period. In the implementation of this programme work on the Ghanzi cattle export route was completed with the exception of one borehole in the extreme south-east. Only one borehole remains to be completed in the programme for the Barolong Tribal Territory and only two boreholes remain to be completed in the Bamalete Tribal Territory. Work has also been in progress in the Batawana Tribal Territory and the Ghanzi district. A limited amount of work has been carried out in most other Tribal Territories and boreholes have also been drilled for agricultural and veterinary requirements and various Government camps and institutions.

The following is a statistical summary of the drilling results for the year under review:—

Rigs in operation (average number throughout the year)	10
Number of successful boreholes	90
Total footage in successful boreholes	17,389
Number of blank boreholes (including 4 abandoned for technical reasons)	24
Total footage in blank boreholes	6,207
Total number of completed boreholes	114
Total completed footage	23,721
Number of uncompleted boreholes	6
Footage in uncompleted boreholes	983
Number of boreholes cleaned or deepened	5
Footage in deepened boreholes	125
Footage drilled in reaming boreholes 16-inch, 10-inch or 8-inch	4,715
Total yield developed in gallons per hour	113,033

PROGRESS REPORT FOR COLONIAL DEVELOPMENT AND WELFARE
SCHEMES D.3639A — D AND D.4609
UNDERGROUND WATER DEVELOPMENT: DRILLING BRANCH

The development of underground water supplies in the Bechuanaland Protectorate was financed over the five year period to 31st March, 1960, by grants made under Colonial Development and Welfare Scheme D.2639A — D. The grants totalled £411,628 and during this period the local contribution towards the recurrent costs was increased from 25% in 1956/57 to 100% on the financial year 1959/60. This provision from C.D.W. Scheme, D.2639, included funds not only for the cost of drilling boreholes in the development of underground water supplies, but also funds to cover the cost of equipping successful boreholes developed during the drilling programme. From April 1st, 1959, full control of the actual drilling section was passed from the Director of Public Works to the Director of Geological Survey. The Geological Survey became responsible for all government water boreholes drilling in the Territory and its role in underground water development work is the siting and drilling of boreholes to the stage where productive boreholes can be passed to the Public Works Department for equipping and maintenance.

For the first three months of the period under review to 31st March, 1960, the Drilling Section was financed by funds from C.D.W. Scheme, D.2639, passed to the Director of Geological Survey by departmental warrant from the Director of Public Works. A further grant of £42,650 was then made under Colonial Development and Welfare Scheme, D.4609, to cover the costs of actual drilling and development of underground water supplies over the period 1960/64. Control of this scheme is vested in the Director of Geological Survey, who has assumed full financial responsibility for the Drilling Branch section since 1st April, 1960.

The Drilling Branch section made very satisfactory progress indeed during the year and the total number of boreholes drilled shows a substantial increase over the total for 1959. With the exception of a vacancy for a post Senior Driller the Branch has been fully manned throughout the greater part of the year. The Drill Superintendent, who was formerly on the establishment of the Public Works Department, was transferred to the Geological Survey establishment from the 1st April, 1960.

During the first eight months of the period under review frequent drilling delays were caused by a shortage of reliable transport, but transport difficulties are now being overcome by the

replacement of the old Warford trucks by tractors for hauling the rigs and 5-ton diesel trucks as load carriers. Trailers are still awaited but it is hoped to purchase these early in 1961. Earlier troubles experienced with drilling cables have now been overcome as a result of correspondence between the Drill Superintendent and local manufacturers and the subsequent production of drilling cable suitable to local requirements, with the addition of molybdenum disulphide impregnated grease to prevent internal corrosion when drilling in sulphated waters. A more suitable low carbon alloy steel, designated percussion drilling bit steel, is now being widely used. This steel has the advantage that it can be dressed and hardened in portable bit forges with the rigs in a much simpler manner than imported high carbon steels, which, although of better quality, are very difficult to work with and temper under field conditions. There is, in addition, a substantial financial saving on each six-inch diameter bit. New replacement engines are on order in the United Kingdom for a number of the drilling rigs which are over 14 years old and it is hoped that these will be delivered during the first quarter of 1961.

During 1960 all drilling was carried out by the Drilling Branch section and no contract work was undertaken. Government operated rigs completed a total of 114 boreholes (90 successful) during 1960 as against 70 boreholes (47 successful) during 1958. In addition five boreholes were cleaned or deepened and six remained uncompleted at the end of the year. The total footage drilled was 24,704 feet, of which 17,389 feet were drilled in productive boreholes. The yield developed overall was 113,033 gallons per hour. On average 10 rigs were manned during the year and in operation in the field. In addition to the normal drilling, reaming of boreholes for insertion of casing was carried out as follows:

16" diameter 123 feet: 10" diameter 942 feet
8" diameter 3,650 feet.

The following is a resume of drilling results for the period 1st January to 31st December, 1960:—

LOCALITY OF HOLES DRILLED OR PURPOSE	NO. OF SUCCESS- FUL BORE- HOLES	NO. OF BLANK BORE- HOLES	TOTAL FOOTAGE DRILLED IN FEET	WATER DEVELOPED IN GALLONS PER HOUR
Barolong Tribal Territory	9	3	2,659	6,020
Bamalete Tribal Territory	10	2	3,087	12,430
Bamangwato Tribal Territory	4	—	821	3,700
Bangwaketse Tribal Territory	2	—	539	1,020
Batawana Tribal Territory	3	—	1,125	3,840
Tati African Area	3	—	309	6,000
Batlokwa Tribal Territory	1	—	288	500
Bakgatla Tribal Territory	1	—	133	1,800
Kgalagadi District	3	—	1,077	3,720
Ghanzi Cattle Export Route	9	3	3,643	10,735
Veterinary, Tsetse Fly Con- trol and Agricultural De- partments	21	4	2,896	34,324
Governments (Roads, Police and Village supplies)	17	4	4,223	23,354
Ghanzi District	3	7	3,119	1,940
Private boreholes drilled for farmers and Traders on repayment	4	1	785	3,650
Totals.....	90	24	24,704	113,033

N.B. Footage of productive boreholes — 17,389 feet.

Underground water supplies: Equipping of boreholes:

During the period under review, over ninety boreholes supplying both Tribal and Government needs were equipped with engine powered pumping plants of varying capacities, and financed from C.D. & W. Scheme D.2639 and the current scheme D.4608. Government equipping priorities were, to some extent, upset due to the foot and mouth outbreak.

Government Transport:

The Mechanical Branch is responsible for the repair and maintenance of the majority of the Government transport fleet and plant. The exceptions are in localities where the branch has no workshops, and it is more beneficial to have work carried out in local garages.

During the year, the workshops at Gaberones, Mahalapye, Francistown, Maun and Lobatsi carried out a total of 3,162 Government repair jobs and 264 for the public unable to obtain service elsewhere.

In addition, the following items are noteworthy.

A mobile laboratory was constructed on a ten-ton Albion Reiver chassis; four mobile maintenance units were placed in service for installation, repair and maintenance of borehole plant; the hospitals at Serowe and Maun had their electric power supply augmented by 20 K.W. plants, constructed in the workshops at Gaberones with Perkins diesel engines from boarded vehicles; 3×1000 gallon mobile water tankers and 2×5 ton trailers, with turntable steering were fabricated.

CHAPTER 11

Communications

RAILWAYS

The main railway line from Cape Town to Rhodesia passes through the Protectorate entering at Ramathlabama, 886 miles from Cape Town, and leaving at Ramaquabane, 394 miles further north. The single track line runs roughly parallel to the eastern boundary of the Protectorate at an average distance from it of about 50 miles. The railway within the Protectorate formed part of the undertakings owned and operated by the Rhodesia Railways Limited which have been transferred to a statutory body established under the Laws of Southern Rhodesia and operating under the Laws of the three Territories of Southern Rhodesia, Northern Rhodesia and the Bechuanaland Protectorate.

The railway line from Ramathlabama in the south to Mahalapye in the north is administered and staffed by the South African Railways.

The line north of Mahalapye to Ramaquabane, which was formerly administered by the South African Railways, was taken over during 1959 by the Rhodesia Railways Administration.

ROADS AND BRIDGES

The main and secondary roads of the Protectorate are predominantly of earth or sand, formed to shape and camber, with gravelled sections where high traffic density and heavy going made it necessary. There are two short lengths of bituminous surfacing through Lobatsi and Francistown.

The sum of £57,000 (inclusive of Allied Service Maintenance of Vehicles and repair), was provided for road maintenance. Of this amount £2,600 was allocated for district roads, and the remainder for the 2,432 miles of Public Works Department controlled roads. Additional funds were provided under the roads development schemes for betterment of the road systems of the Territory and construction of new roads.

Generally speaking the standard of the roads and road maintenance in the Protectorate has improved considerably during recent years but, with the considerable increase in traffic den-

sities experienced on many of the more important roads, so the standard is becoming increasingly difficult to maintain with the funds voted.

The second meeting of the Roads and Air Transport Advisory Board was held during May. Among the more important items discussed was the revision of the Motor Vehicles Proclamation.

During the year under review, the following more important works were carried out:—

- (a) New road construction and realignments mainly in the desert: 145 miles
- (b) Over 50 miles of gravelling was carried out on the excessively sandy or soft stretches of road, with special reference to the Francistown/Maun road and the main road north/south;
- (c) The Peleng bridge at Lobatsi, a low level bridge, consisting of $5 \times 22'6''$ reinforced concrete spans with two short approach spans, was opened to traffic towards the end of April. At the end of the year, work was in progress on a very similar bridge at Ramoutsa, to give better alignment to the main road and avoid a double crossing of the railway line.

Foundational investigations have been completed for the proposed Tati river bridge at Francistown and the Thamelakane bridge at Maun.

AERODROMES

The sum of £3,000 was voted for the maintenance of aerodromes and landing grounds. Normal maintenance consisting of inspections, grass cutting, was carried out regularly and grading when necessary.

Lobatsi aerodrome has been lengthened and widened to accommodate the new Government sponsored air service operating from Lobatsi.

POSTS AND TELEGRAPHS, TELEPONES AND WIRELESS

Postal and telephone traffic is expanding at a steady rate, and the revenue earned from these services is becoming increasingly important in the economy of the Territory.

Although there are still large areas of the country without postal facilities, good progress is being made with extending services to remote areas.

Seven new post offices were opened during the year, and the total number of post offices in the Territory is now 56, classified as follows:—

(a) transacting all classes of post office business	15
(b) transacting all classes of post office business excepting telephone service	2
(c) postal, telegraph and telephone agencies	2
(d) postal and telegraph agencies	4
(e) postal agencies ...	29
(f) telegraph agencies	2
(g) telephone agency ...	1

Growth of the Department is reflected in the increase in the authorised establishment since the 1st January, 1957, when the Bechuanaland Protectorate Government took over control of all postal, telegraph and telephone services.

<i>Grade</i>	<i>Authorised Staff</i>		<i>Increase</i>
	<i>1 January 1957</i>	<i>31 December 1960</i>	
Supervising Officer	1	4	3
Postal Officer/Assistant	27	50	23
Telephonist	4	34	30
Technician	Nil	9	9
Other grades	9	38	29
Agents ...	13	39	26
Total.....	54	174	120

Considerable progress is being made in training Africans for staff positions in the Post Office, and many are now employed as counter clerks, mail sorters and as telephonists. Ten of the 17 major post offices in the Territory have African Postmasters.

A comparative table is given below of business transacted at post office counters:—

	1959 £	1960 £
Postage stamp sales	22,528	25,686
Money order/postal order commission	983	997
Rental collections, private boxes/bags	1,278	1,441
Money orders issued	20,097	14,953
Money orders paid	1,517	1,588
Cash on Delivery parcels delivered	13,994	11,771
Postal orders issued	44,556	49,636
Postal orders paid	10,196	15,374
Savings bank deposits	6,193	5,418
Savings bank withdrawals	5,106	6,893
Radio licences issued	1,868	2,057
Registered letters accepted	77,029	95,343
Registered letters delivered	64,514	35,372
Insured parcels accepted	5,719	5,311
Insured parcels delivered	9,624	8,912

TELEPHONES

It was in the field of telecommunications that the Territory lagged farthest behind, and it is in this field that the greatest expansion is taking place.

Prior to 1957 the Territory owned virtually no telecommunications, Lobatsi being connected to the system of the Union of South Africa and Francistown to the Southern Rhodesia system. As a result of loans from the United Kingdom Government an effective national telecommunication system has been brought into operation.

Over 500 miles of trunk telephone routes have been built, and three-channel carrier systems have been installed on the Lobatsi-Mahalapye, Mahalapye - Francistown and Francistown - Bulawayo sections in order to provide additional speech channels.

A programme for further development of telecommunications provides for the extension of telephone services to villages near the main trunk telephone line and to more settled farming areas and for further exploitation of trunk lines by means of carrier systems. The number of new telephones installed during the year was 114. The total number of telephones in use at the end of 1960 was 726, made up as follows:—

direct exchange connections	....	....	....	....	....	466
extension lines	....	....	....	....	....	224
rural party lines	....	....	....	....	....	36

There is continuous attendance for telephone switching at several of the larger villages, and attendance until midnight at others.

TELEGRAPHS

The transmission of telegrams between the Territory and the Union of South Africa has been speeded up by the introduction of a teleprinter service between Lobatsi and Johannesburg.

The number of telegrams transmitted during the year was 66,041.

Telegraph traffic has fallen away as the result of the expansion in telephone services.

WIRELESS

Because of the long distances between settlements in the Territory and of the difficulty in providing telephone services to

remote areas, increasing use is being made of the radio as a means of communication. There are now 138 radio communication stations, operated by:—

Government departments	....	....	....	....	....	73
Private persons	....	....	....	....	....	56
Amateur experimental	....	....	....	....	....	9

GENERAL

A summary is given below of revenue earned during the year.

Postal: collections at post offices	....	£28,124	
parcel transits	....	64,669	
mail transits	....	42,179	
			£134,972
Telegraphs	....		6,242
Telephones	...		21,812
Miscellaneous	...		377
Total	....		£163,403

A postal museum has been established in the Lobatsi Post Office in order to preserve old articles of equipment. Specimens of stamps of current and previous issues are also being exhibited.

CHAPTER 12

Press, Broadcasting, Films and Government Information Service.

No newspapers are published in the Protectorate, but South African and Rhodesian newspapers circulate. An inter-territorial independent weekly, the African Echo, published in Johannesburg by the Bantu Press in English and the three vernaculars of the High Commission Territories, began publication in 1958.

The Government wireless station in Mafeking, in addition to providing the link between the Protectorate wireless system and the South African and Southern Rhodesia telegraph systems, broadcasts light musical programmes twice a day by arrangement with the South African Broadcasting Corporation, and relays the South African news twice a day.

There are no cinemas in the Protectorate, though in the larger centres films are shown in a local hall or hotel. There is a Government-owned mobile cinema van which continued to show educational films to appreciative audiences during the year.

In October an Information Officer was appointed, who has made recommendations for the establishment of an information service for the Protectorate.

CHAPTER 13

Flora and Fauna

The Game department has continued to grow, and now comprises a Game Officer, two Game Rangers and fourteen Game Scouts. This increase has helped considerably in the work of the department, which has also been enabled to patrol the country more efficiently by the purchase of an additional landrover and a four-wheel-drive five-ton vehicle.

A 6,000 square mile area in the Chobe District was declared a game reserve in July, and a tract of 19,000 square miles in the Central Kalahari, where game is to be protected and entry restricted in the interests of the Bushman population, will be similarly declared early in 1961.

A number of animals which were not wanted in the ranching areas have been tranquillised and taken to the Chobe Game Reserve.

Elephant control is still one of the department's major tasks, and with the increase in trained staff the main herds of marauding elephants are now under control.

Fishing at Kasane has been an attraction for visitors, and a mechanically propelled pontoon has been established at Kazungula to facilitate the entry of tourists across the Zambesi from Northern Rhodesia.

The Central Kalahari game reserve is being established mainly with the object of preserving the natural food and habitat of the Bushmen, and so is not to be developed as an attraction for visitors.

In the south-west corner of the Protectorate a game sanctuary has existed for many years adjacent to the Gemsbok National Park in the Union of South Africa. At present no tourist facilities exist in this area, in which travel is difficult.

PART III

CHAPTER 1

Geography and Climate

GEOGRAPHY

The Bechuanaland Protectorate is a vast tableland not yet surveyed as a whole but estimated to cover some 222,000 square miles at a mean altitude of 3,300 feet. It is bounded on the south and east by the Notwani, Marico and Limpopo rivers beyond which lies the Transvaal Province of the Union of South Africa, and in the north-east by a common boundary with Southern Rhodesia extending north as far as the Zambesi which with its tributary, the Chobe, separates the northern part of the Territory from Northern Rhodesia and the Caprivi Strip.

In the west, the border with South West Africa follows the 21st meridian of east longitude southwards from the Caprivi Strip as far as the 22nd parallel of south latitude where it turns due west to the 20th meridian of east longitude and then due south again until the meridian crosses the Nossob river which then forms a natural boundary as far as its junction with the Molopo river.

The southern boundary of the Territory is the Molopo river, beyond which lies the Cape Province of the Union of South Africa.

The great thirstland of the Kalahari Desert covers a large part of the south west portion of the country, but since it merges gradually into the northern and eastern bush-veld, its actual area cannot be determined or defined. The so-called desert consists of vast expanses of undulating sand belts with outcrops of limestone here and there and is covered with grass and acacia-thorn scrub. In large areas where the water is nearer the surface the country is wooded with stands of taller trees and resembles parkland. The only typical desert country is found in parts of the extreme south-west corner, where there is little vegetation of any kind and sand dunes occur.

The Kalahari is the natural habitat of the true aboriginal Bushmen who lead a primitive nomadic existence living on wild roots and fruits and the abundant game, which they shoot with poisoned arrows.

In the north-west the great Okovango river enters the Territory from Angola through the Caprivi Strip, and spreads over a great inland delta forming the Ngami Swamps.

From this land of lush vegetation and tortuous watercourses, the overflow spills into Lake Ngami to the south-west via the Tamalakane river and via the Botletle river eastwards to Lake Dow and the Great Makarikari Salt Lake, an enormous pan roughly 70 miles square.

There is some pleasant hill scenery in the eastern regions of the Territory, which are otherwise largely undulating plains rich in grasses, shrubs and trees supporting a large number of cattle. Though old and well-defined water courses which nowadays flow only during the annual rains indicate that the country was once well watered, it is now dependent on wells, dams and underground water boreholes.

The Protectorate as a whole is a natural game reserve for most species of fauna which are indigenous to Southern Africa, and Government policy is aimed at their preservation.

A large proportion of the population of approximately 325,000 people live in villages situated in the eastern areas of the Protectorate. The biggest villages, with populations of over 10,000 are Kanye, Serowe, Molepolole and Mochudi.

CLIMATE

The climate of the country is generally sub-tropical, but varies with latitude and altitude. The Tropic of Capricorn passes through the centre of the Territory and the northern area, therefore, lies within the Tropics.

The average rainfall for the whole Protectorate over many years has been about 18" but varies from 27" in the north to 9" or less in the Kalahari. The whole of the Territory lies in the summer rain belt, the rains beginning in October and ending in April. May to September are normally completely dry months.

By far the greatest area of the more populated portion of the Protectorate lies in an extensive depression having an altitude of 3,000 feet, bounded by higher ground of about 4,000 feet at Hildavale in the south and the Rhodesian border in the north-east. There are also elevations at Kanye, Serowe and Ghanzi of 4,000 to 5,000 feet.

The climate of the higher parts of the Territory is sub-tropical to temperate. During the winter the days are pleasantly warm and the nights cool, with occasional frosts. The summer is hot, but is tempered by a prevailing north-east breeze which generally springs up in the late evening. In August the annual seasonal winds from the West Coast begin, and with every drop of humidity extracted during the Kalahari crossing, sweep across the country carrying an unpleasant burden of sand and dust.

The normally dry atmosphere helps to mitigate the high temperatures throughout the year, though to Europeans this consistent dryness and the regular glaring sunlight, added to the effect of the altitude can prove trying, particularly to those whose occupation is sedentary.

In general the country is healthy. There is some malaria in the low-lying areas but this can be avoided by taking the necessary precautions.

CHAPTER 2

History

The picture presented by Southern Africa in the first quarter of the 19th century, north of the narrow strip which then comprised the extent of the European settlement, was a dismal one of savage tribal wars, pillage and bloodshed. The primary cause of these conditions was the expansion of the Zulus who, under Chaka, a military genius who had created out of a comparatively insignificant people a disciplined and warlike nation, waged incessant and merciless war on those people unfortunate enough to be within their reach. These activities, like a stone thrown into a pond, created waves far beyond the impact of Zulu warriors. In order to escape the Zulus, tribes on their borders fled to all points of the compass, despoiling on their way the tribes in their path and thereby setting up a general movement of destructive migration.

The most ferocious of these predatory bands were the followers of an amazon called Mma-Ntatisi and her son Sekonyela. These marauders — part refugees and part banditti — came from tribes living in the neighbourhood of what is now Basutoland. They banded themselves together into some sort of cohesive army and advanced northwards and westwards, harrying and destroying everything that stood in their way.

In a different category were the Matabele. These were originally a group of Chaka's people under Mzilikazi, one of Chaka's principal captains. On one of his raids Mzilikazi embezzled the booty and deemed it prudent not to return home. He moved north-westwards and, after a destructive march, established himself in the neighbourhood of what is now Zeerust, where he conducted bloody and profitable raids in systematic fashion on the tribes within his reach. The forays of Chaka's disciplined and merciless impis, the wholesale pillage of the hordes of Mma Ntatisi, the murderous exodus of the Matabele, as well as endless

migrations by other less important tribes, themselves torn by internecine quarrels, had reduced the country to a pitiable state of misery and confusion. Yet it was at this time, in 1820, that Robert Moffat of the London Missionary Society, undaunted by the dangers of such an undertaking, established his mission at Kuruman in the country later to become British Bechuanaland, and now incorporated in the Cape Province of the Union of South Africa.

Among the most conveniently situated to receive Mzilikazi's onslaughts were those known as Batswana, of Sotho stock — and hence related to the people of what is now Basutoland, and to several other tribes — who lived in the western Transvaal and westwards towards the Kalahari. Like other Basuto people their early history is shrouded in legend.

As regards the principal tribes of the group the generally accepted tradition is that they are descended from a people ruled by a Chief named Masilo who may have lived about the middle of the 17th century. Masilo had two sons, Mohurutshe and Malope. The former founded the line of the chiefs of the Bahurutshe, while the latter had three sons, Kwena, Ngwato and Ngwaketse. Ngwato and Ngweketse at different times broke away from Kwena's tribe and went with their followers to live at a distance from each other. The Bahurutshe were set upon first by Mma-Ntatisi's horde and then by the Matabele. The home of this tribe is in the western Transvaal but scattered elements have attached themselves to the present ruling tribes of the Protectorate. A small group maintains some sort of independent existence near Francistown. The Bangwaketse, after several migrations, finally settled in their present country around Kanye while the Bamangwato founded a colony in the vicinity of Shoshong in the country occupied by the tribe today. The descendants of the Kwena section now live around Molepolole. Among the Bamangwato a further split occurred; Tawana, one of the Chief Mathiba's sons, seceded at the end of the 18th century and formed a new settlement in Ngamiland. The Batawana are still the ruling community in that area. Other important tribes of the Batswana are the Bakgatla, the Bamalete and the Batlokwa. These are fairly recent immigrants into the Protectorate from the western Transvaal, having arrived here in the 19th century. The Barolong, the greater number of whom today live in the Union of South Africa, trace the genealogy of their chief to one Rolong, who lived at a time even more remote than did Masilo. The Barolong are settled along the southern border of the Protectorate and round Mafeking.

Soon after Moffat's arrival the existence of the tribe and of the mission was threatened by a horde of Bahlakwana and Maphu-

ting, Sotho marauders from the east like the followers of Mma-Ntatisi, and set in motion by the same causes. Moffat acted with much vigour and enlisted the help of the Griqua halfcastes who lived about 100 miles to the south of his station. These came to his aid and inflicted much execution on the invaders who had by then outrun their supplies and were not used to firearms. In the following year Moffat obtained an extraordinary ascendancy over Mzilikazi and, though the Matabele ceaselessly and mercilessly raided the unhappy Batswana tribes to the north, among the worst sufferers being the Bakwena, the mission at Kuruman and the peoples in its immediate surroundings remained inviolate.

The 50 years between 1820 and 1870 were periods of chaos and anarchy, of internecine quarrels and struggles which it would be tedious to recapitulate in detail. Internal and inter-tribal difficulties were complicated by the impact on these borders of the Boer trekkers. To the latter, however, belongs the credit of ridding the immediate neighbourhood of the Matabele; after several engagements with the Boer, disastrous for his tribe, Mzilikazi removed himself northwards in 1838, preying whenever he got the chance on the weaker people on the way, Batswana and Makalanga. To these tactics few of the Batswana chiefs made effective resistance, with the exception of Chief Sekgoma of the Bamangwato who was made of sterner stuff than the rest, and who in 1840 inflicted several minor reverses on Matabele raiding parties. In the meantime, David Livingstone, who had married Robert Moffat's daughter, Mary, established a mission among the Bakwena, where he stayed until the early fifties.

In 1872 there acceded to the chieftainship of the Bamangwato (descendants, it will be remembered, of the adherents of Ngwato, son of Malope) the most remarkable African of his time and possibly one of the most remarkable of any time. This was Khama III, the son of Sekgoma I. His youth had been troubled by dissensions within the tribe and by the ever present peril of the Matabele. During the first few years of his reign he much enhanced the standing of his tribe until the Bamangwato were among the most prominent of the people of this part of Africa. He was no mean strategist, had a well trained and well equipped little army and earned the respect of Lobengula, son Mzilikazi, and with it some assurance of immunity from the depredations of that potentate. A lifelong and rigid adherent of Christianity, he introduced numbers of reforms into the life of the tribe, one of the most important, and the one on which Khama himself set most store, being the total prohibition of alcoholic liquor. No detail of tribal administration escaped his attention and he devoted himself with energy and singleness of purpose to the uplifting of his people. Though the weaker tribes still had to

submit to the ravages of Lobengula's Matabele, by the middle "seventies" there was some stability and order in the life of these regions, and the Bamangwato, under Khama's domination, and for that matter the other Batswana tribes, enjoyed conditions less turbulent and chaotic than at any other time earlier in the century.

It was at this time, however, that the Batswana began to feel the effect of forces that were entirely to alter their lives and to remould their destinies. Hitherto they had seen little of the white man. A few traders and hunters had indeed penetrated into their territories, but these expeditions had been few and far between and, except at large centres like Shoshong, no permanent relations had been established. The only Europeans who had lived among them were the missionaries, men like Moffat and Livingstone and that remarkable missionary-administrator, Mackenzie. Now began the exploration of Africa, the division of the continent among the nations and the exploitation of its resources. Embittered relations between the Boers from the Transvaal and the Batswana tribesmen (particularly the Barolong and the Batlhaping) prompted the latter to address appeals for assistance to the Cape authorities while Khama, shortly after his accession, made representations to the High Commissioner that his country be taken under British protection. These appeals were powerfully seconded by Cecil Rhodes, who appreciated the importance of Bechuanaland as the "Suez Canal to the North" and was determined to keep it open for the furtherance of his plans for the occupation and development of the land beyond the Limpopo. But the British Government showed no anxiety to assume such new responsibilities and it was not until 1884 that the Home Government sent the missionary John Mackenzie to these territories as Deputy Commissioner. Finally in 1885 Sir Charles Warren, with the concurrence of Khama and the other principal chiefs, proclaimed the whole of Bechuanaland to be under the protection of Her Majesty the Queen. The southern part of the Territory, which included Mafeking, Vryburg and Kuruman, was later constituted a Crown Colony and eventually became part of the Cape Colony. It is now in the Cape Province of the Union of South Africa and is known as Bechuanaland and sometimes as British Bechuanaland. The Northern part, thenceforward known as the Bechuanaland Protectorate, which stretches as far north as the Zambesi river, has remained to this day under the protection of the British Crown.

Meanwhile British expansion northwards continued and, with the occupation of what is now Southern Rhodesia, Rhodes's description of Bechuanaland as the "Suez Canal to the North" was fully justified.

In 1895 the British Government showed itself in favour of handing the administration of the Protectorate to the British South Africa Company. Chiefs Khama of the Bamangwato, Bathoen of the Bangwaketse and Sebele of the Bakwena went to England to protest against the suggested transfer and an agreement was reached that if they gave up a strip of land on the eastern side of the Protectorate for the construction of a railway (through which the railway runs today) they should remain, as they desired, under the protection of the British Crown.

The 20th century has seen steady progress in the change of status of the Territory from that of an unwelcome responsibility to that of a unit of the Colonial Empire enjoying in effect the same esteem, the same recognition of the need for financial aid and the same full measure of administrative attention and establishment as any other British dependency.

Necessary intervention in tribal affairs by the central authority, financial and economic development, the growth of export and import trade, technical advances and ever-increasing demands for more and better services have brought about a continually widening sense of responsibility towards the people of the Territory, and therefore an inevitable and intensifying extension of central government activity. This expansion of central authority has been accompanied at the same time by the steady evolution of local tribal government. Before 1934 the "Queen's protection" had implied a state of affairs where central government authority was really little more than protection as such, and chiefs and tribes supposed themselves and their affairs almost completely autonomous and independent. In that year, however, the promulgation of the African Courts and African Administration Proclamation set out to regularise the position of the chiefs, to provide for the proper exercise of their powers and functions, to define the constitution and functions of the Courts and to establish their powers of jurisdiction on a proper legal footing. The validity of the Proclamations was tested in a Special Court of the Protectorate by three chiefs in 1936, but on application by the Court to the Secretary of State, under the Foreign Jurisdiction Act, for a decision as to the nature and extent of His Majesty's jurisdiction in the Protectorate, it was laid down that His Majesty had unfettered and unlimited power to legislate for the government and administration of justice among the tribes of the Bechuanaland Protectorate and that this power was not limited by Treaty or Agreement. The actions of African Authorities and African Courts were consequently henceforward governed by law. With the stabilising of the legal positions of the Chiefs and Courts of the tribes went also the stabilising of the finances of local tribal governments by the creation in 1938 of tribal treasuries, into which was paid a proportion of the basic tax collected from Africans. With these funds, plus those

derived from graded taxation of cattle and property, from school and other fees, stock sales commissions, rents and other sources, local tribal governments were able to undertake firstly the most essential service of primary education and, as revenues have increased and local administrations developed in extent and sense of responsibility, so also has the whole sphere of local government as a corollary to that of central government.

This steady administrative progress has been accompanied, particularly in the decade preceding 1939, and again since 1955, by an expansion of the public services of the Territory. During these periods funds have been made available to a territory not itself economically viable from the Colonial Development and Welfare Fund, and, since 1957, a substantial grant-in-aid has been generously provided to cover the chronic financial deficit on the ordinary budget.

At the same time a certain amount of political progress has been achieved. In 1920 the Protectorate Government associated itself more closely with the peoples of the Territory by the establishment of the European and African Advisory Councils, now both statutory bodies, and a further step forward was made in 1950 with the establishment of the Joint Advisory Council, consisting of officials, Africans and Europeans. Since their inception these advisory bodies have been encouraged to play an important part in the administration of the Territory and in drafting legislation.

With a grant of a new constitution in December, a new chapter in the political development of the Protectorate is about to begin, with Executive and Legislative Councils replacing the Joint Advisory Council and the European Advisory Council, and a new African Council in place of the African Advisory Council to function as an electoral college and to deliberate on matters concerning Africans exclusively.

In the sphere of local government, the closer association of chiefs with their peoples in the government of those peoples was heralded by the general adoption in 1957 of the conciliar principle whereby tribal authorities receive the advice of local councils, properly constituted in one form or another, and chosen from the ranks of the tribesmen.

The pace of the progress of internal development suffered the normal retardation due to the wars of 1914-18 and 1939-45. In both these wars, however, the Batswana people demonstrated their deep loyalty to the Crown by sending substantial contingents overseas to serve in 1916 in France, and in the last war in the desert, the Middle East and in Italy, with no small credit.

Administration is carried out by a Resident Commissioner whose headquarters and Secretariat are, by accident of history,

outside the Protectorate, at Mafeking in the Cape Province of the Union of South Africa. The Resident Commissioner is responsible to the High Commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland, who is the legislative authority for these three Territories, operating either from Pretoria or Cape Town in the Union of South Africa.

Despite the apparent remoteness of the legislative authority, and despite the physical absence of the administrator of the Territory and of most of his departmental heads from the Protectorate, the history of the country since the early days of internecine tribal and scattered missionary activity has shown an increasing degree of unity among its inhabitants and a resulting awareness of their position as part of the British Commonwealth.

CHAPTER 3

Administration

The constitutional position in the Bechuanaland Protectorate is governed by various Orders in Council and Proclamations, of which the most important until December, 1960, was the Order in Council of Her Majesty Queen Victoria dated the 9th May, 1891. That Order in Council empowered the High Commissioner to exercise on Her Majesty's behalf all the powers and jurisdiction which Her Majesty at any time before or after that date of the Order had or might have within the Protectorate and to that end empowered him further to take or cause to be taken such measures and to do or cause to be done all such matters and things within the Protectorate as are lawful and as in the interest of Her Majesty's Service he might think expedient, subject to such instructions as he might from time to time receive from Her Majesty or through a Secretary of State.

Other provisions of the Order in Council empowered the High Commissioner:

- (1) to appoint administrative and judicial officers and to assign their functions to them subject to the preservation of his own powers, and authorities in their entirety; and
- (2) to provide by proclamation from time to time for the administration of justice, the raising of revenue and generally for the peace, order and good government of all persons within the Protectorate including the prohibition and punishment of acts tending to disturb the public peace.

In issuing this proclamation the High Commissioner was instructed by the Order in Council to respect any African laws and customs by which the civil relations of any African chiefs, tribes or population under Her Majesty's protection were at that time (viz. in May, 1891) regulated except in so far as the same might be incompatible with the due exercise of Her Majesty's power and jurisdiction or which were repugnant to humanity.

The Order in Council required the High Commissioner to publish his proclamations in the Gazette and reserved to Her Majesty the right to disallow any such proclamations. The Order in Council provided also that, subject to any proclamation lawfully issued by the High Commissioner, any jurisdiction exercisable otherwise than under this Order in Council of 1891, whether by virtue of any Statute or Order in Council or of any Treaty, or otherwise, should remain in full force.

Her Majesty reserved the power to revoke, alter, add to or amend this Order in Council at any time.

All references to Her Majesty in the Order in Council were declared by it to include Her Majesty's Heirs and Successors.

In December, 1960, a new constitution was conferred on the Protectorate by Her Majesty the Queen by Order in Council 1960 No. 3 dated the 21st December, 1960. Changes in the powers of delegation by the High Commissioner made necessary by the grant of the new constitution were set out in Order in Council 1960 No. 1 of the same date, and additional Royal Instructions were contained in Order in Council 1960 No. 2, also of the same date. These measures will take effect in 1961, and for the purposes of the year under review it is sufficient to say that the new constitution will introduce a Legislative Council with an elected majority, and an Executive Council which includes members chosen from amongst the unofficals on the Legislative Council but is responsible to the High Commissioner. The main points of the constitution were set out in a White Paper which was laid before Parliament in September 1960; a copy is annexed as Appendix VII.

The Protectorate is administered by a Resident Commissioner under the direction of the High Commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland (formerly styled the High Commissioner for South Africa).

The Territory comprises Crown Lands, European Blocks of farms and Tribal Territories and is divided, for administrative purposes, into the following districts, under District Commissioners, who are assisted by a force of police:—

Ngamiland (including the Batawana Tribal Territory) — headquarters at Maun.

Ngwato (including the Bamangwato Tribal Territory and some Crown Lands) — headquarters at Serowe.

Gaberones (including the Gaberones Block and the Batlokwa and Bamalete Tribal Territories) — headquarters at Gaberones.

Tuli Block — headquarters at Machaneng.

Francistown (including the Tati Concession and some Crown Lands) — headquarters at Francistown.

Kgatleng (Bakgatla Tribal Territory) — headquarters at Mochudi.

Kweneng (Bakwena Tribal Territory) — headquarters at Molepolole.

Ngwaketse (Bangwaketse Tribal Territory) — headquarters at Kanye.

Lobatsi (including the Lobatsi Block, the Barolong Farm Tribal Territory and some Crown Lands) — headquarters at Lobatsi.

Kgalagadi (Crown Lands) — headquarters at Tshabong.

Ghanzi (Ghanzi Farms and Crown Lands) — headquarters at Ghanzi.

Kasane (Crown Lands) — headquarters at Kasane.

In the tribal areas the method of administration is that generally known as "indirect rule". Tribal Administrations were formally established and the powers and rights of African Authorities were defined in the African Administration and African Courts Proclamations, Chapters 56 and 5 of the Laws of the Bechuanaland Protectorate. In 1938 Tribal Treasuries were successfully established in eight out of nine Tribal Territories, and a Treasury was established in the ninth in 1951. Government pays 50 per cent. of each Tribal Administration's collection of tax to the Tribal Treasury concerned; other sources of revenue are tribal levies, rates and stand-rents in addition to graded tax.

In the preparation of estimates and the general management of their treasuries the chiefs and finance committees, under the guidance of District Commissioners, display an intelligent and keen appreciation of their responsibilities.

There is an African Advisory Council which meets once a year under the presidency of the Resident Commissioner, and this is

attended by the chiefs and tribal representatives from the various Tribal Territories and non-tribal areas.

A European Advisory Council meets under the presidency of the Resident Commissioner, usually twice a year. There are eight non-official members who are elected to represent the interests of the European residents in the eight electoral areas into which the Protectorate is divided.

A Joint Advisory Council, consisting of eight non-official members of the European Advisory Council and eight members from the African Advisory Council usually meets twice a year.

Under the new constitution three of these advisory councils will disappear, though there will continue to be an African Council with the dual functions of an electoral college to the Legislative Council and an advisory body on matters exclusively affecting Africans.

CHAPTER 4

Weights and Measures

The weights and measures in use in the Bechuanaland Protectorate are those which are in use in the Union of South Africa.

CHAPTER 5

Reading List

DORNAN, S. S. *Pygmies and Bushmen of the Kalahari*. Seeley Service, London: 1925

HAILEY, LORD: *Native Administration in the British African Territories, Part V*. Her Majesty's Stationery Office, London: 1953.

LIVINGSTONE, D.: *Missionary Travels and Researches*. 1895.

MOLEMA, S. M.: *The Bantu Past and Present*. An Ethnological and Historical Study of the Native Races of South Africa, W. Green and Sons, Ltd.

— *Chief Moroka*. His Life, His Times, His Country and His People. Methodist Publishing House, Cape Town.

- POLE EVANS, I. B.: *A Reconnaissance Trip through the Eastern Portion of the Bechuanaland Protectorate and an Expedition to Ngamiland*. Government Printer, Pretoria: 1948.
- PERHAM, M. & CURTIS, L.: *The Protectorates of South Africa*. (The question of their transfer to the Union.) Oxford University Press, Humphrey Milford: 1953.
- SCHAPERA, I.: *The Bantu Speaking Tribes of South Africa*. George Routledge & Sons, Ltd., London. Maskew Miller Ltd., Cape Town: 1937.
- *A Handbook of Tswana Law and Custom*. Oxford University Press: 1939.
- *Migrant Labour and Tribal Life*. Oxford University Press: 1947.
- *Married Life in an African Tribe*. Faber & Faber, London: 1940.
- *Native Land Tenure in the Bechuanaland Protectorate*. Loveday Press: 1943.
- SILLERY, A.: *The Bechuanaland Protectorate*. Oxford University Press: 1952.
- *Sechele*. George Ronald, Oxford: 1954.
- BENSON, MARY: *Tshekedi Khama*. Faber & Faber, London.

APPENDICES

D3047, 3047A and 3047B. Development of Veterinary Services .. 3064A, 3064B and 3064C. Development of Agriculture .. 3067A, 3067B and 3067C. Development of Medical Services .. D3185. Topographical Survey	6,367 19 5	—	—	—	5,703 0 0	664 19 5	1,310 7 8	—	645 8 3
D3319. Contribution to C.D. & W. Scheme R907 Veterinary Investigational Laboratory	—	1 9 11	5,572 0 5	—	—	4,362 7 10	4,360 17 11	1,209 12 7	—
D3376. Extension of Veterin- ary School ..	1,996 16 1	—	—	—	1 5 0	1,873 12 7	1,873 12 7	121 18 6	—
D3477. Development of Ba- mangwato Primary Educa- tion ..	—	70 13 2	27,439 18 4	—	—	24,074 1 2	24,003 8 0	3,365 17 2	—
D3478. Building and Equip- ping of African Junior Se- condary Boarding School ..	—	—	—	—	—	—	—	—	—
D3570. Clerical Courses for Africans ..	—	—	3,100 0 0	—	—	3,100 0 0	3,100 0 0	—	—
D3575. Foot and Mouth Disease Control ..	1,318 4 2	—	—	—	4 4	469 14 4	469 14 4	848 5 6	—
D3721. Bushman Survey ..	—	—	2,476 4 9	—	5 3 11	2,471 0 10	2,998 16 9	—	527 15 11
D3826. Cattle Route to Rail- head from Dukwe to Shashi	—	—	2,033 0 0	—	—	2,033 0 0	2,436 15 9	—	403 15 9
D3866. Ngamiland/South West Africa Border Fence ..	—	—	—	—	—	—	—	—	—
D3867. Survey of Bechuana- land Protectorate/Southern Rhodesia Boundary ..	—	—	2,300 0 0	—	—	2,092 15 2	2,092 15 2	207 4 10	—
D3949. Provision of Medical Services, Bakgatla Reserve	—	—	5,809 15 11	—	—	4,821 4 9	4,821 4 9	988 11 2	—
D3986. Pilot Tuberculosis B.C.G. Vaccination Cam- paign ..	—	—	—	—	—	—	—	—	—
R907. Veterinary Investiga- tional Laboratory ..	—	4,387 0 11	14,687 13 4	—	59 13 1	14,163 16 9	9,776 15 10	464 3 6	—
£	21,372 2 0	11,211 6 11	286,993 18 11	19,090 9 9	6,237 16 10	284,070 18 2	274,490 4 3	37,147 15 8	1,630 13 0

APPENDIX I B

STATEMENT OF LOAN EXPENDITURE

5½% Intercolonial Loan, 1980 (£92,360 — Issue Price £99)

Details of Expenditure	Allocation	Expenditure up to 31.3.59	Expenditure during 1959/60	Expenditure up to 31.3.60	Balance Outstanding on 31.3.60
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
European Staff Quarters	91,251 13 7	91,251 13 7	—	91,251 13 7	—
Expenses of Issue ..	184 14 5	184 14 5	—	184 14 5	—
TOTAL	91,436 8 0	91,436 8 0	—	91,436 8 0	—

5½% Intercolonial Loan, 1971 (£40,692 — Issue Price £98½)

5½% Intercolonial Loan, 1976 (£121,151 — Issue Price £99¼)

African Staff Quarters ..	34,630 0 0	34,630 0 0	—	34,630 0 0	—
European Staff Quarters	115,370 6 1	115,370 6 1	—	115,370 6 1	—
Railway Water Supplies	10,000 0 0	10,000 0 0	—	10,000 0 0	—
Expenses of Issue ..	323 13 8	323 13 8	—	323 13 8	—
TOTAL	160,323 19 9	160,323 19 9	—	160,323 19 9	—

6¼% Intercolonial Loan, 1972 (£76,531 — Issue Price £98)

Housing	50,183 4 7	50,183 4 7	—	50,183 4 7	—
Telecommunications ..	24,817 3 0	24,817 3 0	—	24,817 3 0	—
TOTAL	75,000 7 7	75,000 7 7	—	75,000 7 7	—

6¼% Intercolonial Loan, 1977 (£126,904 — Issue Price £98½)

Housing	73,500 8 10	73,500 8 10	—	73,500 8 10	—
Telecommunications ..	51,500 0 0	51,500 0 0	—	51,500 0 0	—
TOTAL	125,000 8 10	125,000 8 10	—	125,000 8 10	—

6½% Intercolonial Loan, 1978 (No. 1) (£101,523 — Issue Price £98½)

Housing	100,000 3 1	100,000 3 1	—	100,000 3 1	—
---------------	-------------	-------------	---	-------------	---

6½% Intercolonial Loan, 1983 (No. 1) (£102,350 — Issue Price £98½)

Housing	65,768 2 8	65,768 2 8	—	65,768 2 8	—
Telecommunications ..	10,732 0 0	10,732 0 0	—	10,732 0 0	—
Railway Water Supplies	18,500 0 0	8,407 13 8	10,092 6 4	18,500 0 0	—
Township Water Supplies	5,000 0 0	5,000 0 0	—	5,000 0 0	—
Expenses of Issue ..	204 14 0	204 14 0	—	204 14 0	—
Expenses of Issue 1957/58 Loans	609 18 4	609 18 4	—	609 18 4	—
TOTAL	100,814 15 0	90,722 8 8	10,092 6 4	100,814 15 0	—

6½% Intercolonial Loan, 1978 (No. 2) (£63,539 — Issue Price £102½)

Housing	23,000	7	11	18,778	8	9	4,221	19	2	23,000	7	11	—
Telecommunications ..	15,500	0	0	4,006	6	5	11,493	13	7	15,500	0	0	—
Railway Water Supplies	6,500	0	0	—	—	—	6,500	0	0	6,500	0	0	—
Township Water Supplies	20,000	0	0	18,228	17	1	1,771	2	11	20,000	0	0	—
Expenses of Issue ..	127	1	7	127	1	7	—	—	—	127	1	7	—
TOTAL	65,127	9	6	41,140	13	10	23,986	15	8	65,127	9	6	—

6½% Intercolonial Loan, 1983 (No. 2) (£90,180 — Issue Price £100)

Housing	81,837	12	10	—	—	—	81,837	12	10	81,837	12	10	—
Railway Water Supplies	7,000	0	0	—	—	—	7,000	0	0	7,000	0	0	—
Telecommunications ..	1,162	0	0	—	—	—	1,162	0	0	1,162	0	0	—
Expenses of Issue ..	180	7	2	—	—	—	180	7	2	180	7	2	—
TOTAL	90,180	0	0	—	—	—	90,180	0	0	90,180	0	0	—

6½% Intercolonial Loan, 1978 (No. 3) (£74,350 — Issue Price £100½)

Housing	63,563	0	3	—	—	—	63,563	0	3	63,563	0	3	—
Telecommunications ..	1,288	17	0	—	—	—	1,288	17	0	1,288	17	0	—
Township Water Supplies	10,000	0	0	—	—	—	5,030	1	7	5,030	1	7	4,969 18 5
Expenses of Issue ..	148	14	0	—	—	—	148	14	0	148	14	0	—
TOTAL	75,000	11	3	—	—	—	70,030	12	10	70,030	12	10	4,969 18 5

6½% Intercolonial Loan, 1983 (No. 3) (£60,236 — Issue Price £103½)

Housing	62,148	9	11	—	—	—	62,148	9	11	62,148	9	11	—
Expenses of Issue ..	120	9	5	—	—	—	120	9	5	120	9	5	—
TOTAL	62,268	19	4	—	—	—	62,268	19	4	62,268	19	4	—

6½% Intercolonial Loan, 1978 (No. 4) (£42,396 — Issue Price £101½)

Housing	29,513	2	10	—	—	22,010	19	1	22,010	19	1	7,502	3	9
Telecommunications ..	4,514	0	0	—	—	4,514	0	0	4,514	0	0	—	—	—
Railway Water Supplies	1,000	0	0	—	—	1,000	0	0	1,000	0	0	—	—	—
Township Water														
Supplies	7,973	0	0	—	—	—	—	—	—	—	—	7,973	0	0
Expenses of Issue ..	84	15	10	—	—	84	15	10	84	15	10	—	—	—
TOTAL	43,084	18	8	—	—	27,609	14	11	27,609	14	11	15,475	3	9

6½% Intercolonial Loan, 1983 (No. 3) (£88,956 — Issue Price £100½)

Housing	83,000	9	7	—	—	—	—	—	—	83,000	9	7	—
Township Water Supplies	6,000	0	0	—	—	—	—	—	—	6,000	0	0	—
Expenses of Issue ..	177	18	3	—	—	—	177	18	3	177	18	3	—
TOTAL	89,178	7	10	—	—	—	177	18	3	177	18	3	89,000 9 7

APPENDIX I C
CONSOLIDATED STATEMENT OF LOAN EXPENDITURE: ALLOCATION

Loan	Date Raised	Loan Warrant No.	Housing	Railway Water Supplies	Tele-communications	Township Water Supplies	Expenses of Issue	Total
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
5% Intercolonial Loan 1980	1. 3.56	1/1955/56	91,251 13 7	—	—	—	184 14 5	91,436 8 0
5% Intercolonial Loan 1971	15.11.56	1/1956/57	40,000 4 9	—	—	—	81 7 8	40,081 12 5
5% Intercolonial Loan 1976	15.11.56	1/1956/57	110,000 1 4	10,000 0 0	—	—	242 6 0	120,242 7 4
6% Intercolonial Loan 1972	15.12.57	1/1957/58	50,183 4 7	—	24,817 3 0	—	—	75,000 7 7
6% Intercolonial Loan 1977	15.12.57	1/1957/58	73,500 3 10	—	51,500 0 0	—	—	125,000 8 10
6% Intercolonial Loan 1978	15. 3.58	1/1958/59 2/1958/59	100,000 3 1	—	—	—	—	100,000 3 1
6% Intercolonial Loan 1983	1. 9.58	2/1958/59	65,768 2 3	18,500 0 0	10,732 0 0	5,000 0 0	609 18 4*	100,814 15 0
6% Intercolonial Loan 1978	1.12.58	3/1958/59	23,000 7 11	6,500 0 0	15,500 0 0	20,000 0 0	127 1 7	65,127 9 6
6% Intercolonial Loan 1983	14. 7.59	2/1959/60	81,837 12 10	7,000 0 0	1,162 0 0	—	180 7 2	90,180 0 0
6% Intercolonial Loan 1978	2.11.59	3/1959/60	63,563 0 3	—	1,288 17 0	10,000 0 0	148 14 0	75,000 11 3
6% Intercolonial Loan 1983	2.11.59	3/1959/60	62,148 9 11	—	—	—	120 9 5	62,268 19 4
6% Intercolonial Loan 1978	17.12.59	4/1959/60	29,513 2 10	1,000 0 0	4,514 0 0	7,973 0 0	84 15 10	43,084 18 8
6% Intercolonial Loan 1983	15. 3.60	3/1959/60	83,000 9 7	—	—	6,000 0 0	177 18 3	89,178 7 10
TOTAL RAISED TO 31.3.60			873,767 2 2	43,000 0 0	109,514 0 0	48,973 0 0	2,162 6 8	1,077,416 8 10

* Expenses of Issue 1957/58 Loans.

EXPENDITURE

1955/56	91,251 13 7	—	—	—	—	—	184 14 5	91,436 8 0
1956/57	124,242 17 4	8,538 6 8	—	—	—	—	323 13 8	133,104 17 8
1957/58	133,438 18 6	—	77,606 2 2	—	—	—	—	211,045 0 8
1958/59	200,548 18 2	9,869 7 0	13,449 7 3	23,228 17 1	—	—	941 13 11	248,038 3 5
1959/60	233,782 1 3	25,087 11 4	20,030 11 6	6,801 4 6	—	—	712 4 8	286,413 13 3
Unspent Balance on 31.3.60	783,264 8 10	43,495 5 0	111,086 0 11	30,030 1 7	—	—	2,162 6 8	970,038 3 0
	90,502 13 4	—	—	18,942 18 5	—	—	—	109,445 11 9
Overexpenditure charged to Advances	873,767 2 2	43,495 5 0	111,086 0 11	48,973 0 0	—	—	2,162 6 8	1,079,483 14 9
	—	495 5 0	1,572 0 11	—	—	—	—	2,067 5 11
	£873,767 2 2	43,000 0 0	109,514 0 0	48,973 0 0	—	—	2,162 6 8	1,077,416 8 10

APPENDIX II

Report on the Progress of Colonial Development and Welfare Schemes

For the Year Ended 31st December, 1960.

1. Scheme No. D 2515 — Soil Conservation.

During the last twelve months of this Scheme soil conservation demonstrational projects were completed in the Potsani area of the Bamalete Tribal Territory with intensive soil reclamation work at Shoshong in the Bamangwato Tribal Territory where serious erosion had started at the head of a water course. The soil conservation unit then cleared the fence line between the Bangwaketse Tribal Territory and the area ceded to the Bamalete Tribe and commenced fencing operations of this 44,000 yard fence. Staff employed under this Scheme proceeded on leave in January, 1960, pending completion of their contracts when departmental staff continued with the project.

2. Scheme No. D 2553 — Development of Surface Water Supplies.

This Scheme expired on the 31st March, 1960. During the last quarter of the Scheme, the main contribution by this Scheme was for providing the necessary staff, in some cases materials, for development of Government water supplies, camps and institutions in support of the general development of the territory. The schemes aided in this manner were, supervision of Notwani dam construction, first phase of the augmentation of the Lobatsi supply from Woodlands borehole source and minor storage and/or distribution schemes at the Government camps of Mochudi and Serowe.

3. Scheme No. D 2632, 2632A, and B — Road Construction and Maintenance.

This Scheme expired on the 31st March, 1960.

Aided by continual bush-dragging and grading, the general standard of the roads in the Protectorate have improved considerably during recent years but, with the considerable increase in traffic densities experienced on many of the major roads, so the standard is becoming increasingly difficult to maintain within the maintenance funds voted.

During the quarter under review, the following more important works were executed:—

Thirty-five miles of desert roads were constructed.

Fifteen miles of gravelling was applied to the excessively sandy or soft stretches of road.

The Peleng bridge at Lobatsi, a low level bridge consisting of 5 No. 22'6" reinforced concrete spans with two short approach spans was completed.

Foundational investigations for the new Tati bridge at Francistown were also completed.

4. Scheme D. 2639A and B — Development of Underground Water Supplies.

The Public Works Department was only responsible for expenditure under Capital Items B. Installation and Equipment and C. Improvements. The remainder was undertaken by the Director of Geological Survey.

During the quarter under review, 21 boreholes supplying both Tribal and Government needs, were equipped with engine powered pumping plants of varying capacities and minor storage and/or distribution schemes were executed at Martin's Drift and Mochudi.

5. Scheme No. 2677A — Ghanzi Stock Route.

Seventeen rondavels were erected for the use of African pumpers stationed on the trek route. A number of Africans were sent for training courses as pumpers to the Public Works Department after which they took up duty on the stock route. The sum of £4,500 was allocated from this scheme to the Public Works Department for the erection of reservoirs at the borehole sites.

6. Schemes No. D 2894A and D 4303 — Geological Survey.

For the first three months of the period under review the Geological Survey was financed by funds provided from Colonial Development and Welfare Fund Scheme D 2894A. This scheme ended on 31st March, 1960, but provision was then made by a grant from Colonial Development and Welfare Fund Scheme, D 4303, to continue geological survey work in the territory for the 4-year period until 31st March, 1964. Since the 31st March, 1960, the local contribution made by the Bechuanaland Protectorate Government towards the recurrent expenses has been increased from 50% to 75% of the recurrent expenditure.

During the period under review the work of the Geological Survey has continued on the same lines as in previous years. Certain staff changes in the professional staff of the establishment have been introduced and one post of Geologist has now

been upgraded to a post of Deputy-Director. The post was filled by the promotion of a Geologist during the year. The old post of Chemist/Petrologist has been abolished and has reverted to a post of Geologist, and the post of Laboratory Scientific Assistant has been upgraded to the professional post of Chemist. One Geologist was appointed at the end of 1960, leaving one vacancy on the establishment. The post of chemist remained vacant throughout the year. There were also vacancies in the Division II staff, notably that of the post of Scientific Assistant and in the Drilling Branch section of the Department there was a vacancy for Senior Driller.

The major emphasis during the year under review was placed on geological and geophysical work in connection with the underground water development programme and on geological mapping in an attempt to speed up the tempo of the regional reconnaissance geological mapping programme. Unfortunately, owing to leave arrangements, it was only possible to employ two geologists full time on geological mapping during the year. From 1st April, 1960, the Geological Survey exercised full financial control over the Drilling Branch and the Drill Superintendent is now directly responsible to the Director of Geological Survey. The Geological Survey is now responsible for all government water borehole drilling in the Territory and its role in the underground water development work is the siting and drilling of boreholes to the stage where productive boreholes can be passed to the Public Works Department for equipping and maintenance.

As the result of Geological Survey work over the past decade considerable interest has been aroused in the mineral potential of the Territory and this interest continues to be maintained. At the present time Crown Grants are in force over the majority of the Tribal Territories. Two Crown Grants for diamond prospecting rights have been awarded over large areas of the northern and central (Ghanzi) Crown Lands and negotiations are in progress for Crown Grants for diamond prospecting rights over the major Tribal Territories in the south-eastern Protectorate.

During the period under review the major work undertaken by the department in direct mineral survey was the continuation of the examination of the potential coalfield areas of the Protectorate. During the year the department's investigations in the Mamabule coal area were completed. In the course of this programme a total of 10,545 feet of core drilling was completed in 39 boreholes drilled departmentally. In addition two shafts, totalling 164 feet, were sunk to take bulk samples of the coal from the two seams present in the area for washability tests and bulk analysis. The detailed investigation carried out by the Geological Survey has proved that in an area around Mamabule

railway siding in the Bamangwato Tribal Territory, two principal coal seams of medium-grade, non-coking, bituminous steam coal are developed at shallow depth in the arenaceous Middle Stage of the Eccca Series. The total coal reserves present over an area of 17 square miles in the case of the Lower coal seam, which has an average thickness of 8 feet, are of the order of 163 million tons. This Lower Coal seam is separated from the upper carbonaceous development by some 60 feet of shale and sandstone. The upper carbonaceous development is some 65 feet in thickness, with an 18 feet thick coal seam at base. The quality of the coal in the Upper seam tends to be poorer and less consistent than that of the coal in the Lower seam. The investigation has proved that over an area of some 13 square miles the total reserves of coal present in the case of the Upper seam are of the order of 245 million tons. The average analyses of the coals developed in the two seams in Mamabule area are as follows:—

	S.G. OF SEPARATION	YIELD PERC.	CALORIFIC LBS/LB. VALUE	ASH PERC.	MOISTURE PERC.	FIXED CARBON PERC.	VOLATILE MATTER PERC.
Upper Coal	Raw Coal	—	10.29	18.9	6.1	51.3	24.5
Upper Coal	1.58	80.2	11.1	12.4	6.7	55.8	24.7
Lower Coal	Raw Coal	—	11.08	14.7	5.7	54.0	25.6
Lower Coal	1.58	93.7	11.5	11.5	6.5	55.4	26.7
Lower Coal	1.45	62.5	11.92	9.9	5.9	55.5	37.9

A Mineral Resources Report on the Mamabule coal area has now been completed and will be printed and distributed as soon as the results of the washability tests and bulk analysis on the samples submitted from the Upper seam have been received from the Fuel Research Institute of the Union of South Africa.

Consolidated African Selection Trust, who held a short term diamond prospecting concession over the Bamangwato Tribal Territory, completed their work in February and allowed their Crown Grant to lapse in May. During the course of their work three small diamonds were recovered from panned samples in the upper Macloutsi river area. The Company concluded from their work that these diamonds were probably pre-Cambrian diamonds weathering out of Eccca Series sediments present in this area and as such the diamonds were not considered to be of any economic interest. The Geological Survey are in general agreement with the company's findings, but in view of the possibility that the diamonds might be of Cretaceous age, and that associated kimberlite minerals were possibly overlooked in the field, the department carried out further sampling in this area. A study of the heavy mineral concentrates from these samples has

not revealed any minerals of kimberlitic origin and preliminary results accord with C.A.S.T.'S. views. Further work may still be undertaken in this area.

The department has continued to foster the interest shown in the brine deposits at Nata and has collaborated with an interested company in undertaking a further study of the brines, including an assessment of the reserves. The economic interest in the brines is due to the fact that they not only represent a source of sodium chloride, but also in that they contain sodium carbonate/sodium bicarbonate which leads to the possibility of soda ash production. The Geological Survey first drew attention to the potential of the brines in 1956. During the year five boreholes were drilled by the department in the Nata area, samples of brines at various depths and at varying distances from the Makarikari pan were taken and pumping tests were carried out. From the results of these tests it is obvious that the reserves of the brines are very extensive indeed. Their exploitation depends largely on the possibility of an economic method of transporting the brines to railhead and at present consideration is being given to the possibility of piping them.

Other departmental activities in mineral survey work have included preliminary investigation into an asbestos occurrence in the Bamangwato Tribal Territory, which was located during the course of the geological mapping programme, and assistance rendered to the manganese mine at Ootsi. The company operating this mine has unfortunately run into financial difficulties and the mine has been closed down temporarily. It is hoped however that the working will be re-opened again in 1961. At the Kgwakge manganese mine in the Bangwaketse Tribal Territory, which was first located by a geologist of the department in 1957, the company have installed a heavy media separation plant and more than doubled their average monthly production. During 1960 a total of 25,032 short tons of manganese ore was produced in the Territory and of this 17,542 short tons were produced at the Kgwakge mine. Exports for 1960 amounted to a total of 14,242 short tons valued at £70,822 which represents a reduced export figure of 1,663 short tons valued at £21,183. Export of asbestos fibre showed an increase of over 700 short tons in 1960 as compared with 1959 and a total of 1,848 short tons valued at £132,262 were exported during the year. The actual production of asbestos fibre at Moshaneng mine, however, was nearly 130 tons below the production figure of 1959.

Regional reconnaissance geological mapping has continued, but owing to leave arrangements and pressure of other work, particularly in the sphere of underground water development, it was only possible to employ two geologists full time on geological mapping during 1960. Mapping was carried out on the Foley

Siding, Topsis Siding and Palapye quarter-degree sheets in the Bamangwato Tribal Territory and on the Mochudi sheet in the Bakgatla Tribal Territory. In addition to the systematic mapping programme, regional reconnaissance geological surveys were undertaken in the Kalahari area and in the north-western Protectorate in the Ghanzi district. Geological mapping has also been undertaken in connection with coal exploration work, and detailed mapping has been carried out in certain areas to assist mining companies.

The department has continued to be responsible for all government water borehole drilling in the Territory. All drilling over the past year has been carried out by the Drilling Branch Section (financed by C.D. & W. Schemes D 2639A to D and since March 31st, 1960, by C.D. & W. Scheme D 4609) and no contract work has been undertaken. Geological and geophysical surveys prior to drilling have been carried out in the Barolong, Bamalete, Batawana, Bangwaketse and Bamangwato Tribal Territories, the Tati African Reserve, the northern Crown Lands, the Ghanzi district and the Tati Concession area. Surveys have also been carried out in the Tuli Block and Lobatsi block farming areas and for various government camps and institutions. A detailed study has been carried out by the Geological Survey in connection with the Lobatsi Township water supply and work is being carried out into the water resources of this area and recharge possibilities. Since early in 1960 work has followed the line set out for priority for development of underground water supplies during the 1960/63 period. This plan has been adhered to as far as possible, but minor modifications have been necessary owing to the Foot and Mouth outbreak and the chronic state of the Drilling Branch's transport which made long moves impossible for the first 8 months of the year.

During the period under review 114 boreholes were drilled on sites selected by geophysical methods by officers of the department in various areas of the Protectorate. Of these sites it was known prior to drilling that five would yield saline supplies, but this was considered immaterial in view of the fact that these boreholes were only required for road maintenance purposes. Four boreholes were abandoned for technical reasons. Of the remaining 105 sites, 85 were successful representing a success ratio of 81%.

The laboratory has continued to provide chemical and petrological services both for members of the department and the public. During the year the post of Chemist/Petrologist was abolished and reverted to the post of Geologist and a new post of Chemist was created. This new post of Chemist, however, remained vacant throughout the year. The incumbent of the

post of Chemist/Petrologist carried out laboratory work during the first quarter of the year, but on his promotion to Deputy-Director, and reversion of the post of Chemist/Petrologist to that of Geologist, the amount of laboratory work which could be carried out in 1960 was considerably reduced. Chemical work was directed mainly at the analysis of groundwater in connection with potability problems. Mineralogical determinations and ore analysis have also been carried out both for the department and for companies undertaking prospecting work in certain areas in the Protectorate. Routine identification of samples submitted by officers of the department was also carried out. In November a start was made on the new laboratory block which is being built at headquarters at Lobatsi and it is hoped that this will be completed early in 1961. The new laboratory block will include an expanded laboratory with better facilities, and offices for the Deputy-Director and Chemist. When this new building has been completed the old laboratory will be modified to form an extension of the drawing office and the office at present being occupied by the Deputy-Director will be converted into an optical laboratory.

Work in the drawing office has consisted in the preparation of maps, plans and diagrams illustrating the results of geologists' field work, both for departmental use and for publication. A new provisional geological map of the Territory to a scale of 1:1,000,000 was prepared and this has been issued at the reduced scale of 1:2,000,000. The Annual Report for 1959 was sent to the printers in August, but unavoidable delays have unfortunately occurred and the report will only be issued at the end of January, 1961. The records of the Geological Survey for 1957/58 are in the hands of the printers and it is expected that they will be issued during the first quarter of 1961. A Mineral Resources report No. 2 on the Mamabule coal area has been prepared and will be sent to the printers as soon as the results of certain analyses have been received. Certain maps and boreholes sections which will be issued in this report have already been sent to the printers. The Annual Report for 1960 is in the course of preparation. The records for the Geological Survey for 1959/60 are being assembled and will be printed during 1961.

7. Scheme No. D 3046, 3046A and B — Development of Education.

Difficulty in recruiting staff resulted in some underexpenditure on personal emoluments.

A small primary co-educational boarding school for children of the Muslim community was completed in Lobatsi in 1960.

£1,000 was spent on classrooms and equipment at African primary schools in non-tribal areas.

8. Scheme D 3047 — Development of Veterinary Services.

This scheme ended on the 31st March, 1960, when the staff which had been employed on it were brought on to the territorial budget.

9. Scheme No. D 3064 and 3064A to C — Development of Agriculture.

The one vacant post of Agricultural Officer was filled in April, 1960, as well as two Agricultural and Livestock Officer posts later in the year. The remaining posts on the Agricultural side were all filled and the officers posted to their respective districts for carrying out the agricultural extension programme. In-service training courses were held for field staff.

It has not been possible to fill the vacant post of Forest Officer and consequently survey work in the Chobe Forests could not commence. Routine forest protection was maintained by departmental staff. Field quarters were erected in many districts where additional staff were posted, financed by this Scheme. The results of the extension work are most encouraging now that the initial resistance has been overcome and the number of Progressive and Master Farmers is increasing.

10. Scheme No. D 3067, 3067A and B — Development of Medical Services.

Tuberculosis Control: Tuberculosis blocks at Serowe were completed.

Health Centres: The construction of the Health Centres at Rakops and Kasane are nearing completion.

Work was started and nearing completion of the following:—

Maternity and Welfare Unit at Francistown; Isolation Ward at Maun; Anti-natal Ward at Mahalapye.

Two diesel trucks were purchased during the year.

Personnel: There is one vacancy for a Medical Officer and one vacancy for a Health Assistant. All completed building projects are now staffed and operating.

11. Scheme No. D 3477 — Development of Bamangwato Primary Education.

This Scheme provided for the building of and equipment of 60 classrooms in the Bamangwato district. Work was virtually completed in 1960.

12. Scheme No. D 3478 — African Junior Secondary Boarding School.

The object of this scheme was to provide for assistance towards the cost of building and equipment of a London Missionary Society School in the Southern Protectorate.

No work was begun on this school during 1960.

13. Scheme No. D 3721 — Bushman Survey.

The initial year of the Bushman Survey presented the Survey Officer with many unforeseeable problems, and because of the nature of the terrain in which the Bushman live, and because of vehicle trouble, progress was slow and difficult. This was aggravated by the language difficulty in making first contacts with people whose language has never been recorded.

The investigation of Bushmen in contact with European and Bantu, and the study of the economy, social organisation and general way of life of the wild G/wi Bushmen is nevertheless proceeding satisfactorily, and the Survey Officer was able to put out an interim report at the end of 1960.

As an initial result, it has been decided that a game reserve should be established in the Central Kalahari to prevent the disturbance of the Bushmen and the game on which they are dependent by the influx of hunters and others, which would lead to considerable, harmful, dislocation of the way of life of the Bushmen of the central desert. By invoking fauna legislation it is possible quickly and economically to restrict entry into the area and to ensure that the game is protected and not frightened away from Bushmen camps by visitors or poachers.

Plans are also being made to provide waterholes, which will improve the lot of the Bushmen during the dry months.

Progress has also been made in the demographic study of the Bushmen.

14. Scheme No. D 3949 — Provision of Medical Services in the Bakgatla District.

The construction of the Health Centre at Mochudi and a Dispensary at Mathubudukwane are nearing completion and it is expected that these two projects will be staffed and operating early in 1961.

15. Scheme No. D 3986 — Pilot B.C.G. Campaign.

This project has been delayed pending the availability of the Advisory Personnel contributed by World Health Organisation. It will go into operation late in 1961.

16. Scheme No. 4029 — Disease Control, Fencing and Quarantines.

Four 7½ ton Albion Reivers as well as five tractors and two road graders were purchased from this scheme during the year.

17. Scheme No. 4600 — Development of Veterinary Services.

No capital expenditure was incurred during the year. The Veterinary Research Officer returned from a training course overseas and commenced duties at the laboratory. There were no suitable applicants for the post of Animal Husbandry Officer during the year.

18. Scheme No. D 4204 — St. Joseph's College, Khale.

This scheme provided for the building of a hostel to accommodate 96 boys at St. Joseph's College, Khale. It was complete in 1960.

19. Scheme No. D 4604 — Development of Roads and Bridges.

Very little expenditure was incurred during the first nine months of this scheme, as unfortunately the scheme was not approved until very late in the year, which necessitated working on very small advances against items I and II only.

The funds available from this scheme aided the construction and realignments of roads, the gravelling programme and culverting.

Work was started on the Ramoutsa bridge at Ramoutsa to provide better alignment to the main road at this point, and also to avoid a double crossing of the main railway line.

Foundational investigations were completed for the proposed new Thamalakane bridge at Maun.

20. Scheme No. D 4608 — Development of Water Supplies.

Very little expenditure was incurred during the first nine months of this scheme, as approval was not received until very late in the year. Funds expended were for purchase of borehole equipment, and 68 engine powered pumping plants of varying sizes were installed for both tribal and Government needs.

21. Scheme 681 & 681A — C TSETSE FLY CONTROL

The new Colonial Development and Welfare Scheme which should have started in April was not approved by the end of the year and this meant that work did not proceed as quickly as had

been hoped. Transport was particularly difficult and a great strain was placed on already old vehicles. Despite all difficulties good progress was reported in the Chobe, at Shorobe and on the Maun front. The continued existence of fly, albeit in low density, in the Boro area was a matter for concern as was the discovery that densities were building up in the Kadizwalo focus and that light fly was present in the country between Kadizwalo and the Gomare ring-barking area. There was also evidence of an advance taking place northwards Ikwaga and Sepopo from this focus.

Mechanical saws did a small amount of mopping up of uncleared habitat on the Shorobe road but the bulk of control work was done by labourers in the Nxabe area beyond Shorobe. This was an extension of protective clearings around the village to relieve further the pressure of fly. 1,960 acres were treated between January and September at a cost of 19/3d. an acre.

Regular sampling was made over forty seven fly rounds from the Boro to Toteng between the inner fence and the Thamalakane/Ngabe river. In the very light density areas of Shashi, Xoo, Xaberachaa and Xutego fewer flies were caught than in the previous year. In fact so few flies were recovered that it was unlikely that they represented a breeding population. They might have been wanderers from the Chuchubegho area between the fences.

Nearer Toteng there was distinct improvement in the fly position on the Naragha Valley. From Mushu to Toteng a total of only 104 flies was caught in 1,143 miles of searching. Five times as many were caught in 1959. Most pleasing was the reduction in the fly population around Mushu and Xudum on the north bank. This was probably the result of clearing at Mushu and better hunting supervision in the Naragha Valley.

Clearing by hand-felling and mechanical saws commenced at Mushu in April and extended down the north bank of the Naragha Valley to Soda where it stopped in June. There were 50 labourers and two saws. 284 acres of habitat were cleared at a cost of 77/9d. per acre.

When water became available elsewhere the mechanical saws mopped up in the Gabarachaa area by felling all *A. giraffae* unaffected by the treatment with dieseline in 1957, and all other *Acacia spp.* left from the clearings in 1958. This work ceased in August through lack of funds.

The zone between the two game control fences had ten, one and two fly rounds on the Marophe, Xudum and Matsebe molapos, respectively. The Marophe rounds were only on the cleared west

bank of the molapo. Not all showed a decrease in density despite much mopping up of apparently suitable secondary habitat. It was thought that no fundamental improvement would be brought about until all the islands and the east bank were cleared. Catches dropped on the Xudum however, particularly towards the end of the year. Clearings during the year passed through the two Matsebe rounds which showed a five-fold and two fold reduction in density respectively compared with 1959.

Hand-clearing with 70 men started on the Matsebe in July where it had ceased in 1957. By September, when work was discontinued, clearings extended to the outer fence on the west bank of the molapo, and to some two miles beyond the fence on the east bank. 352 acres of habitat were cleared at a cost of 41/9d. per acre.

Beyond the outer fence the two untreated control rounds at Matsebe showed a slight increase in density over 1959. The east bank of the Xudum was cleared in 1956 and 1957 and the tsetse showed no sign of building-up density above the very low figures which followed closely on the clearings. On two of the three rounds on the west however there was a 100% rise while the other stayed the same. This zone was ring-barked in 1957 though only *A. giraffae* were treated. There may still be enough cover to facilitate tsetse breeding. The old control round on the Marophe which was cleared in 1959 gave a 50% drop in density. The new control round which started in June gave the same density level for the last seven months as did the old control round for the corresponding period in 1959.

Game destruction operations continued uninterrupted throughout the year from the Boro in a 2 - 3 miles wide strip running parallel to, but south of the inner fence to Mushu, in the Naragha Valley, and between the two game control fences. The operations were strengthened by the introduction of hunting patrols shooting from the line of the outer fence. The most important duty of the patrols was to discourage the hunters from shooting outside their prescribed areas. The monthly average of hunters employed rose from 43 in 1959 to 46 but the total of 3,144 animals shot showed a decrease from the previous year's figure of 3,914.

The monthly average was 262 for the whole area and 75 for the south-east bank of the Naragha Valley. In the whole of the Naragha Valley there was a decrease in the total of animals shot and for every species except buffalo, the number of which increased to the same extent as that shot between the fences. Numbers of duiker and steenbuck also fell in Naragha while they rose between the fences. This decline in the Naragha resident game species might be the answer for the decline of the tsetse population.

Work on fences was considerably hampered by lack of transport, but two western fences were rebuilt and routine maintenance was carried out along the entire outer fence line. A stock-pile of 3,343 standard and 1,965 droppers was made. Two fence foot patrols operated.

A start was made in training African staff for microscopy work in connection with the trypanosome infection rate in the tsetse fly, for resting site behaviour observations, pupal searching and blood meal sampling.

Blood meal sampling was started in co-operation with Mr. Weitz of the Lister Institute, England. Of 70 blood squashes sent to him from fly rounds in Ngamiland 27% and 35% were positive for warthog and kudu respectively. The number of warthog feeds was smaller than normally found in other parts of Africa while the kudu feeds were more numerous. Although buffalo were certainly present in one area off and on throughout the year not one positive meal was recorded. On the other hand elephants were occasional visitors in another area and three positive were recorded.

An observation made in Nyasaland that cloth screens used in fly catching increased the availability of tsetse was followed up by an investigation at Matsebe. The intention was to compare fly boy catches with and without the use of a screen on a high density fly round for a twelve month period. Work started in March and a cursory examination of the data available from ten months' catches confirmed the Nyasaland finding. Twice as many tsetse were captured when the screen was used. Screens were introduced on all low density fly rounds towards the end of the year. They will be used in all foot survey work.

Twenty routine fly rounds on a special grid system tested the fly situation in the Makakun/Setateng/Tsau triangle in the western sphere of operations. The situation remained stable and there was no evidence of a build-up in density. On the contrary there was falling off towards the end of the year. There was one disquieting fact and that was one fly was taken in the Makakun section of the barrier being cleared between Makakun and Setateng, and a few were taken just north of it. Cattle moving back and forth across the clearing might have carried these flies and they may not indicate a breeding population. Nevertheless sampling must be intensified to determine the degree of carriage and whether the barrier will prove effective.

The deflying chambers on either side of Tsau on the main roads to Maun and Nakaneng respectively operated throughout the year. Despite a twofold increase in traffic from Tsau to Maun there was a 50% reduction in fly recovered. 8834 traffic units

passed through and yielded only 16 tsetse. A picket was erected 10 miles north of Tsau on the Nokaneng road on the southern edge of the dense Konde fly population. It was intended to test the effect on catches at the deflying chamber three miles north of Tsau and on the Xai Xai road picket. It collected almost 2,000 flies on traffic moving to Tsau and reduced the chamber catches tenfold; 134 only being recovered. It was thought that it might reduce the number of flies finding their way round on the west of Tsau. The catches on the Xai Xai road are a reflection of this movement. There was a reduction in the middle of the year but it could not be expected to stop all movement since game move down from Konde which is north of the Nokaneng road picket and in very dense fly. A picket south of Tsau on a path passing through Dobe to Makakun operated for the first half of the year and collected small numbers of flies moving both ways. It was closed down due to shortage of funds.

No clearing work was done around Tsau as funds were limited and preference was given to the more important Makakun/Setateng barrier designed to half movement of tsetse towards Lake Ngami. Treatment took the form of alternate 400 yard wide strips of clearing and ring-barking. 10,880 acres were treated at about 6/- per acre. The width of the clearing between Makakun and Setateng is 21 miles and is now $1\frac{1}{2}$ miles deep.

Chambers north and south of Nokaneng continued to defly traffic. The number of flies per traffic unit stayed the same for the south whereas there was a drop for traffic from the north. For traffic moving out of Nokaneng there was an increase going south and a decrease going north. It is concluded from this that the clearings between the village and the chamber to the north of the deflying chamber have had a beneficial effect. The experimental clearing north of the deflying chamber might account for the reduction of transport into Nokaneng.

At the request of the Chief's representative at Nokaneng two pickets were placed in the bush on the outskirts of the village to inspect traffic, mainly pedestrian, entering Nokaneng from the north-east.

These started operating in May and 967 and 3,333 flies were caught on traffic going into Nokaneng from the north-east and the south-east respectively, and 268 and 440 flies respectively were caught on the way out.

During March a survey was undertaken starting from Gomare and working southwards towards Nokaneng along the flood plain. This was to see how far north of Nokaneng flies had spread along the flood plain islands. The first flies were caught eight miles south of Gomare on a large island close to the mainland. Two

tsetse were taken. Flies were next caught nine miles north of Nokaneng where apparent densities of 24, 20 and 32 were recovered on three walks. Here the islands were much closer together than further north. From this point to Nokaneng all the islands were infested.

Very little work was possible around Nokaneng but a small amount of clearing was done to extend the protective barrier around the village. Experimental clearing work north of the deflying chamber was commenced in May to compare the efficiency, speed, permanency and economy of various techniques. The first technique, ring-barking of primary and secondary habitat trees with undercover clearing, was completed. An area of 2,240 acres was treated at the cost of 8/- per acre. Five fly rounds were plotted to test the effect of the clearing on the tsetse population but there was no indication of reduction in density by the end of the year.

Fourteen fly rounds which were started in May, 1959, continued to sample the tsetse position on either side of the Gomare/Nokaneng road from Gomare to a point eight miles to the south. They were designed to determine whether the advance northwards from Nokaneng was continuing. Only one round returned higher catches than the previous year's but the increase was appreciable. For the rest catches were the same or slightly lower. A comparison of the ratio of flies per traffic unit for 1959 and 1960 on the picket south of Gomare and the deflying chamber north of the village revealed that there was a slight increase in the transport of flies from the south while there was sharp decline in the number from the north. There was an increase in transport out of Gomare to the south but the ratio for the traffic to the north stayed the same. Game control was continued in this region in an attempt to decelerate the advance. Ten hunters were employed shooting over 20 square miles of country and 239 animals were shot of which 120 were kudu.

Clearing proceeded on the Gomare east/west barrier. Owing to limited funds not all labour available could be employed in April when work started. The gang was brought up to full strength in June. Funds ran out at the end of September when 3,840 acres had been cleared at the cost of approximately 11/- an acre. The clearing is now four miles wide by three miles deep and three square miles remain to be cleared.

The ring-barking of the zone demarcated on the mainland north of the village was completed during this year. The area still to be done lies between the edge of the Taoghe flood plain and the river itself. 19,200 acres were treated at the cost of 2/3d. an acre. The present width of the treated section is five miles and the depth nine miles.

In May a preliminary survey of Tubu Island was carried out as a result of rumours that tsetse had encroached onto the western side of the island. The survey was done with an ox-drawn sleigh to transport equipment as it was impossible to cross a vehicle over flooded rivers. The route taken was down the western side of the island which was mostly open plain with palm trees and occasional patches of *Acacia karroo*. Only one fly was taken near a camp of hunters who had just arrived from the eastern side of the island. On the northern part where villages were few, game, in the form of numerous head of Lechwe and many lone Reedbucks, was plentiful. Cattle were kept in large open plains and appeared to be in good condition. It was considered that the sparseness of the vegetation would prevent a westward spread of tsetse.

Nine fly rounds were plotted in the ring-barking zone north of Gomare between the village and Kurube at the north edge. Two tsetse were caught in April near this edge but on the main road to the north. No more flies were taken and the question arose, as always when the odd fly is caught on a road, as to whether their capture indicated the presence of a light density tsetse population or the transport in of tsetse from another focus. It was not until August that a picket was placed at Kurube four miles south of the junction of the main road and the old road to Ikwaga via the flood plain. Traffic from north and south was inspected to determine the direction of transport of fly, if any. At the same time the picket attendants were instructed to make reconnaissances around the site of the picket with the use of a cloth screen. In September the picket collected four tsetse from traffic from the north and one from the south. During the same month the reconnaissances produced 25 flies from a small area three miles to the east of the picket.

As a result of this discovery and because rumours persisted that the Kadizwalo focus was expanding southwards and northwards the Field Officer of the Western area and the Survey Officer undertook a combined survey in October which confirmed the presence of a pocket of tsetse where the picket attendants had caught flies in September. This infestation occurred in a belt of large *A. giraffae* running north-south about two to three miles east of the main road and three miles south of the northern edge of the ring-barked zone. The trees were not yet noticeably affected by the treatment. Two tsetse were caught between the southernmost round of the Kadizwalo system and the northern edge of the ring-barking. Two Land Rover trips west of Kadizwalo failed to produce fly. A grid system of fly rounds was instituted in the region immediately north of the ring-barking to regularise sampling.

A careful watch of the Kadizwalo focus was kept with the aid of eleven routine fly rounds. From August onwards all rounds showed the seasonal rise peculiar to that area. Although four rounds gave no density rise and one showed a decrease, the remaining six produced more flies. Most disturbing was the fact that the most northerly round and one of the westerly rounds opposite the original focus gave greatly increased catches though the infestation is still not more than light. At the same time the fly boys received reports from villagers that there was an extension northwards towards Ikwaga. A 16 mile long herring bone grid fly round system was planned to extend from Sepopa to the top of the present sampling area at Kadizwalo. Work started at the beginning of December but no tsetse were encountered by the end of the year. The grid is so planned to provide better access into a most sandy area as the base-line will be opened into a track. Apart from providing future systematic sampling well ahead of the possible advance the grid will also greatly facilitate the introduction of control work based on the application of residual insecticide.

From the beginning of the year 16 routine fly rounds in the Chobe district kept a check on the fly position from a point two miles east of Ngoma along the Chobe river flood plain for a distance of 28 miles to a point two miles west of Kachikau. When it was found that flies were being regularly caught between Kavimba and Mabele it was decided to put in a grid system of fly round from Kavimba to the easternmost edge of the routine fly round sample area.

This was done in June and the total number of rounds rose to 28. There was a great reduction in the number of tsetse caught on all rounds compared with 1959. Around Kachikau, considered in 1959 to be on the outskirts of the heavy density fly, only 19 tsetse were taken from April to December, while 111 was the total for the corresponding period of 1959. Between Kavimba and Kachikau the figures were three and 83 for 1960 and 1959, between Kavimba and Mabele five and 62, between Mabele and Mochenje nil and 13. Even more remarkable than this was the complete collapse of the population towards the end of the year. No tsetse were caught on rounds or traffic control pickets in December. Pickets operated at Ngoma, Mochenje, Kavimba and Kachikau. The latter two served a useful purpose in stopping the transport of fly. The first two showed that very few flies found their way past Mabele. Two flies only were taken at each picket.

Work continued, except for a short break from mid-February to the beginning of April, on the barrier clearing of bush from the top of the flood plain between Ngoma and Kavimba. By the

end of the year Kavimba was reached and 4,632 acres were cleared at the cost of 10/- an acre.

When the Chobe Game Reserve was declared, the area from Ngoma to Kasinka between the top of the ridge and the river was made a free shooting area for all persons holding a small game licence. It was forbidden only to shoot elephant, hippopotamus and giraffe. This shooting was allowed to effect as much disturbance of the ecology as possible. By the end of the year game was not as much in evidence as previously.

APPENDIX III

BECHUANALAND PROTECTORATE IMPORTS: 1958, 1959, 1960

U: From Union of South Africa — F: From Federation of Rhodesia and Nyasaland — O: Other Countries

COMMODITY	From	1958		1959		1960	
		Quantity	Value £	Quantity	Value £	Quantity	Value £
Sorghum & Millet (bags of 200 lb.)	U F Total	84 — 84	150 — 150	3,111 — 3,111	4,700 — 4,700	36,346 10,210 46,556	81,779 25,441 107,220
Maize and Maize Meal (bags of 200 lb.)	U F Total	25,974 23,697 49,671	49,350 45,024 94,374	58,383 18,120 76,503	119,685 37,146 156,831	116,975 101,232 218,207	233,950 202,464 436,414
Wheat and Wheat Meal (bags of 200 lb.)	U F Total	33,107 300 33,407	81,010 885 81,895	38,465 20 38,485	93,638 66 93,704	— — —	— — —
Horses, Mules and Donkeys	U F O Total	14 — — 14	335 — — 335	201 60 574 835	4,020 1,200 11,480 16,700	107 1 61 169	2,140 20 1,220 3,380
Cattle	U F O Total	94 — — 94	5,215 — — 5,215	1,993 89 370 2,452	51,084 1,780 7,400 60,264	3,686 27 73 3,786	110,892 809 2,192 113,893
Sheep and Goats	U O Total	— — —	— — —	42 104 146	168 416 584	87 — 87	218 — 218

Imports (contd.)

COMMODITY	From	1958		1959		1960	
		Quantity	Value £	Quantity	Value £	Quantity	Value £
Pigs	U F Total	— — —	— — —	223 3 226	3,122 42 3,164	— — —	— — —
Butter (lb.)	U Total	27,490 27,490	4,467 4,467	28,750 28,750	4,552 4,552	9,450 9,450	1,535 1,535
Vehicles and Spares	U F O Total	— — — —	372,957 57,037 3,054 433,048	— — — —	283,024 66,246 65,278 414,548	— — — —	397,046 60,959 98,158 556,163
General Merchandise	U F O Total	— — — —	1,445,295 256,289 63,828 1,765,412	— — — —	1,169,862 252,286 35,139 1,457,287	— — — —	822,317 188,570 47,003 1,057,890
Other Foodstuffs	U F O Total	— — — —	329,677 35,775 299 365,751	— — — —	366,728 45,115 536 412,379	— — — —	382,866 54,508 — 437,374
Textiles	U F O Total	— — — —	590,379 140,049 3,286 733,714	— — — —	528,641 206,559 10,979 746,179	— — — —	383,372 103,652 871 487,895
Fertilizers	U F Total	— — —	18,423 863 19,286	— — —	14,143 21,525 35,668	— — —	74,886 5,824 80,710
GRAND TOTAL		—	3,503,647	—	3,406,560	—	3,282,692

BECHUANALAND PROTECTORATE EXPORTS — 1958, 1959, 1960

U: To Union of South Africa — F: To Central African Federation — O: To Other Countries

COMMODITY	TO	1958		1959		1960	
		Quantity	Value	Quantity	Value	Quantity	Value
Sorghum (bags of 200 lb.)	U F Total	31,391 10,000 41,391	£ 49,200 17,000 66,200	50,998 1,010 52,008	£ 76,500 1,500 78,000	234 — 234	£ 351 — 351
Citrus ... (pockets of 37 lb.)	U F Total	— 13,244 13,244	— 7,100 7,100	3,164 4,974 8,138	696 2,296 2,992	2,000 13,000 15,000	800 6,500 7,300
Beans and Pulses... (bags of 200 lb.)	U F Total	36,417 35 36,452	109,140 60 109,200	13,393 2,570 15,963	26,000 5,000 31,000	5,731 — 5,731	11,462 — 11,462
Groundnuts (bags of 200 lb.)	U Total	7,017 7,017	32,900 32,900	16,597 16,597	79,600 79,600	2,160 2,160	10,152 10,152
Wheat ... (bags of 200 lb.)	U Total	100 100	250 250	251 251	592 592	1,210 1,210	3,025 3,025
Millet ... (bags of 200 lb.)	U F Total	5,618 750 6,368	14,500 1,900 16,400	298 — 298	540 — 540	75 1 76	112 1 113
Sunflower Seed ... (bags of 200 lb.)	U Total	1,500 1,500	4,500 4,500	1,568 1,568	3,000 3,000	767 767	1,600 1,600
Cotton ... (bales)	U Total	59 59	674 674	47 47	380 380	— —	— —
Potatoes (pockets)	U Total	3,800 3,800	1,900 1,900	8,588 8,588	2,255 2,255	— —	— —
Timber ... (short tons)	F Total	— —	— —	— —	— —	400 400	1,767 1,767

Exports (contd.)

COMMODITY	TO	1958		1959		1960	
		Quantity	Value £	Quantity	Value £	Quantity	Value £
Flower Bulbs (tons)	U Total	— —	— —	120 120	5,120 5,120	80 80	3,000 3,000
Butter (lb.)	U Total	284,479 284,479	44,378 44,378	286,550 286,550	28,810 28,810	136,550 136,550	21,784 21,784
Butterfat (lb.)	U O Total	85,760 146,214 231,974	13,410 21,168 34,578	84,720 181,202 265,922	13,187 25,980 39,167	8,563 145,180 153,743	1,346 22,146 23,492
Cattle (live)	F Total	7,215 7,215	167,079 167,079	10,196 10,196	204,190 204,190	7,871 7,871	150,894 150,894
Cattle (carcases) (lb.)	U F O Total	18,493,968 3,530,219 8,434,711 30,458,898	917,475 144,115 412,098 1,473,688	26,614,897 526,061 15,065,124 42,206,082	1,291,292 19,948 669,341 1,980,581	13,734,910 — 22,282,749 36,017,659	642,614 — 935,352 1,577,966
Sheep and Goats	U F Total	141 3,288 3,429	284 7,945 8,229	797 3,119 3,916	1,910 8,183 10,093	2,373 239 2,612	8,683 773 9,456
Pigs	F Total	1,978 1,978	21,537 21,537	1,919 1,919	16,390 16,390	1,282 1,282	9,236 9,236
Poultry	U Total	13,712 13,712	3,258 3,258	9,517 9,517	2,640 2,640	5,431 5,431	1,488 1,488
Hides (lb.)	U F O Total	4,666,746 350,224 424,509 5,441,479	124,972 17,045 20,518 162,535	6,476,893 354,157 728,865 7,559,915	292,876 25,704 50,865 369,445	502,570 221,209 658,483 1,382,262	33,240 12,938 47,555 93,733
Skins (sheep and goats) pieces	U F O	20,926 1,293 1,000	4,836 157 250	71,082 19,586 80,289	6,869 2,878 7,402	25,413 425 14,890	7,919 215 2,585

COMMODITY	TO	1958		1959		1960	
		Quantity	Value	Quantity	Value	Quantity	Value
Skins and Karosses ... (wild animals) pieces	U	21,044	£ 6,927	33,575	£ 26,514	133	£ 1,113
	F	2,233	668	42	236	4	10
	O	120	391	6,944	4,871	27	248
	Total	23,397	7,986	40,561	31,621	164	1,371
(1) Miscellaneous animal ... products	U	—	9,302	—	11,294	—	50,827
	F	—	5,591	—	4,009	—	7,856
	O	—	1,162	—	3,431	—	5,734
	Total	—	16,055	—	18,734	—	64,417
(2) Abattoir by-products ...	U	—	117,077	—	192,782	—	409,510
	F	—	19,709	—	6,458	—	3,215
	O	—	26,791	—	36,242	—	56,236
	Total	—	163,577	—	235,482	—	468,961
Bones ... (lb.)	O	—	—	234,000	1,150	154,000	770
	Total	—	—	234,000	1,150	154,000	770
Gold ... (oz.)	F	215	2,643	198	2,434	203	2,496
	Total	215	2,643	198	2,434	203	2,496
Silver ... (oz.)	F	44	14	42	13	25	8
	Total	44	14	42	13	25	8
Asbestos ... (short tons)	U	1,734	139,911	1,112	95,268	1,849	132,262
	Total	1,734	139,911	1,112	95,268	1,849	132,262
Manganese ... (short tons)	U	5,893	49,394	15,905	92,004	14,242	70,821
	Total	5,893	49,394	15,905	92,004	14,242	70,821
Other articles ...	U	—	40,005	—	13,166	—	—
	F	—	7,672	—	2,296	—	—
	Total	—	47,677	—	15,462	—	—
GRAND TOTAL ...		—	2,586,906	—	3,364,112	—	2,678,644

APPENDIX IV
LIVESTOCK CENSUS — 1960

	Old Bulls	Young Bulls	Cows	Heifers	Oxen	Tollies	Calves		Total Cattle	Sheep	Goats	Horses	Mules	Donkeys	Pigs	Poultry	Dogs	Camels
							Bull	Heifer										
Lobatsi ..	142	890	8,611	4,340	4,403	4,263	2,097	2,013	26,759	17,049	9,706	318	24	1,999	222	5,532	834	—
Werda ..	154	293	14,697	7,291	6,711	6,631	3,209	3,410	42,396	3,821	18,569	1,394	132	2,934	35	2,957	1,165	61
Kanye ..	1,216	1,962	33,366	11,223	24,691	8,743	5,967	6,791	93,959	14,191	25,190	723	25	1,949	46	6,722	1,797	—
Molepolole ..	1,281	3,991	39,907	15,404	22,353	9,226	8,366	8,879	109,407	8,039	24,436	606	18	3,388	823	9,503	2,481	—
Gaberones ..	244	682	4,835	3,399	3,434	2,105	1,120	1,306	17,125	1,442	3,106	33	34	42	190	2,158	437	—
Mochudi ..	844	866	27,408	10,746	20,694	8,331	7,515	6,650	83,054	2,778	7,286	94	11	1,011	1,097	5,153	1,692	—
Machaneng ..	228	375	14,927	5,140	15,623	4,800	3,151	3,227	47,471	1,704	879	88	51	285	123	2,015	328	—
Mahalapye ..	916	929	35,986	13,764	15,092	12,338	8,767	9,488	97,280	5,548	12,329	88	17	523	34	4,122	1,282	—
Serowe ..	1,583	6,698	65,942	24,782	32,710	15,558	13,237	15,485	175,995	8,081	31,362	1,015	15	3,341	38	5,525	2,559	—
Palapye ..	1,902	4,909	71,139	24,816	31,750	16,689	12,543	13,949	177,697	9,022	30,269	122	96	1,759	382	11,628	2,581	—
Francistown .. (incl. Nata, C.D.C. Nata and Odiakwe Quarantine.)	2,509	6,924	72,106	29,055	38,315	17,744	15,732	16,672	199,057	11,781	44,006	329	50	2,319	1,595	36,769	4,828	—
Ngamiland .. (incl. Maun, Shakawe, B'pits and Makala- mabedi)	728	2,672	43,956	18,045	14,201	12,337	10,315	11,236	113,490	3,319	27,303	1,483	2	4,344	2	7,446	2,860	—
Chobe and Panda-ma- Tenga	36	64	531	356	4,831	351	176	172	6,517	—	17	5	—	38	1	132	75	—
Ghanzi .. (incl. the non- classification of 4,974 head of cattle)	539	497	27,399	14,342	4,646	13,776	7,532	7,926	76,657	1,701	16,721	1,643	50	2,400	61	2,493	725	—
TOTAL ..	12,322	31,752	460,810	182,703	239,454	132,892	99,727	107,204	1,271,838	88,476	251,179	7,941	525	26,332	4,649	102,155	23,644	61

APPENDIX V
CASES REPORTED TO AND DEALT WITH BY THE POLICE: 1960

OFFENCES	Pending at 31.12.59	Total Reported in 1960	Pending Investigation at 31.12.60	Referred to African or Local Courts	Not taken to Court			Accused dead or insane	Total	Convicted	Taken to Court		Awaiting trial at 31.12.60
					Total	Civil, no case in law or found false	Evidence insufficient, trivial or undetected etc.				Dismissed	Nolle Prosequi	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Against Lawful Authority:</i>													
Escape	18	73	16	—	16	1	15	—	59	59	—	—	—
Perjury	1	5	3	—	2	2	—	—	1	1	—	—	—
<i>Against Public Morality:</i>													
Abortion	—	3	—	—	2	2	—	—	1	1	—	—	—
Bestiality	—	1	—	—	—	—	—	—	1	1	—	—	—
Concealment of Birth	1	2	—	1	—	—	—	—	2	2	—	—	—
Crimes Injuria	—	7	—	—	1	1	—	—	6	6	—	—	—
Incest	—	4	—	—	1	1	—	—	3	2	1	—	—
Indecent Assault	1	22	—	—	1	1	—	—	22	21	1	—	—
Rape	1	41	1	—	11	11	—	—	30	20	10	—	—
Rape, attempted	—	15	1	2	2	2	—	—	10	10	—	—	—
Sodomy	—	—	—	—	1	1	—	—	—	1	—	—	—
Sodomy, attempted	—	2	—	—	1	1	—	—	1	1	—	—	—
Women & Girls' Protection Act	—	17	—	—	5	4	1	—	12	11	1	—	—
<i>Against the Person:</i>													
Assault, Common	37	507	18	143	64	61	2	1	319	300	19	—	—
Assault, G.B.H.	24	190	32	27	23	14	8	1	132	132	—	—	—
Culpable Homicide	2	14	5	—	5	4	—	1	6	3	3	—	—
Murder	14	22	9	—	13	10	1	2	14	9	2	2	1
Murder, attempted	2	5	2	—	1	1	—	—	4	4	—	—	—
<i>Against Property:</i>													
Arson	2	12	2	2	6	4	1	1	4	3	1	—	—
Fraud	1	21	2	—	10	8	2	—	10	10	—	—	—
Housebreaking with intent	3	6	1	1	5	1	4	—	2	2	—	—	—
Housebreaking with theft	43	253	61	17	102	20	82	—	116	109	7	—	—
Malicious Injury to Property	17	60	6	6	11	5	6	—	54	50	4	—	—
Receiving Stolen Property	3	25	1	3	6	6	—	—	18	13	5	—	—
Robbery	—	7	2	2	1	1	—	—	1	1	1	—	—
Stock Theft	62	266	51	60	103	59	44	—	114	99	15	—	—
Theft	123	813	99	79	341	108	232	1	417	387	27	3	—
Theft by conversion or false pretences	9	91	9	11	25	14	11	—	55	48	7	—	—
<i>Against Local Laws:</i>													
Liquor Laws	14	851	20	181	13	13	—	—	651	644	7	—	—
Road Traffic	6	331	10	—	19	18	1	—	308	299	9	—	—
Other	155	3,892	177	207	391	355	26	10	4,014	3,903	102	5	4
TOTAL	539	7,558	528	742	1,181	728	436	17	6,387	6,151	222	10	5

APPENDIX VI
PERSONS DEALT WITH BY THE COURTS: 1960

OFFENCES	Total arrested or summoned to court	Acquitted	Nolle Prosequi	Awaiting trial at 31.12.60	Convicted										First Offenders Act of Warning		
					Total	Death		Imprisonment			Whipping		Fine				
						(6)		(7)			(8)		(9)				
						M	F	M	F	J	M	J	M	F		J	
<i>Against Lawful Authority:</i>																	
Against Public Order ..	46	4	—	—	42	—	—	9	—	—	—	—	27	5	—	—	1
Perjury ..	6	—	—	3	3	—	—	—	—	—	—	—	2	1	—	—	—
Escape and Rescue ..	94	1	—	—	93	—	—	74	—	1	2	—	10	2	—	—	4
<i>Against Public Morality:</i>																	
Rape and Indecent Assault	68	13	4	—	51	—	—	37	—	—	2	4	7	1	1	—	—
Unnatural Offences ..	5	—	—	—	5	—	—	3	—	—	—	1	—	1	—	—	—
Other ..	20	—	1	—	19	—	—	3	2	3	1	4	5	—	—	—	1
<i>Against the Person:</i>																	
Murder and manslaughter	9	4	—	—	5	—	—	3	1	—	2	—	—	—	—	—	1
Attempted murder and suicide ..	3	—	—	—	3	—	—	2	—	1	—	—	—	—	—	—	—
Grievous bodily harm, wounding ..	126	8	1	1	116	—	—	69	3	—	1	1	35	—	—	—	7
Assaults ..	319	19	—	—	300	—	—	59	—	2	3	4	203	10	1	—	18
Other ..	86	—	—	—	86	—	—	9	3	—	—	—	43	15	—	—	16
<i>Against Property:</i>																	
Thefts and other stealing	596	39	10	4	543	—	—	306	8	4	5	20	155	25	—	—	21
Robbery and extortion ..	3	—	—	—	3	—	—	2	—	—	—	—	1	—	—	—	—
Burglary, house and store breaking ..	122	9	—	—	113	—	—	87	1	8	2	8	5	—	—	—	2
Fraud, false pretences, cheating ..	34	3	1	—	30	—	—	16	1	1	—	—	11	—	—	—	1
Receiving stolen property	18	6	1	—	11	—	—	6	—	—	—	1	3	1	—	—	—
Arson ..	10	2	—	—	8	—	—	5	1	—	—	—	1	—	—	—	1
Other ..	77	2	1	—	74	—	—	6	—	—	—	—	66	—	1	—	1
<i>Against the Penal Code:</i>																	
Forgery and coinage ..	12	1	—	—	11	—	—	6	—	—	—	—	4	—	—	—	1
Other ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Against Local Laws:</i>																	
Against Traffic Laws ..	292	8	—	—	284	—	—	20	—	—	—	—	253	4	—	—	7
Against Township Laws ..	173	1	—	—	172	—	—	43	—	—	—	2	116	1	—	—	10
Against Liquor Laws ..	641	10	—	—	631	—	—	19	45	—	—	—	216	340	3	—	8
Gambling ..	15	—	—	—	15	—	—	—	—	—	—	—	15	—	—	—	—
Other ..	2,432	49	7	—	2,376	—	—	356	13	1	—	—	1,531	40	1	—	434
TOTAL ..	5,207	179	26	8	4,994	—	—	1,140	78	21	18	45	2,709	446	7	—	534

APPENDIX VII

Constitutional Proposals for the Bechuanaland Protectorate

I. INTRODUCTION.

The present constitution of the Bechuanaland Protectorate is contained in Orders in Council of 9th May, 1891, and 18th October, 1909, the Basutoland, Bechuanaland Protectorate and Swaziland (office of the High Commissioner) Orders in Council, 1959 and 1960, and the High Commission Territories Royal Instructions, 1959.

2. The Bechuanaland Protectorate is administered by the Resident Commissioner under direction of the High Commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland. In 1920 two Advisory Councils representing respectively the European and African inhabitants of the Bechuanaland Protectorate were established, and these Councils have been consulted on major items of Government policy. (The composition of the present African Advisory Council will be seen from paragraph 20 below). Over the years the range of matters on which the Advisory Councils have been consulted has increased. In 1950 a Joint Advisory Council was established, consisting of eight members of the African Advisory Council elected by that Council, the eight members of the European Advisory Council and seven Government officials. Since its establishment the Joint Advisory Council has been consulted by the Bechuanaland Protectorate Government on all important matters affecting both African and European inhabitants.

3. In April, 1958, the Joint Advisory Council passed a resolution "that in the opinion of this Council the time has come when a Legislative Council should be formed and empowered to assist in the Government of the Territory". In April, 1959, the Joint Advisory Council was informed that the Secretary of State for Commonwealth Relations would be happy to consider proposals for the establishment of a Legislative Council for the Protectorate. For this purpose he indicated that he would be glad if the Resident Commissioner would formulate and submit proposals to the High Commissioner after consultation with the Joint Advisory Council and consideration of any views submitted by interested persons in the Protectorate. He asked the High Commissioner then to submit to him his recommendations regarding such proposals.

4. A Constitutional Committee, consisting of four European and four African unofficial members of the Joint Advisory Council and four Government officials, was appointed to assist the Resident Commissioner in the formulation of proposals. The Committee's Report, which was unanimous, was unanimously endorsed by the Joint Advisory Council and was published in the Protectorate on 2nd November, 1959. Since publication, certain modifications recommended by the Resident Commissioner and the High Commissioner have been agreed with the Constitutional Committee.

5. The proposed constitution, which it is intended to promulgate by Order in Council, is outlined in the following paragraphs.

II. OUTLINE OF THE PROPOSED CONSTITUTION.

The Legislature:

6. The High Commissioner will be empowered, with the advice and consent of the Legislative Council, to make laws for the peace, order and good government of the Protectorate, subject to the other provisions of the proposed constitution.

The Legislative Council:

7. The Legislative Council will consist of 31 - 35 members with the Resident Commissioner as President. The composition of the Legislative Council will be as follows:—

- (a) Three ex-officio members, namely, the Government Secretary, the Secretary for Finance and the Legal Secretary;
- (b) 21 elected members, of whom 10 will be European, 10 African and one Asian;
- (c) Seven nominated official members;
- (d) The High Commissioner will be empowered at his discretion to nominate up to four European and African unofficial members, provided that he nominates an equal number of each.

8. The European elected members will be elected by European voters in ten constituencies. The present European Advisory Council will cease to exist. The African elected members will be elected by an African Council constituted in the manner described in paragraph 20, five from the members of the African Council from the Northern Division and five from those from the Southern Division of the Protectorate. The Asian elected member will be elected by Asian voters.

9. Members of the Legislative Council will have to be British subjects or British protected persons. European and Asian elected members will have to be qualified as voters and African elected members will have to be ex-officio, appointed, or elected members of the African Council.

10. The qualifications for the European and Asian franchise will be:

- (a) status of British subject or British protected person;
- (b) age 21 or over;
- (c) residence in the Protectorate for 12 months immediately prior to application for registration;
- (d) (i) ownership of land or stock in the Protectorate to the value of £200; or
- (ii) possession of one of the more important types of trading licence; or
- (iii) income of £200 from any source in the 12 months prior to application for registration; or
- (iv) being the wife of a person so qualified.

11. Persons of mixed blood will be classified for electoral purposes with the racial community with which they are associated.

12. There will be power to summon any official or to invite any other person in the Protectorate to any meeting of the Legislative Council, where in the opinion of the President the business before the Council renders it desirable. Any such person may take part in the proceedings without a vote.

13. The period between dissolutions of the Legislative Council will not be more than five years.

14. The Constitution will also provide:—

- (a) that Her Majesty has power to disallow laws passed by the Legislature;
- (b) that the High Commissioner has power to withhold his assent to any Bill or to reserve it for the signification of Her Majesty's pleasure;
- (c) that the High Commissioner has the reserved power to give legal effect to any Bill or motion rejected by the Legislative Council if, in the High Commissioner's opinion, it is expedient to do so in the interests of public order, public faith or good government.

15. The High Commissioner will be required to reserve any Bill affecting the Constitution, any Bill relating to the privileges and immunities of the Legislative Council or its members, or any Bill varying the qualifications or disqualifications of voters in elections for membership of the African Council or of the Legislative Council. He will also be required to reserve any Bill in classes to be defined affecting African interests (including any Bill for amending or repealing any customary law or the powers of a Chief), if the majority of African members of the Legislative Council have voted against it.

16. The Constitution will also contain the usual provisions prohibiting the Legislative Council from proceeding, without the consent of the High Commissioner, with any Bill which makes provision for imposing or increasing any tax or charge on the revenue or for compounding or remitting any debt due to the Protectorate.

The Executive Council:

17. There will be an Executive Council to advise the High Commissioner and Resident Commissioner in the discharge of their executive functions. It will normally be presided over by the Resident Commissioner, but the High Commissioner may preside when he is in the Protectorate. The Executive Council will consist of the Resident Commissioner, the Government Secretary, the Secretary for Finance, the Legal Secretary and two other officials appointed by the High Commissioner, together with four members nominated by the High Commissioner from among the unofficial members of the Legislative Council, of whom two will be European and two African. The High Commissioner will be instructed, in selecting the unofficial members of the Executive Council, to take account of the views of unofficial members of the Legislative Council, to be ascertained informally.

18. The Resident Commissioner may, when, in his opinion, the business before the Executive Council makes it desirable, summon any person to a meeting of the Council, notwithstanding that that person is not a member of the Council.

19. The High Commissioner and Resident Commissioner will have the power to act in opposition to the advice of the Executive Council. When either the High Commissioner or the Resident Commissioner decides so to act, the High Commissioner will be required to report the matter, with the reasons for the action, to the Secretary of State.

The African Council:

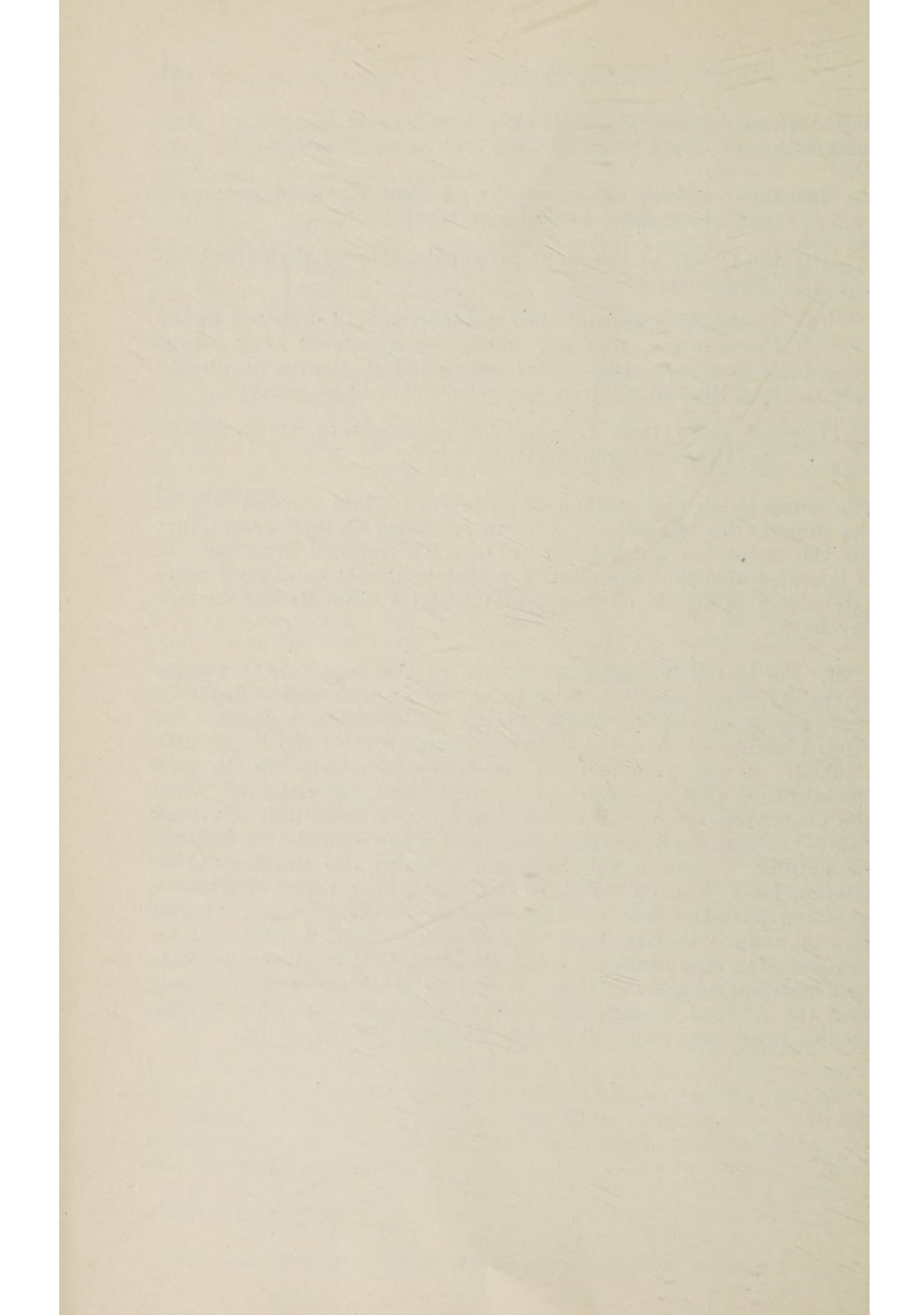
20. An African Council will be established to replace the pre-

sent African Advisory Council (which will cease to exist). The composition of the African Council will be as follows:—

- (a) the Resident Commissioner as President and not more than seven other official members;
- (b) the Chiefs of the eight principal tribes as permanent ex-officio members;
- (c) 32 members appointed or elected from 13 divisions in the Protectorate, who may either be appointed at meetings of the respective tribes assembled in kgotla or elected by Tribal or District Councils where these exist;
- (d) not more than two non-official members appointed by the Resident Commissioner.

The composition and method of selection of this Council will be the same as for the present African Advisory Council except that for the latter the numbers at (c) are 31 from 12 divisions. It is intended also that the elective principle should be applied more extensively in future as Tribal and District Councils are further developed.

21. As stated in paragraph 8, one of the important functions of the African Council will be to act as an electoral college for the purpose of electing, from among its ex-officio, appointed, or elected members, 10 Africans to sit as members of the Legislative Council. It will, therefore, be necessary to provide in the new Constitution that the African Council shall be dissolved when the Legislative Council is dissolved and a new Council be convened before the date fixed for the assembly of a new Legislative Council. In addition, provision will be made whereby the Resident Commissioner may consult the African Council on a range of matters affecting Africans only, such as matters affecting Chiefs, African Courts and customary law; the African Council will also be available for consultation by the Resident Commissioner on matters of tribal administration. It will be a statutory requirement that the African Council shall be convened at least once a year by the President, who will be the Resident Commissioner.



Other Publications in the Series

ANNUAL REPORTS

BASUTOLAND	FIJI	N. RHODESIA
BECHUANALAND	GIBRALTAR	NYASALAND
PROTECTORATE	HONG KONG	SARAWAK
BR. GUIANA	KENYA	SINGAPORE
BR. HONDURAS	MAURITIUS	SWAZILAND
BRUNEI	N. BORNEO	

BIENNIAL REPORTS

ADEN	FALKLAND IS.	ST. HELENA
ANTIGUA	GAMBIA	ST. LUCIA
BAHAMAS	GILBERT AND	ST. VINCENT
BARBADOS	ELlice IS.	SEYCHELLES
BERMUDA	GRENADA	TONGA
BR. SOLOMON IS.	MONTserrat	TURKS AND
BR. VIRGIN IS.	NEW HEBRIDES	CAICOS IS.
CAYMAN IS.	ST. KITTS-NEVIS	ZANZIBAR
DOMINICA	-ANGUILLA	

A standing order for selected Reports or for the complete series will be accepted by any one of the Bookshops of H.M. Stationery Office at the addresses overleaf. A deposit of £9 (nine pounds) should accompany standing orders for the complete series.

Orders may also be placed through any bookseller

© *Crown copyright* 1963

Published for the Commonwealth Relations Office by
HER MAJESTY'S STATIONERY OFFICE

To be purchased from
York House, Kingsway, London W.C.2
423 Oxford Street, London W.1
13A Castle Street, Edinburgh 2
109 St. Mary Street, Cardiff
39 King Street, Manchester 2
50 Fairfax Street, Bristol 1
35 Smallbrook, Ringway, Birmingham 5
80 Chichester Street, Belfast 1
or through any bookseller

