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# FINAL REPORT

OF THE

## SECOND REGULAR SETTLEMENT

OF THE

### BANNU DISTRICT

BY

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R. I. R. GLANCY, C.S.,

*Settlement Officer,*

BANNU.

1903-07.



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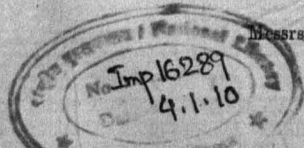
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FROM

R. W. CARLYLE, Esq., C.I.E., I.C.S.,

*Secretary to the Government of India,  
Department of Revenue and Agriculture,*

To

THE HON'BLE THE CHIEF COMMISSIONER, NORTH-  
WEST FRONTIER PROVINCE.*Simla, the 16th July 1908.*

SIR,

I am directed by the Government of India to convey the following remarks on the draft review of the final settlement report of the Bannu district which was forwarded for their approval with your predecessor's letter No. 321, dated the 22nd January 1908. The review is very complete and interesting.

2. The resettlement operations have raised the revenue demand of the district by nearly 66 per cent. from Rs. 2,61,366 to Rs. 4,31,258. The increase is heavy, though the assessments are not in themselves severe when judged by ordinary standards, and the settlement has, it is reported, been favourably received by the people. The high price of land gives further indication that the assessment is not in itself in any way excessive.

3. I am however to invite attention to paragraph 33 of the Government of India's Resolution No. 1, dated the 16th January 1902, in which the impolicy of raising the revenue demand too suddenly is emphasized. The circumstances of parts of the Bannu district are undoubtedly exceptional, and in such tracts as the Tandoba Circle where the cultivation increased by 85 per cent. and irrigation by 157 per cent. during the period of the expiring settlement, and where moreover the old demand was for special reasons extremely light, a large enhancement of revenue at resettlement was inevitable. But the Government of India are not satisfied that sufficient importance is attached in the North-West Frontier Province to the necessity of avoiding large and sudden increases of revenue, and they desire to see more attention paid to this question in future, both in framing the initial assessments, and in deferring portions of high enhancements where circumstances make a large enhancement inevitable. As the initial assessments have now been introduced on the basis of calculations to which no exception was taken on the submission of the assessment reports, they do not consider it necessary that any modifications should be made at this stage, but they are of opinion that more liberality should be shown in the matter of deferring enhancements. Under the system at present in force in the North-West Frontier Province, the Settlement Officer is given a free hand in deferring enhancements within a certain fixed sum, and it is impossible to ascertain exactly from the report how such a system works out in practice. The introduction of more definite rules on this subject is necessary in the North-West Frontier Province, and you will be separately addressed on this matter. For the present the Government of India consider that the arrangements proposed may be approved with one modification, unless in consideration of the above remarks you think that more liberal terms are in any respect necessary. It is observed that when enhancements have been deferred, the periods for which a concession was given in some cases five years and in others three. I am to ask that the period

may in all cases be raised to five years. That is to say the initial assessment fixed by the Settlement Officer should in all cases be taken for a period of five years when a shorter term has been proposed, and when the ultimate enhancement is imposed after two periods in which some concession is enjoyed, these periods should each extend to five years. If you consider any further steps necessary in individual cases of excessive enhancements with reference to the general policy of Government, the Government of India will be prepared to consider them favourably.

4. I am also to take this opportunity of pointing out a mistake in paragraph 22 of the review, where the detailed figures of the frontier remissions as now revised should apparently be shown as Rs. 3,588 in Marwat and Rs. 12,149 in the Bannu tahsil. Great difficulty has moreover been experienced in discovering how the figure Rs. 1,39,390 which is mentioned in paragraph 16 of the review as being the net final increase of revenue due to the resettlement, has been arrived at, and I am to ask that the figures in the last two sentences of this paragraph, which in their present form are not very easy to understand, may be carefully verified\* before the review is published,

\*Verified and necessary  
correction slips issued.

5. Subject to these modifications the Government of India agree to the issue of the draft review, and they approve of the proposal to confirm the settlement for a period of 20 years. They note, however, that Sir Harold Deane was of opinion that the conditions of the district should again be examined towards the close of the period now fixed for the currency of the settlement. They entirely approve of this proposal and are of opinion that it may be found advisable to extend the term to 30 years.

6. The Government of India have much pleasure in endorsing the remarks in the concluding paragraph of the review regarding the good work of Mr. Glancy and his Assistant.

I have the honour to be,

SIR,

Your most obedient servant,

R. W. CARLYLE,

*Secretary to the Government of India.*

FROM

THE HON'BLE LIEUT.-COLONEL SIR HAROLD DEANE, K.C.S.I.,  
*Chief Commissioner and Agent to the Governor-General,  
North-West Frontier Province,*

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,  
DEPARTMENT OF REVENUE AND AGRICULTURE,  
CALCUTTA.

*Dated Peshawar, 22nd January 1908.*

SIR,

IN compliance with the instructions contained in your letter No. 1703, dated 31st October 1907, I have the honour to submit, for the approval of the Government of India, a Review of the Final Settlement Report of the Bannu District, by Mr. M. F. O'Dwyer, Revenue and Financial Secretary, North-West Frontier Province, which embodies my own views on the subject.

2. In the concluding paragraph of the Review I have recorded my appreciation of the thoroughness and ability with which Mr. Glancy carried out the Settlement, and I trust that his work and that of his Assistant Rai Sahib Bhai Hotu Singh will meet with the commendation of Government. This Settlement has from the commencement been most ably directed by Mr. O'Dwyer, whose energy, intimate study of the district, and sympathy with the people have mainly contributed to the rapid and thorough manner in which this difficult Settlement has been carried through. The care with which the work has been done and the consideration given to local conditions, matters with which Mr. O'Dwyer has throughout kept himself in close touch, are evidenced by the small number of appeals and the absence of any discontent on the part of the people with the re-assessment.

I have the honour to be,

SIR,

Your most obedient Servant,

H. A. DEANE, LIEUT.-COLONEL,

*Chief Commissioner.*

# ERRATUM SLIP.

Page.	Para- graph.	Line of page.	CORRECTION.
		<i>Chief</i>	<i>Commissioner's Review.</i>
8	16	24 from bottom of page ...	For "Rs 3,17,338 net" read "Rs. 3,18,538 net."
8	16	24 from bottom of page ...	For "Rs. 2,62,239 " read " Rs. 2,62,390."
8	16	23 from bottom of page ...	For "Rs. 1,39,390" read "Rs. 1,56,055."
10	22	23 from bottom of page ...	For "Rs. 3,587" and "Rs. 11,150" read "Rs. 3,588" and "Rs. 12,149" respectively.
		<i>Final</i>	<i>Settlement Report.</i>
27	48	Line 4 of paragraph ...	For "Rs. 1,817 " read "Rs. 3,017."
27	48	Line 8 of paragraph ...	For "Rs. 2,61,490 " read "Rs 2,62,390."

## Review of the Final Settlement Report of the Bannu District.

THE Bannu District is a level plain,—very similar in natural features to the Peshawar Valley,—almost circular in shape and enclosed on all sides but

Natural features.

the north-east by a rampart of bare sand and limestone hills, the height of which ranges from 2,000 to 5,000 feet above sea level. On the south and east those hills divide Bannu from the Dera Ismail Khan and Mianwali districts; on the north and west from the tribal territory of the Wazirs and Bhattanis. The plain slopes gently from the north-west, where the Kurram and Tochi (or Gambila) rivers force their way into the district through the rocky gorges of the Wazir hills close to Bannu town, to the south-east at Darra Tang (the narrow gorge), where the united streams, after a course of 50 miles through the district pass into the Isa Khel Tahsil of Mianwali to finally lose themselves in the Indus. Within this distance the altitude of the plain falls from about 1,300 to 750 feet.

Bannu is one of the most remote and inaccessible districts in Northern India, the head-quarters being 80 miles distant from the railway at Kohat on the north and 102 miles from Darya Khan on the south. It is, however, connected with both places by an excellent metalled road constructed within the last 20 years. Owing to its isolation prices of agricultural produce generally rule lower than in adjoining districts, and much of the trade is with the adjoining hill tribes and the Afghan province of Khost. The trade is concentrated in the town of Bannu (population 14,291), which lies in the centre of the most populous and productive tract, and after Peshawar is the most flourishing mart in the Province.

### 2. The district is divided geographically and ethnologically into the two

Area, rainfall and cultivation.

tahsils of Bannu (the northern), inhabited by Bannuchis and Wazir immigrants of recent date, and Marwat (the southern), of which the Marwat tribe holds almost exclusive possession. Of the total area—1,677 square miles—48 per cent. is under the plough and nearly one-fourth of this is canal irrigated, the rest being dependent on the scanty local rainfall—averaging 12·2 inches—which is supplemented in the case of lands close to the border by occasional inundations from hill torrents (*rodkohi*); about 20 per cent. is returned as culturable, but most of this is broken stony or sandy wastes or high-lying wolds (*waran*), the drainage from which is conducted on to the more fertile low-lying fields. In the 30 years since last Settlement the cultivated area rose from 358,000 (see paragraph 23 of the Review on the Bannu Report) to 502,000 acres, *i. e.* by 40 per cent., and the irrigated area by 17 per cent., and though those figures falsify the view taken at last Settlement that the limit of cultivation had been then almost attained and illustrate the danger of such forecasts, it may be accepted that the field for further expansion is now very limited.

### 3. Agriculturally the tract also falls into two main sub-divisions according

Irrigated tract.

to the presence or absence of irrigation. Well-irrigation is unknown and canal-irrigation is limited to the Kurram-Gambila Doab—which forms a wedge or triangle running right through the district with its apex a few miles above Darra Tang—and two narrow fringes on the northern bank of the Kurram and the southern bank of the Gambila. This irrigated tract occupies only about one-sixth of the total and about one-fourth of the cultivated area, but it contains about two-thirds of the population and pays over three-fifths of the total assessment.

It includes 6 out of the 11 assessment circles into which the district is sub-divided. Those are:—

- (1) The Bannu, Lohra and Trikha Circles—all long settled and highly developed tracts—of Bannu occupying the upper portion of the Doab with a rich alluvial soil fertilised by the

annual silt deposits of the Kurram; abundant water-supply; a population—chiefly Bannuchi Pathans—dense almost to the point of serious congestion; small holdings; intense if not very scientific agriculture in which the spade plays a prominent part; much double-cropping, and a high proportion of valuable crops, such as sugarcane, rice and turmeric (requiring labour and manure), in addition to the usual staples maize and wheat.

- (2) The Nar-Landidak Circle of Bannu and the Tandoba and Nar Circles of Marwat, which lie further down the Doab, are of more recent growth—being the result mainly of canal extensions carried out since annexation—and, though fully protected by irrigation, have not the advantages of water-supply, fertilising deposits, abundant manure, dense and industrious population to the degree possessed by the older-settled tracts. The population in these circles is comparatively sparse; the water-supply is apt to run short in seasons of drought, especially in the lower end of the Doab, where its value is also lessened by the brine brought down by the Kashu torrent from the Kohat salt hills; double-cropping is consequently very rare; and sugarcane is little grown, maize and wheat being the staples. In both the Nars and in Landidak the owners are small bodies of rent-receiving landlords, descendants of the Pathan notables and Government servants to whom lands—then waste or jungle—were allotted by Majors Nicholson and Taylor soon after annexation; while the Tandoba Circle is held mainly by stalwart bodies of Marwat peasant proprietors, who have progressed immensely in numbers and prosperity since last Settlement, mainly owing to the construction of the two private canals referred to in paragraph 10 of the report.

Sir H. Edwardes' description of the upper portion of the Doab, though characteristically florid, is so appropriate that it deserves to be cited.

"In spring it is a vegetable emerald, and in winter its many coloured harvests look as if Ceres had stumbled against the Salt Range and spilt half her cornucopia in this favoured vale \* \* \*. Altogether nature has so smiled on Bannu that the stranger thinks it a paradise; and when he turns to the people wonders how such spirits of evil ever found admittance."

4. The unirrigated tract is divided in two by the irrigated Doab. It comprises (1) the tract under the western hills to the south of the Kurram held

[ Unirrigated tracts.

by Wazirs, in which about one-seventh of the cultivation is irrigated and the rest is *rodkahi* land of great natural fertility, but dependent on occasional floods from the hill torrents of the Shaktu and Khaisora assisted by the small local rainfall; (2) the Eastern Wazir Circle to the north-east of the Kurram in which only 4 per cent. of the area is irrigated, the remainder being a light but fertile sandy loam similar in quality to the adjoining Marwat plain; (3) the Pakha, Gadwad and Shigga Circles of Marwat, which are absolutely waterless and outside the western portion of the Pakha Circle, receive little benefit from the hill torrents. Those three circles, which contain 280,000 acres of cultivation—or if the similar Eastern Wazir Circle be included 342,000 acres—form the dry and sandy, but fertile, plain of Marwat famous as the granary of the Afghan border land. Its character is vividly described in the following extract from Thorburn's "Bannu or the Afghan Frontier":—

"It is a vast treeless plain of undulating sandy downs, merging to the west into a fringe of soft loamy clay, furrowed as by some giant's plough with numerous deep water courses, which converge almost at the same point in the Gambila, or lose themselves before reaching it in the sand. \* \* \*

"It is a country of wonderful contrasts. Seen in autumn or in a year of drought it appears a bleak howling wilderness, fit home for the whistling heat-laden duststorm that often sweeps across its surface in the hot months; but seen in the late spring, if a few showers of blessed

rain have fallen opportunely, it presents to the eye an interminable waving sea of wheat, the vivid green of which gives place here and there to streaks and patches of darker shaded gram."

Both the gram and the wheat of Marwat are noted for their excellence.

#### 5. The agriculture of the unirrigated tract is of a simple and primitive character. In the light sandy soils of

System of agriculture.

Eastern Wazir, Shigga and Gadwad the

monsoon rainfall is so small and uncertain that autumn crops are almost unknown in ordinary seasons. The summer rains however usually leave some moisture in the subsoil, which the sandy surface safeguards against evaporation. When this moisture is available wheat and gram in rotation are sown in the late autumn or early winter; failing such moisture, if the winter rains fall up to the middle of January, wheat and barley can be sown. Otherwise the land remains fallow for the whole year, but the analysis of the figures for Shigga Circle for the last 18 years (paragraph 33 of the Final Report) shows that even in the driest tract failure to sow is very rare, and that of the sown crop more than three-fourths comes to maturity. Once the crop has germinated, so cool and kind is the soil, that a few well distributed showers between the middle of January and the end of March will secure a good outturn. That outturn, too, is obtained with a minimum of labour and capital. Ploughing and sowing are usually one and the same operation, and a single yoke of inferior bullocks can work an area of 30 to 40 acres.

The stiffer *barani* soils on the west of the district—the Pakha and Western Wazir Circles—are less easy to work. In dry seasons enormous areas lie fallow or wither up; but in good seasons, when the local rainfall is supplemented by torrent irrigation, the outturns are much heavier than on the light sandy soils, and autumn crops are also raised.

#### 6. The variations in economic and agricultural conditions have produced

Leading tribes and their characteristics.

and are reflected in the characteristics of the three leading tribes—Bannuchis,

Marwats and Wazirs—and are briefly, but accurately, described in paragraph 11 of the Report. Those tribes combined make up over one-half of the rural population. Marwats own over four-fifths of the cultivated area in the Marwat Tahsil and pay a corresponding quota of the land revenue; Bannuchis and Wazirs hold respectively about 30 and 50 per cent. of the cultivation in Bannu Tahsil and pay one-half and one-fourth of the assessment—the Bannuchis possessing the richest and most highly assessed lands. Saiyids are scattered over both tahsils and own about 5 per cent. of the area. The settlements of all three tribes represent in the order given successive waves of invasion and conquest by Pathan tribes from the west driven to seek new fields, when increase from within or encroachment from without reduced their pastures below the level of their wants and gradually brought about the transition from a pastoral and nomadic to a settled and agricultural life. The Bannuchis with their spiritual leaders—the Saiyids and Ulumas—were the first to settle, and occupied the best lands, driving out or assimilating the Mangals and Hanis. The Marwats, a branch of the great Lodi tribe from the Kandahar side, came next in Akbar's reign, driving their kinsmen, the Niazi Pathans, eastward into Isa Khel. They appear to have kept their race and their tribal customs untainted by any foreign admixture, and, like the Yusafzais in Peshawar, parcelled out the country by lot among the various sections of the tribe. The system of periodical redistribution (*vesh*) among all the members of each village or sub-section has been maintained with extraordinary tenacity in a country where no permanent improvements were possible; and even at the present Settlement more than one sub-division successfully carried out a complete partition of all their lands on principles of the most naked socialism, each member, from the new-born babe to the Malik or Chief, receiving an equal share. The Wazir immigration began only in the second quarter of the last century. Those greedy and hardy mountaineers being pressed out of the Shawal highlands by their hereditary foes—the Mabsuds—were in their turn rapidly displacing the soft Bannuchis, and even ousting the more manly Marwats and Khattaks, when the occupation of the country by the British Government, as

successors to the Sikh Durbar put a bar to their further progress and stereotyped the conditions then found existing. Here, as elsewhere along the border, annexation at once set up a barrier to the further advance of the hardy hill tribes drawn by tradition and instinct to the conquest of the fertile plains at their feet, and the political difficulties which have been associated with our rule are a natural consequence of our obligation to resist such encroachments and maintain the status we found in existence at annexation.

7. A graphic contemporary picture of the state of affairs in the Bannu Tahsil immediately preceding annexation is given in the following extract from Sir H. Edwardes' work "A year on the Afghan Frontier" written about 1850. He writes:—

"The reader has now been introduced to the four classes which make up the population of Bannu—the mongrel and vicious Bannuchi peasantry ill-ruled by Meliks and ill-righted by factions; the greedy Sayads and other religious mendicants sucking the blood of the superstitious people; the mean Hindu traders enduring a life of degradation that they may cheat their Muhammadan employers; and the Wazir interlopers half pastoral, half agricultural, wholly without law, but neither destitute of honour or virtue."

Major Edwardes was perhaps too hard on the Bannuchis, who, whatever their faults, have by their patient plodding industry worked out and maintained the elaborate irrigation system, which is the chief basis of the prosperity of the district.

To complete the description it is only necessary to add that the Marwats, who own two-thirds of the district, are a simple, frugal and hardy race, but inferior to their Khattak neighbours on the north in enterprise, to the Wazirs in intelligence, and to the Bannuchis in industry.

8. In marked contrast to other frontier districts, the tribes in Bannu have few sources of income outside their lands, and in the case of the Wazirs their flocks as well. Comparatively few are employed in Government service; but a beginning has been made in recent years, and the Marwats now enlist freely in the Border Police and Waziristan Militias, and are finding an opening in the Regular Army. The Wazirs are still semi-pastoral in their habits; most of their sections migrate in the summer to their hill settlements beyond the border; they receive considerable allowances for their past responsibilities, and many of them are also employed in the Militia. Within the last generation they have steadily improved as agriculturists and have extended their cultivation by over 20,000 acres. The home-loving Bannuchis prefer to stagnate on their petty but productive holdings—averaging only some two acres—rather than take up land further down the Doab, or seek a career outside.

9. The incidence of population is only 290 per square mile of cultivation, and while the area under cultivation has risen by 40 per cent. since last Settlement population has increased by only 24 per cent. since 1881. The district as a whole is rather sparsely populated, and in the *barani* tracts occupied by the Wazirs and Marwats the incidence is as low as 180 per square mile of cultivation; but the congestion in the Bannuchi Circles of Bannu and Trikha, where the incidence of population is 1,069 and 720 per square mile of cultivation, is serious, and considerable weight must be given to it in assessing. Muhammadans form 90 per cent. of the total, and practically the entire agricultural population, and the great majority are of Pathan origin. The district produces a large surplus of food-grains and of *gur*, the average exports (after the wants of the agricultural and urban population have been supplied) of the former in the last three years exceeding 6 lakhs of rupees per annum and of the latter 2½ lakhs. It is computed that the city and cantonments absorb 85,000 maunds of grain, value 1½ lakhs, and *gur* to the value of half a lakh. Thus the total surplus produce disposed of at the commutation prices assumed is about 10½ lakhs of rupees, and it is mainly from this income that the agriculturists have to supply all their wants—other than food-grains—and meet the Government demand.

# 10. The Durani and Sikh rulers had no organized revenue system in

Previous assessments.

this remote and backward tract, but took what they could exact from the local Chiefs by mutual agreement, or, failing that, at the point of the sword. On annexation the State share was fixed at one-fourth of the produce from all but the priestly classes, who were allowed to pay at the privileged rate of one-sixth. The two Summary Settlements of 1852-53 and 1857-58 were made on that basis, while Mr. Thorburn's Regular Settlement, which came into force for a period of 30 years from the kharif of 1877, was calculated as now on half of the net assets. Meantime under a settled Government the district was steadily increasing in prosperity, while the incidence of the State demand was being steadily lowered as the following table shows:—

		SUMMARY SETTLEMENT.				REGULAR SETTLEMENT.			1904.
		1st.		2nd.					
		Revenue.	Incidence.	Revenue.	Incidence.	Revenue.	Incidence.	Incidence.	
		Rs.	Rs. A. P.	Rs.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	
Bannu	...	1,11,229	1 10 6	1,19,925	1 8 8	1,47,977	1 0 9	0 14 4	
Marwat	...	1,13,840	1 4 7	1,23,417	0 12 0	1,13,513	0 7 10	0 5 6	
Total		2,25,069	1 6 11	2,43,342	1 2 3	2,61,490	0 11 3	0 8 4	

The Summary Settlements were undoubtedly severe in Marwat, and even after the liberal relief given to that tahsil by Mr. Thorburn's Settlement the demand in certain tracts—notably the Pakha Circle—pressed heavily on the people in dry seasons, necessitating considerable suspensions and some remissions in the earlier years. The great rise in prices owing to improved communications and wider markets and the extension of cultivation within the last 30 years have considerably lowered the incidence of the revenue, which prior to the re-assessment now completed represented only 7 per cent. of the gross produce (paragraph 36 of the Report) and Re. 0-8-4 per acre cultivated against Re. 1-7-9 at the first Summary Settlement.

# 11. The district, like all Pathan tracts, is essentially one of small

Owners, tenants and rents.

peasant proprietors cultivating their own holdings. The number of proprietary holdings is over 65,000; there are few large landlords outside the two Nars and the Landidak Circle which were colonised by Government grantees soon after annexation, and the peasant owners as such hold no less than 54 per cent. of the cultivation in their own hands. Occupancy tenants hold only 2 per cent., while tenants-at-will, most of whom are peasant owners cultivating their own lands under mortgagees or the surplus lands of their neighbours, hold about 44 per cent. and pay almost invariably a share of the grain and straw to the landlord. The rent rates are very high, representing 48 per cent. of the gross produce in Bannu—against 36 per cent. at last Settlement—and 37 per cent. in Marwat. Except on very inferior or badly situated lands, the usual rate for irrigated and unirrigated lands is half of the produce after deduction of menials' and canal dues. Mr. Glancy in paragraph 24 of his Report regards this rate for the dry sandy lands of Marwat as approximating to rack-renting, and consequently as a dangerous guide to assessment; but it might be held with equal force that the high rent rate on unirrigated lands is due to the small expenditure of capital and labour required for cultivation in this tract.

# 12. The Pathan system of individual ownership carrying unlimited

Sales, mortgages and value of land.

freedom of transfer; the peculiar system of tenures under which the lands of a single owner may be scattered over several estates or over the various blocks (wands) into which each estate is usually sub-divided; the fewness of hereditary money-lenders who in more developed districts finance a family from generation

to generation ; the absence of any form of credit other than the land ; and the ease and cheapness with which that credit can be pledged by a verbal transaction followed by a mutation order—all those circumstances account for the extraordinary prevalence of alienations noticed in paragraph 25 of the Report.

At the 1877 Settlement 28 per cent. of the cultivated area was under mortgage ; the proportion is now 32 per cent. (Bannu 21, Marwat 38), or 163,000 acres of cultivation, and the mortgage debt is 66 lakhs of rupees, or fifteen times the new assessment. Three-fourths of the mortgaged area and two-thirds of the mortgaged debt are, however, held by members of agricultural tribes. Turning to sales, it appears that since last Settlement 13 per cent. of the cultivated area (or allowing for area transferred more than once about 10 per cent.) has changed hands for over 68 lakhs of rupees, of which about six-sevenths have gone to agriculturists and only one-seventh to non-agriculturists. The statistics have been analysed and commented on in the Assessment Reports and reviews, and it has been shown that according to the figures of recent years (1897—1905) the average price of land in the Bannu Tahsil has been Rs. 185, representing 134 years' purchase of the land revenue on the area transferred, while in Marwat the average price was Rs. 59 per acre, and represented 112 years' purchase of the land revenue in the Shigga Circle, 178 years in Gadwad, 287 years in Nar, and no less than 363 years' purchase in Tandoba. All through the district the price had more than doubled during the currency of Mr. Thorburn's Settlement, and the number of years' purchase of the land revenue which the price represents is a striking indication of the leniency of the assessment, especially in the irrigated circles. The most satisfactory feature in connection with the alienations is the small proportion of the land which has passed into the hands of capitalists and money-lenders. Those classes had in recent years been strengthening their position, but the tendency received a decided check by the introduction in 1904 of the Land Alienation Act—a measure which, though viewed like all reforms with some suspicion at first, is now admitted by the land-owning classes to be one of the main bulwarks against external encroachment.

One curious instance of the development of popular views on the subject may be quoted. All the agricultural tribes of the district have been notified as a single group to allow free transfer between one tribe and another. The Bannuchis—whom the advent of our rule protected against violent dispossession by their Wazir neighbours—finding that they are now being slowly, but surely, expropriated by the more frugal and thrifty Wazirs, are beginning to clamour that the latter should be notified as a separate tribe, so that they might eat up one another, and leave the Bannuchis to sell and mortgage among themselves.

13. Some reference has already been made to the agriculture. In an average year the cropping for the district as a whole is as follows :—

Crop statistics.

Kharif	Rice	...	5 per cent.	} 17 per cent.
	Jowar	...	1 "	
	Bajra	...	4 "	
	Maize	...	9 "	
	Cane	...	1 "	
	Cotton	...	1 "	
	Other food crops	...	5 "	
Rabi	Wheat	...	50 per cent.	} 83 per cent.
	Barley	...	5 "	
	Gram	...	24 "	
	Fodder	...	3 "	
	Miscellaneous	...	1 "	

Over 90 per cent. of the area is under food-grains. The area under rabi crops is steadily increasing at the expense of the kharif, bajra and jowar being replaced by gram and wheat, which under the prevalent rainfall conditions are less liable to failure. A reference to the figures in paragraph 18 shows that—excluding cotton—the area and percentage of the more valuable crops, sugarcane and maize, have considerably improved. Mr. Glancy has as the basis

of his estimates the crop returns of the six years 1899-1900—1904-05. The period includes two extremely bad years—1899-1900 and 1901-02—when the matured areas were only 266,000 and 258,000 acres; two average years, and two good years—1903-04 and 1904-05—with matured areas of 439,000 and 406,000 acres.

For the whole cycle the average sown area was 437,000 acres and the matured area 355,000 or 82 per cent. The allowance for failed crops appears reasonable. It works out lower than in the adjoining districts of Kohat and Dera Ismail Khan, but in Bannu irrigation plays a much greater part, and the unirrigated lands are better able to withstand a drought. That Mr. Glancy's figures are not unduly favourable to Government appears from a comparison with the figures of the last two years 1905-06 and 1906-07, viz. :—

			Sown.	Matured.
1905-06	...	...	463,965	418,971
1906-07	...	...	495,448	417,994
Average	...	...	480,000	418,500

14. Mr. Glancy's remarks on the outturns assessed in paragraphs 19 and 35 of the report need no comment, as the subject was discussed in some detail in the review of the Assessment Reports. His estimates, though cautious, are on the whole higher than those assumed by Mr. Thorburn at last Settlement, but that officer admitted at the time that his estimates were designedly pitched low so as not to bring out too marked a difference between the half-assets estimate and the assessment actually imposed.

Taking the three principal crops, Mr. Glancy's rates for irrigated wheat per matured acre range from 6 to 9 maunds, for irrigated maize from 6 to 14 maunds, for unirrigated wheat from 4 to 8 maunds, for unirrigated gram from 4 to 8 maunds—the average yield for unirrigated gram and wheat not exceeding 5 maunds. For *gur*, which is the revenue-paying crop of the Bannu Circle, and on which the Bannuchis concentrate most of their labour and nearly all the manure, the yield assumed is 22 maunds per acre.

15. The commutation prices for calculating the value of the produce according to the assumed outturns are discussed in paragraph 27 of the Report. Price of produce. They are appreciably lower than the rates assumed in the recent Settlements of the adjoining districts of Kohat and Dera Ismail Khan, which are in close touch with the railway, and in the case of barley and gram the rates assumed for Marwat are lower than those for Bannu.

The necessity for cautious estimates will appear from the fact that in 1894 wheat was selling at Re. 1-2-0 and gram at Re. 0-12-0 per maund, and in 1905 the price of wheat for a few months sank to Re. 1-4-0 and of gram to Re. 1 per maund. In good years the surplus stocks are very large, and as the distance from the railway hampers export, prices often rule much lower than in the adjoining districts. The rates now adopted bring out as compared with those of last Settlement, according to the method of calculation adopted, a rise of 41 to 44 per cent. in Bannu and of 59 to 64 per cent. in Marwat, but it has to be borne in mind in dealing with the Bannuchi circles which are mainly dependent on their sugarcane that the price of Bannu *gur* has risen by only 22 per cent. All other circles produce ordinarily a large surplus, and the revenue-payers are therefore in a position to get the full benefit of the great rise in prices of food-grains.

16. The following table shows for each tahsil and the district as a whole—

Calculation, amount and pitch of the new assessment.

- (1) the demand of last Settlement as it stood in 1906-07;
- (2) the total value of the agricultural produce as now calculated;

- (3) the value of the landlord's net share;
- (4) the half-assets or limit of the Government demand;
- (5) the *final* demand as now sanctioned;
- (6) the final demand as actually announced;
- (7) & (8) the proportion of the total produce and half net assets represented by the new demand;
- (9) the percentage of enhancement.

Table.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. 0	Rs.	Rs.
Bannu ...	1,47,601	20,19,000	8,24,000	4,12,000	2,31,300	2,30,480	11-5	56	56
Marwat ...	1,13,765	17,31,000	6,48,000	3,24,000	2,63,000	2,00,778	11-6	62	77
Total ...	2,61,366	37,50,000	14,72,000	7,36,000	4,94,300	4,31,258	11-5	59	65

The considerations to be kept in view in arriving at the assessment finally imposed are lucidly summarised in paragraph 29 of the Report. Even assuming that Mr. Thorburn's assessment was not a lenient one in 1877, the two all-important facts that the cultivated area had since risen by 40 per cent. and prices by from 40 to 60 per cent. would have *prima facie* justified the doubling of the old revenue; the application of the half-assets standard would have almost trebled it. But from a general review of the circumstances of the tract and of the people it was considered advisable to limit the new demand to 59 per cent. of the half net assets. This represents a final enhancement of 65 per cent. on the old revenue, one-ninth of the value of the agricultural produce, and gives an incidence of about Re. 0-14-0 per cultivated acre, Re. 1-3-6 per acre of matured crops, and Rs. 2 per head of the rural population. In the adjoining district of Kohat the incidence of the new demand works out to Re. 0-15-0 per cultivated and Re. 1-4-6 per matured acre and Re. 1-7-6 per head of the rural population. From whatever standpoint it may be regarded the new assessment is a decidedly lenient one, and Mr. Glancy's conclusion may safely be accepted that Bannu is even now more lightly assessed than any settled district in the Province, except perhaps Hazara. Including the revenue now separately assessed on date palms (Rs. 1,113) and on water-mills, which has risen from Rs. 873 to Rs. 1,753 (paragraph 39 of the Report), the total final assessment comes to Rs. 4,34,124, of which Rs. 50,216 are assigned, against Rs. 34,537 under the expired Settlement, and Rs. 3,83,908 are payable to Government, while the initial demand is Rs. 3,65,737 gross and Rs. 3,17,338 net against Rs. 2,62,239 and Rs. 2,26,347, the corresponding figures of the old Settlement. The net final increase is Rs. 1,39,390, excluding the Rs. 6,400 assessed on canal-owners as "water dues," and the forecast that the re-assessment would result in an enhancement of Rs. 1,10,000 in the Khalsa demand has been more than realised for the reasons given in paragraph 40 of the Report.

## 17. The great fluctuations in the results of agriculture in a district

Reasons for maintaining a fixed assessment.

where 76 per cent. of the cultivation and 63 per cent. of the crops raised are dependent on a small and often ill-distributed rainfall, and in which several circles are without any irrigation whatsoever, not only pointed to great moderation in assessment, but forced the question forward whether any fixed system of assessment would work in the unirrigated tracts. The arguments for and against a fluctuating assessment—on lines similar to that adopted in Dera Ismail Khan—were considered by the Chief Commissioner in passing orders on the Assessment Reports, and have been correctly summed up by Mr. Glancy in paragraph 41 of the present report. It was finally decided—mainly with reference to the determined opposition of the people to any system of fluctuation—that a moderate fixed assessment, combined with an elastic system of suspensions and remissions in bad years such as is now accepted as an axiom of our revenue policy, would meet the case. At the same time for the precarious Pakha Circle fluctuating rates were worked out and the people were given the option of accepting them, but in every case they refused to do so.

Fluctuating rates as shown in Appendix C have however been very carefully worked out for all the *barani* circles, and those rates can be applied with the sanction of the Chief Commissioner at any time during the currency of Settlement should the fixed assessment break down. At the same time a sliding scale for the guidance of revenue officers in proposing suspensions of the demand has been proposed (Appendix F), and if the district authorities, with the assistance of the subordinate revenue establishment, which has now been reorganized and strengthened as shown in paragraph 57, work the fixed assessment with reasonable elasticity, the necessity for falling back on the fluctuating system will probably not arise.

18. The table given in paragraph 42 shows that on *barani* soils the new rates (averaging  $7\frac{1}{2}$  annas per acre) are practically the same as those applied by Mr. Thorburn 30 years ago, the average of which was  $6\frac{1}{2}$  annas; in Marwat there has even been a slight decrease, while the increase in Bannu is due to the fact that Mr. Thorburn's assessment on Wazir lands was merely nominal.

Mr. Thorburn's rates on irrigated land were extraordinarily low, especially in the Nar, Landidak and Tandoba circles—which had at the time been recently colonised. The new rates show a substantial enhancement, but a fixed wet assessment which works out at Rs. 2-2-0 per cultivated acre and less than Rs. 2 per acre of crops on land under perennial canals must be considered extremely light. But in this case too the leniency is justified by the facts stated by Mr. Glancy, *viz.* that the canals have been dug by the people, that the State has spent nothing on their construction or upkeep, and that Government has therefore no claim to water-rates or to any charges which represent interest on capital; in fact the capital outlay has been the people's, and the limit of the Government demand is the half net assets standard.

19. For those reasons it was decided that the system of fixed wet assessments on irrigated lands should be retained. Any difficulties which may arise in the working of the irrigation—especially on the two private canals whose owners take water-rates (paragraph 49 of the Report) from the irrigators and have been separately assessed to Rs. 6,400 as water dues—can be adjusted by the Deputy Commissioner under the Minor Canals Act as explained in paragraph 41 of the Report.

20. To complete this branch of the case it may be mentioned that Government has now sanctioned the proposals summarised in paragraph 59 of the Report to meet the cost (hitherto paid from the Canal Clearance Fund) of the revenue and engineering establishments required for the proper management of the irrigation system, and has further agreed to contribute  $2\frac{1}{2}$  per cent. of the revenue on irrigated lands towards the Canal Clearance Fund to be utilised for improvements. The deputation of a qualified Engineer from the Irrigation Department with an ample expert and revenue establishment working as the adviser and assistant of the Deputy Commissioner will, it is hoped, lead to greater economy and efficiency in the distribution of the water, reduce water-logging and saline deterioration, and while providing for the maintenance of the present area of irrigation and standard of cropping will enable Government to utilise the surplus for restoring irrigation to that portion of the Loira Circle which has lost its supply from the Tochi, and ultimately for further extensions in tracts now unirrigated. The matter has recently been discussed with the Chief Engineer, who agrees that the lines above indicated afford the surest basis for a sound working system.

21. To return to the question of assessments. Light as the new revenue may be with reference to the common standards of assessment, an enhancement of 65 per cent. for the district as a whole is a heavy additional burden; and as the new demand is double or even treble and quadruple the old in certain

circles, *viz.* Nar-Landidak, Eastern Waziri, Tandoba and Nar, it was necessary to ease it off at the start and afford the revenue-payers time to adjust their expenditure to the altered conditions. In the unirrigated circles-where the new demand exceeds the old by more than 66 per cent., the Settlement Officer was authorized to defer one-third of the excess for five years, and where the excess is more than 100 per cent. to defer half of the enhancement for that period.

In the irrigated Bannuchi Circles,—Bannu, Lohra and Trikha,—where the enhancement in individual estates exceeded 50 per cent., the Settlement Officer was given discretion to defer Rs. 20,000 (out of a total enhancement of Rs. 44,000) for three years.

In the other irrigated circles owned largely by well-to-do rent-receiving landlords who had hitherto paid only a nominal revenue less liberality was necessary. The directions given to the Settlement Officer were :—

- (1) Where the realizable revenue had not been doubled, no initial remission to be given.
- (2) Where the increase was from 100 to 200 per cent., one-third of the total assessment to be deferred for three years.
- (3) Where it exceeded 200 per cent., one-half to be deferred for the first four years and one-third for the next three.

The result of these orders is that the initial remission of Rs. 68,387 has been given—equal to 16 per cent. of the total assessment—which is reduced in the fourth year to Rs. 40,862, in the fifth to Rs. 36,100, in the sixth to Rs. 25,700, and disappears at the close of the seventh year. The total amount surrendered by Government is Rs. 3,33,523, equal to Rs. 16,660 per annum for the 20 years' term of the new Settlement.

22. The pitch of the new assessment has been further lowered by the grant of (1) liberal remissions to

Remissions for frontier service and to priestly classes.

frontier villages for border service and (2) the continuance of the privileged rate of assessment on lands held by Saiyids and Ulumas :—

(1) The origin and past history of those remissions have not been referred to in the report, but they are on the same footing as the similar grants in Kohat, which have been explained in the Kohat Final Report and the review thereof. The value of those remissions at last Settlement was Rs. 2,645 in Marwat and Rs. 8,970 in Bannu—total Rs. 11,615. In the new Settlement they amount to Rs. 15,737—Rs. 3,587 in Marwat and Rs. 11,150 in Bannu—or nearly 4 per cent. of the new revenue. They have now been strictly confined to border villages, which in Bannu include nearly all the Wazir estates. The remission is usually a certain proportion of the land revenue, and in the case of the Utmanzai Wazirs of Jani Khel and Bakha Khel sections, who stand sentry over the mouths of the important Shaktu and Khaisora Passes, and are much harassed by Mahsud raids, amounts to one-half of the total assessment ; for the Ahmadzai branch, whose pass responsibilities have now been considerably lessened, the remission has been reduced from one-fourth to one-half. The Chief Commissioner in sanctioning the remissions has directed the special attention of the district officers to the conditions attaching to them, *viz.* good behaviour, ready service, and the prompt and willing discharge of pass responsibilities in repelling raids, pursuing raiders, capturing dacoits or outlaws, and recovering stolen property.

(2) The nature of *Shashom khori* grants to the priestly classes in Bannu has been explained in paragraph 61. The value of this concession at last Settlement was Rs. 2,142, and has now been fixed at Rs. 2,161.

23. The re-assessment of the district which had been looked forward to

Acceptance of the new assessments by the people.

with some apprehension as likely to arouse open hostility from the semi-independent Wazirs and secret opposition or passive resistance from the Bannuchis has been carried through promptly and smoothly without agitation or excitement. The Bannuchis were re-assured at finding that no serious

interference with their water rights was contemplated, and that full allowance was being made for the congestion of a tract in which almost every rood of land maintained its man; the Wazirs and Marwats—with a few exceptions—were agreeably surprised to find the enhancements fall far below their anticipations; and the adherence to the system of fixed assessments gave general satisfaction. The promptness with which the operations were carried through, the new policy of relieving the land-owners of the cost of chainmen, the abolition of the Famine and Patwar cesses, the judicious liberality shown in the matter of revenue-free grants, and, above all, the consideration shown to depressed tracts—the Pakha and Lohra circles—in which the assessment as a whole was not raised, while in many individual estates it was lowered—all of those circumstances helped to mitigate the unpopularity which must attach to all Settlements, and especially to those resulting in a substantial increase of fiscal burdens. The Financial Commissioner in reviewing the report on the Regular Settlement commented on the tendency—which the Settlement Officer himself admitted—to assess the poorer estates relatively more heavily than the richer. There is good reason to believe that this mistake, which had unfortunate results in the Lohra and Pakha circles, has been avoided in the present Settlement. The data at Mr. Glancy's disposal were more ample and reliable than those available to his predecessor, and the crop-rate estimate provided a very useful check on the soil rates. Though the people are notoriously litigious, out of 388 estates only 30 applied to the Settlement Officer for a reconsideration of the assessment. There were 18 appeals to the Revenue Commissioner, of which 2 were partly successful, small reductions of Rs. 220 being given. Fortunately there is every prospect of an excellent spring harvest, so that the new Settlement will have a favourable start.

#### 24. The distribution of the demand over holdings was simple enough

Distribution of the revenue over holdings.

in the unirrigated circles where the classification of soils took account of the main natural differences, but was attended with special difficulties in the highly developed canal tract round Bannu. The Settlement classification into *dofastli* and *ekfastli* was found by the people too broad to cover the nice distinctions of relative value or fertility which depend on abundance of water-supply, proximity to the village site or hamlet, facilities for obtaining manure, and various other local considerations, the value of which could only be estimated by the people themselves. In such estates the internal distribution was wisely left to the people themselves; who in case of dispute referred the matter to local arbitrators who were aided by the Settlement officials. The result so far as it can be tested at this stage has been satisfactory. Objections have been very rare, and in the few cases which came before the Revenue Commissioner on appeal the work was found to be sound and thorough. A more practical test will be applied when the new assessments are collected for the first time.

#### 25. Mr. Glancy in Chapter VI of the Report has furnished a clear and

Revision of the maps and records.

interesting account of the operations for the revision of the records. Those which had been prepared at the Regular Settlement were excellent at the time in accuracy and finish; but in the 30 years' interval, owing to subdivision, partition, sales and mortgages, changes in canal irrigation, extension of cultivation, the maps had become hopelessly antiquated, while an insufficient and inefficient revenue establishment had not kept pace with the alterations in rights. The whole district had therefore to be re-surveyed, and at the same time a new record-of-rights had to be prepared. The Settlement Officer has not dwelt on a fact which he might well have put prominently forward, that owing to the great demand for Settlement officials in the Punjab he was seriously handicapped in his task by the want of trained subordinates. His two Settlement Tahsildars had never previously held charge of a tahsil, but both fortunately proved to be competent men; his Naib Tahsildars included only a few men from the Settlement Department, the remainder being men deputed from the ordinary line; and the great majority of the Kanungos and Patwaris (Settlement and District) were men with little or no

previous Settlement training. In fact the whole establishment had to be trained as the work proceeded, and for its prompt and satisfactory completion under such difficult conditions the greatest credit is due to Mr. Glancy and his experienced and indefatigable Assistant, Bhai Hotu Singh.

The actual survey presented no great difficulties, as the level nature of most of the district facilitated square-laying and field-mapping; but the classification of soils and the verification and recording of rights called for minute and careful work and very thorough supervision. The mutations necessary to connect the new records with the old were no less than 184,000—an enormous number for a small district. A very large proportion consisted of sales, mortgages and exchanges effected by oral agreement confirmed in the mutation proceedings before the attesting officer, and it is worthy of note that, in a district so notorious for the jealous, partisan, and litigious character of the people only 200 orders out of 184,000 were appealed against. The same remarkable result has been noticed in reviewing the Final Settlement Reports of Kohat and Hazara, and the explanation in all three districts is the same, *viz.* that the Pathan peasant, when dealt with in his village in the presence of his elders and his tribesmen by officers who understand him and his ways, is readily accessible to reason and even to compromise, and that the passion for litigation and the unscrupulous methods by which it is indulged are in great measure a result of our Courts and of the unwholesome atmosphere that surrounds them.

26. In Bannu one of the most important and by far the most intricate record is that of rights in irrigation. As already remarked, the canals have been constructed and the system of management evolved by the people themselves—a fact which shows the capacity of a rude and quarrelsome people divided by factions to elaborate and work a method of distribution involving a considerable amount of self-restraint and mutual co-operation. In practice the Deputy Commissioner has managed all but the two privately owned canals on behalf of the right-holders; but his intervention was confined to the settlement of disputes and the enforcement of the customs as regards supply of labour or payment of fines in default. His authority has now been set on a regular and legal basis by the extension to the district of the Punjab Minor Canals Act; the complete code of irrigation rights and customs now prepared has legal validity and furnishes a reliable basis for the decision of disputes that may arise; while the special Revenue and Engineering establishment now sanctioned provide him with the machinery necessary to work the existing system and carry out improvements and extensions.

27. A matter of considerable importance was the partition of the large areas of tribal lands—nearly 300,000 acres—held jointly by whole sections or sub-sections. This has been carried out without friction, and will give a great stimulus to agricultural improvement. A subsidiary measure was the breaking up of unwieldy estates into units of reasonable size in the Marwat and Wazir tracts. This has led to the formation of 16 new estates, raising the total number for the district to 388. The partition of some estates and the great increase in cultivation and revenue in others rendered it necessary to revise the *lambaradari* arrangements in several instances. Fortunately the change as a rule was in the direction of increasing rather than reducing the number of existing incumbents, and it was effected after the new assessments had been announced with tact and judgment.

28. It can be said with confidence that Mr. Glancy has left a register of rights in land and water which can be safely relied upon as an accurate record of existing facts at the time of its preparation; and no efforts should be spared by the Deputy Commissioner and his establishment to keep it up to date.

General remarks on the records and statistical forms.

Particular attention should be devoted to the mutation and partition work and the harvest inspections, which are the basis of all statistical information, and are specially important in a district where precarious agriculture may often render it necessary to suspend the land revenue. The starting point in any such proposals should be the Abstract Village Note-Books, which as now prepared contain a summary of statistics since the Regular Settlement of 1877, a comparison of the past and present assessments and soil rates, the Settlement Officer's assessment notes and order with a summary of the statistics on which the latter is based, and blank forms for the statistics of the next 20 years and the remarks of inspecting officers. The Chief Commissioner trusts that all officers who have to deal with revenue matters will freely consult these note-books, and that the Deputy Commissioner will keep the statistics and remarks up to date so as to form a continuous revenue history of each estate.

The special rules regarding construction and assessment of water-mills, di-alluvion levy of grazing tax (*tirni*) from Powindah immigrants, and suspension and remission of revenue will be a useful guide in the revenue administration, and should be brought prominently to the notice of all revenue officers. The Chief Commissioner has more than once observed that ignorance or disregard of the rules and instructions framed after much labour and careful enquiry at Settlement is responsible for many of the mistakes in revenue working, and he looks to the Deputy Commissioner to see that his subordinates make themselves thoroughly acquainted with those rules and principles.

29. The investigation into jagirs and other revenue-free grants was very promptly carried out. All cases in which orders were required have been disposed of in separate correspondence, and the final results are given in paragraph 61 of the Report and in the Appendices to it.

The following table compares the total value of the assignments under the old and new Settlements :—

	Former.	Present.
	Rs.	Rs.
(1) Jagirs ... ..	5,930	9,987
(2) <i>Barats</i> to Marwat notables ... ..	5,200	7,900
(3) Special <i>inam</i> grants of 5 per cent. to lam- bardars in the Nar and Landidak Circles	798	2,074
(4) 5 per cent. allowance to <i>tappa</i> Maliks in Bannuchi Circles ... ..	5,933	8,275
(5) Lungi <i>inams</i> to Wazir Maliks ... ..	735	1,200
(6) Zamindari <i>inams</i> in Bannu and Marwat ...	1,701	2,650
(7) <i>Shasham khori</i> grants to priestly classes in Bannu ... ..	2,094	2,161
(8) Frontier remissions to border villages ...	11,615	15,737
(9) Petty <i>mafis</i> to shrines and religious families	531	1,132
Total ... ..	34,537	50,216

The policy pursued has been broad and generous ; and it may be safely asserted that there is not a single deserving man of mark or influence who is not in receipt of an assignment in one form or another. The jagirs with one exception are held in perpetuity ; the *Shasham khori* privilege is enjoyed as long as the land remains in the family of the original grantee ; while all the other grants are for the term of Settlement and subject to revision at the next Settlement. All alike are conditional on loyalty and good service, while the *barats*, *inams* and grants to *tappa* Maliks (corresponding roughly to Zaildars in Punjab districts) are held subject to the general *inam* rules published in the Chief Commissioner's Notification No. 5920, dated 3rd December 1907.

30. The operations began in October 1903 and were practically

Duration and cost of Settlement.

complete by October 1907, when the special establishment was dispensed with, Mr. Glancy remaining on till January 1908 to supervise the collections of the first instalment of the new revenue. With the weak and inexperienced staff he started with, the rapid progress made was most creditable, and one most satisfactory feature of the Settlement is that all connected subjects, assignments, irrigation policy, partition of estates, &c., were taken up and reported on at an early stage, so that not a single question of any importance was left pending when the operations were formally closed. This concentration is as rare as it is admirable.

The total cost of the Settlement to 1st February 1908 works out to Rs. 3,20,681—against the estimate of Rs. 2,62,000—which includes some considerable items; e. g. cost of chainmen, allowances to Patwaris for preparing *parcha bahis*, which had previously fallen on the people. The enhanced revenue of the first four years will more than meet the cost.

31. The Chief Commissioner, with the previous approval of the Government of India, is now pleased to confirm the new assessment for a term of

Term of Settlement.

20 years from the kharif of 1907. The term of the expired Settlement was in Bannu—as in Hazara—fixed for 30 years for the reasons given in paragraph 231 of Mr. Thorburn's Final Report, and a 30 years' term would doubtless be appreciated by the people. But as a 20 years' term is being proposed for Hazara, Kohat and Dera Ismail Khan, there seems no reason for placing Bannu on a different footing. Considerable changes in communications and irrigation may take place within the next 20 years, and in any case it will be advisable to examine the conditions towards the close of the term, and if a re-assessment does not appear necessary, the term can be extended.

32. In his final paragraph Mr. Glancy has recorded his appreciation

Notice of Officers.

of several of the officers who served under him, and especially of his Assistant, Bhai Hotu Singh. It has given the Chief Commissioner great pleasure that Hotu Singh's long services on the frontier, and especially in this Settlement, have received recognition by the grant to him of the title of Rai Sahib.

The Chief Commissioner's high opinion of the ability, industry and promptness with which Mr. Glancy has conducted the Settlement operations has been put on record in passing orders on his Assessment Reports and also in the course of this review. His success in completing a difficult Settlement smoothly and speedily speaks for itself, and is largely due to his faculty for getting the best work out of his subordinates and for gaining the confidence of the people by his knowledge of their circumstances and sympathy with their wants. He has done much to promote the welfare of these backward tribes—notably the Marwats—and to find for them new spheres of employment, and there has been a marked improvement in the tone and demeanour of the people since the Settlement began. His work has throughout been clear, businesslike and thorough, and has been admirably summed up in the present Report and its Appendices.

M. F. O'DWYER,

The 13th January 1908.

Rev. & Finl. Secy. to the Hon'ble the Chief Commr.

and Agent to the Govr.-Genl., N.-W. F. Province.

# CORRECTION SLIP.

<i>Page.</i>	<i>Para.</i>	<i>Line.</i>	<i>Correction.</i>
1.	3.	1.	<i>Read</i> "miles" for "mile."
12.	26.	6.	" "Rs. 59" for "Rs. 45."
12.	26.	7.	" "118" for 90."
13.	27.	12 from end of para.	" "period of the expiring settlement" for "period of expiring settlement."
17.	33.	27.	" "commencement" for "commencements."
23.	41.	15.	" "the" for "the the."
25.	42.	14.	<i>Omit</i> "to" between holding and Rs. 4-10-0,
26.	46.	2 from end of para.	<i>Read</i> "fines" for "fine".
28.	50.	22 from bottom of page.	" "48" for "12" inches.
30.	52.	15.	" "that the final result" for "that final result."

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# SETTLEMENT REPORT

## OF THE

### BANNU DISTRICT.

#### CHAPTER I.—THE DISTRICT.

1. The Bannu district is situated between north latitude 32° and 33° east longitude 70°-24' and 71°-8' and comprises an area of 1,677 square miles. It is bounded on the

Boundries and area.

north by the hills of Waziristan, on the east by the Kohat district of the North-West Frontier Province and the Mianwali district of the Punjab, on the west by the Wazir and Bhitanni hills on the south and south-west by the Dera Ismail Khan district. The extreme length from north to south is 52 miles and the extreme breadth from east to west 34 miles.

2. On the north and north-west of Bannu are the Wazir hills, on the south-west the Bhitanni hills, on the south the Sheikh Budin range, on the east the Maidani range. The

Physical features—Mountains.

Paliana and Pezu estates lie beyond the Sheikh Budin range, and a wedge of the Kohat district interposes between the Bannu boundary and the Maidani range. With these exceptions the Bannu district is surrounded on all sides by hills and comprises the basin drained by the Kurram river between its exit from the Wazir range and its passage through the Darra Tang Gorge.

3. The Kurram and Tochi rivers enter the district a few mile north of Bannu city, unite below Lakki and eventually find their way to the Indus through the Isa Khel

Rivers.

tahsil of the Mianwali district. Though subject to frequent changes in volume the supply of water in the Kurram is always considerable and upon this river the irrigated lands of the district mainly depend. Thirty years ago the Tochi was a river of some importance but owing to the recent extension of irrigation in the Daur valleys above Bannu and possibly also to the denudation of the forests in the hills the volume of water brought down by this river has been growing steadily less and less. The meagre stream which emerges from the pass is at once diverted on to the neighbouring fields. Down to the village of Hawed the bed of the river is dry, except during or immediately after rain. At Hawed springs occur and a short distance below this village the Tochi is joined by the Baran or Lohra torrent which carries the water of the Akra springs. In Marwat the Tochi is known as the Gambila and it is upon this river that the Marwats mainly depend for their drinking water.

The drainage of the district and of the surrounding hills is carried down

Hill-torrents.

to the two rivers by ravines whose beds are often from 40 to 150 feet below the level of the surrounding country. The principal hill-torrents running into the Kurram are the Barganathu or Adhami, the Kashu, the Gangu Nariwah, the Shinawah and into the Gambila the Baran or Lohra, the Khaisora, the Shaktu, the Sawan, the Varmola, the Nugram, the Kharoba, the Lohra, the Chunai. From all these torrents spread fissures caused by the inrush of the drainage from the surrounding country and every year more land is eroded and brought into the network of ravines which in places covers the ground for miles.

4. The district is divided into two tahsils, Bannu the northern occupied by Bannuchis and Wazirs, and Marwat the southern, the home of the Marwat tribe. The Bannu valley is

Main divisions.

an open plain sloping sharply from north-west to south-east and falls into four natural divisions, central Bannu, the Thal, southern Marwat, and the western plain.

5. Central Bannu lies mainly in the Kurram Gambila *Doab*. The

Central Bannu.

northern half of this tract has for centuries been irrigated from the Kurram. The country is well wooded; the villages are close together; valuable crops are grown; double cropping is general and the pressure of population on the soil is probably the heaviest in the Province. Further south the land has only come under irrigation since annexation: trees are more scanty than in the upper half of the *Doab*; cultivation is confined to the staple grains; large areas are left fallow every harvest, and the density of the population is, if anything, below normal.

6. To the east of the Kurram lies the tract known as the *Thal*, theThe *Thal*.

south of which is held by the Marwats, the north by the Wazirs. The *Thal* was formerly debateable land, the battle-ground of Khattaks, Marwats and Wazirs. Since annexation this tract has been partitioned and given over to peaceful cultivation. The soil is light and sandy; trees are few and far between; and population is sparse.

## 7. Southern Marwat, the tract between the Sheikh Budin range and

Southern Marwat.

the Gambila resembles the *Thal* in its chief physical characteristics, but it has long been under cultivation; there is less jungle and the population is more numerous than in the tract east of the Kurram. Both the *Thal* and southern Marwat liberally repay the rudest forms of cultivation. No *kharif* is grown but the sandy soil is extremely retentive of moisture and the *rabi* crops, gram and wheat, often survive a drought that works general destruction elsewhere. In both the *Thal* and southern Marwat, water is at a great distance from the surface; the excavation of wells is impracticable in these tracts and during the eight or nine months, that the village tanks are dry, water has to be carried on donkeys to distances of from one to fifteen miles. The hardships of life under such conditions would be insupportable for any one not born and bred in Marwat.

## 8. The portion of the district between the western range and the

Western Division.

Gambila is composed of stiff clay, intersected by ravines and torrent beds. The rainfall is rarely sufficient by itself to bring a crop to maturity and the fields are embanked and flooded from the hill torrents. Even so cultivation is most precarious and the harvest often a failure. Population is very sparse and long stretches of country lie waste.

## 9. The rainfall of the district is scanty and precarious. The following

Rainfall.

table exhibits the principal statistics as to the rainfall at the head-quarters of the two tahsils:—

Months.				Average during the last thirty years.	Maximum during the last thirty years.	Minimum during the last thirty years.
BANNU.						
April to June	...	...	...	2'71	7'70	'15
July to September	...	...	...	5'57	12'10	1'80
October to December	...	...	...	'68	5'20	...
January to March	...	...	...	3'23	7'70	'20
Annual	...	...	...	12'19	18'78	6'12
LAKKI.						
April to June	...	...	...	2'68	7'50	'12
July to September	...	...	...	6'98	19'13	1'57
October to December	...	...	...	'65	7'30	...
January to March	...	...	...	2'92	6'60	'10
Annual	...	...	...	13'23	23'79	6'90

The distribution of the rainfall can best be considered in its relation to the four main divisions of the district. The central portion of the valley is protected by irrigation and the rainfall in the hills above the district and on the Safed Koh is here of more importance than the rainfall in the Bannu basin. Heavy floods carry away the dams in the Kurram and often do more harm than good. Moderate floods from the end of June to the end of September represent the conditions most favourable for a *kharif* harvest in this tract. A flood in October is of the greatest value for the backward maize in the south of the Kurram-Gambila *Doab*. It is very seldom that the supply of water in the Kurram is insufficient for the *rabi* harvest and then only on the tail of the canals. The north of the *Doab* is in any case secure against failure, and even in the south, when the winter rains in the hills are much below normal, only partial failure occurs.

In the *Thal* and southern Marwat cultivation is practically confined to the *rabi* crops. Here the soil is so retentive of moisture that sowings seldom if ever fall below 70 per cent. of the cultivated area. The summer rains are generally sufficient for sowing. Autumn rains of course enable the *zamindars* to sow a very large area. In this tract the critical season begins about the end of December. Failure of the winter rains is disastrous though even in the worst years a certain proportion of the gram crop manages to survive the drought.

In the west of the district the cultivation is mainly dependent on hill-torrents. The rainfall in the catchment area of the Marwat hill-torrents is not much greater than in the plain below. The Wazir torrents are more often in flood as their catchment area includes the high hills of Waziristan. In this tract rain in July and August is of course necessary for the *kharif*. If the hill-torrents do not come down in flood sufficiently early, sowings are much restricted. If rain does not fall well on in September most of the crop fails to mature, and *rabi* sowings are impossible. If the winter rains fail, the whole *rabi* crop dries up. This is the tract in which the rainfall is of most importance. Unfortunately the rainfall recorded for Bannu and Lakki does not accurately represent the rainfall in the west of the district, which there is some reason to suppose is less than at either of the above centres. A rain-gauge has now been established at Ahmadzai and statistics will be available in future.

From the 15th September to the 25th of December very little rain falls in Bannu, and generally it may be laid down as an axiom for the whole district that the later this dry season begins and the sooner it ends, the better for the *zamindar*.

10. Water is so far from the surface in the unirrigated tracts and so superabundant in the canal irrigated tract that the number of wells in the district is necessarily limited and the area under well irrigation a negligible quantity. Cultivation therefore falls under three main heads, canal irrigated, hill torrent and *barani*.

The light soil of the *Thal* and southern Marwat alone responds to purely *barani* cultivation and that only in the *rabi*.

The system of cultivation is extremely simple, ploughing and sowing are one and the same operation and a *zamindar* with a single yoke of bullocks can cultivate from 30 to 40 acres in a harvest. Wheat and gram are practically the only crops grown: outturns are light, but the harvests are as a matter of fact far more secure than might be expected from the arid aspect of the plain.

In the west of the district dams are placed in the hill-torrents and the floods are diverted on to the embanked fields. Sowing follows the first flooding—a second flooding is followed by a crop of some sort—a third flooding ensures a magnificent outturn. In a good year the outturns are double or treble the yield obtained from the sandy soil. But the floods are most uncertain and while the labour of cultivation is greater, the harvests, especially the *kharif*, are far more precarious than in the *Thal* or southern Marwat.

Owing to the diminution of the supply of water brought down by the

Canal irrigation.

Tochi, land irrigated from this source is now dependent on occasional floods and hence has been classed in this settlement with land under hill-torrent irrigation. The main sources of perennial irrigation are now the Kurram and Lohra canals. The Kurram canals are of great antiquity. At the time of their construction the science of irrigation, if it could then be called a science, was in its infancy. There is no masonry weir at the head of the valley : wherever possible water is drawn off from the river all along its course by means of rough boulder dams which are carried away by any heavy flood : many of the canals are aligned on wrong principles : proper escapes are not provided : the natural line of drainage is often blocked and large areas are waterlogged. The system is faulty and wasteful in the extreme, but it is doubtful whether the expense of re-modelling the canals on the lines suggested by irrigation experts would be covered by the additional revenue the improvements would bring in. This question is still engaging the attention of the authorities and is discussed in its relation to the assessment in Chapter V. Since annexation, the only important improvements in the Kurram system have been the extension of the Kachkot canal through the Nar jungle to the south of the Kurram-Gambila *Doab*, and the extension of the Mamashkel or Landidak canal across the Baran to the Baran-Tochi *Doab*. The general management of the Kurram canals is in the hands of the Deputy Commissioner and the distribution of water is governed by custom as recorded in the irrigation records of the first regular settlement. It is impossible within the scope of this report to describe the Kurram system in detail. In the Gazetteer will be found a full account of the whole subject. Here it is sufficient to say that on the upper reaches of the Kurram canals the supply of water is practically unlimited and the heavy silt deposits brought down by the summer floods are held to be of great manurial value by the local *zamindars*. On the tail of the canals the supply of water is liable to occasional failure in years of drought and is seldom sufficient for the cultivation of a high grade of crops in the *kharif* harvest.

The two Lohra canals are of recent date and were constructed by private individuals to irrigate some twelve thousand acres on the left bank of the Gambila. They have their origin in the springs in the bed of the Lohra torrent at Akra. The canal owners take from the irrigators one-sixth of the crop and certain minor dues. The supply of water in these canals is fairly constant, and crops irrigated from this source are much superior to those grown on the lower reaches of the Kurram canals.

The more important canals and hill-torrents have now been notified under the Minor Canals Act. The Kurram canals and the principal hill-torrents under Schedule I, the Lohra canals under Schedule II.

11. The three main tribes of the district are the Bannuchis, Marwats and Wazirs. Of these the Bannuchis, who cultivate the most highly irrigated part of the district, live in crowded villages where the climate and surroundings are enervating in the extreme : their physique is poor : they are listless, addicted to vice and extravagant but they must be described as the best agriculturists in the district, although their crops are inferior to those grown under similar conditions in any other part of the Province. The Marwats are a hardy and straightforward people but their lands afford little scope for agricultural skill. The Wazirs have only of recent years abandoned the nomadic life of their forefathers and settled down to agriculture. The great majority of the cultivators are peasant proprietors but the farmer, whose chief pride is in his crops, is unknown in Bannu. The Pathan ideal is the swashbuckling spendthrift : extravagance is rated as more honourable than careful industry : agriculture occupies but a very secondary place in the estimation of the people.

## CHAPTER II—FISCAL HISTORY.

12. Previous to the annexation of the district by the British Government, Bannu was in turn subject to the Moghul Emperors, the Durani Kings, and the Sikh Maharajas of Lahore. Little or nothing is known of the revenue realized by the Moghals or the Duranis. According to Sir Alexander Burnes the Baruchis paid a yearly tribute of Rs. 1,40,000 to Kabul, while the Marwats are said to have paid from Rs. 12,000 to Rs. 40,000 per annum. These figures may represent the nominal tribute as registered at Kabul, but it is highly improbable that these sums were ever paid in full or with any regularity. In Sikh times the revenue of the Bannu tahsil was Rs. 65,000 per annum and of the Marwat tahsil Rs. 40,000 per annum. In the Bannu tahsil this sum was never paid except under compulsion and the Sikhs made no attempt to realise the revenue, until the arrears amounted to something worth collecting, when an expedition was sent from Lahore for the purpose.

The Marwat tahsil was leased by the Maharaja to revenue farmers first to Diwan Lakhi Mul and then to Malik Fateh Khan Tiwana. The latter made some sort of revenue settlement with the chiefs by agreeing to take only one-sixth of the gross produce and *roti* an extra cess in the form of a poll-tax bringing in about Rs. 12,000 a year. It is probable that the sum collected by the revenue farmers largely exceeded the Rs. 40,000 yearly remitted to Lahore. The poll-tax was so unpopular as to provoke a rebellion and Sir Herbert Edwardes tells us that his abolition of this tax in 1847 and the substitution of one-fourth for one-sixth as the Government share of the produce was hailed as a "perfect enfranchisement by the people."

13. In 1849 after the second Sikh War Bannu with the rest of the Punjab was annexed by the British Government. For the first four years of our rule the revenue was collected by a crop appraisalment of each field, the standard of assessment being one-fourth of the gross produce; but an abatement was made in the rate of assessment for Syads and the Ulama.

14. In 1852-1853 the first summary settlement of the district was carried out by Major Nicholson. The average of the collections of the last four years was made the standard of assessment. At this settlement the Bannu tahsil was assessed at Rs. 1,04,163 and the Marwat tahsil at Rs. 1,13,840. The Marwat assessment was excessively severe and considerable remissions had to be made during the currency of this settlement. In the Bannu tahsil no difficulty appears to have been experienced in the collections. In 1858 the second summary settlement carried out by Major Cox was brought into force. The standard of assessment was the same as in the first summary settlement. In the Bannu tahsil the demand was raised to Rs. 1,13,467 and in Marwat to Rs. 1,23,417. The assessment of the Bannu tahsil was as before comparatively light. In Marwat owing to the increase of cultivation the assessment of the second summary settlement was less severe than that of the first but it was still heavier than the country could then pay and thrive under.

15. The first regular settlement began in 1872 under Mr. Thorburn and came into force in *kharrif* 1877. The standard of assessment was, as now, half the net assets of the landowners. Mr. Thorburn's circle rates however were not derived directly from the half net assets estimate but from an estimate he framed of the revenue paying capacity of each circle village by village. The full revenue of this settlement amounted to Rs. 1,47,977 for the Bannu tahsil and Rs. 1,13,513 for the Marwat tahsil. Although the assessment of the Marwat tahsil was thus reduced by some ten thousand rupees, the incidence of the revenue on the unirrigated tracts of this tahsil was still in the light of the prices then prevailing unduly high. On the stiff clay lands of north-west Marwat this assessment in fact came perilously near to exceeding the half net assets standard, while on the sandy lands of southern Marwat the revenue approached very much closer to the maximum limit of the Government demand than the settlement

officer with the statistics then at his disposal was able to foresee. Fortunately the general rise in prices between 1877-1907 and the great extension of cultivation throughout the tahsil enabled the Marwats in the long run to meet the Government demand with comparatively little difficulty. In the light of the revenue imposed on the *barani* tracts, the leniency of the assessment of irrigated land in this tahsil was somewhat remarkable: in no case did the rates exceed fourteen annas per acre while the average fell short of twelve.

The assessment of the Bannu tahsil was in comparison with that of Marwat extremely light. In the most highly cultivated tracts of the valley an under estimate of the yield per acre no doubt contributed to this result; but in this part of the district the pressure of population on the soil and the smallness of the holdings will always necessitate great moderation in assessment. Elsewhere the conditions prevailing at the time of settlement rendered a full assessment out of the question. Any severity in the case of the Wazirs, who were only then beginning to settle down to agriculture, would have been highly impolitic. Only a few years had elapsed since the extension of the Kachkot and Landidak canals into the south of the tahsil and in consideration of the heavy expenditure involved in the colonization of the grants and the difficulty of obtaining tenants a full assessment of the revenue in these tracts was deferred for 30 years. The working of the regular settlement has been attended with very little difficulty in either tahsil. Suspensions and occasional remissions will always be necessary in the unirrigated tracts of Marwat and more especially in the north-west of that tahsil. In all between 1878 and 1904, Rs. 1,72,953 were suspended of which Rs. 45,334 were remitted and the balance almost realized in full. During the first years of the settlement remissions were very frequent but since the rise in prices they have not been so necessary. In the Bannu tahsil the revenue has been realized with comparative regularity except in the case of those villages which have suffered from the diminution of the perennial supply of water in the Tochi. Here Rs. 12,496 were suspended between 1895 and 1905 and with the imposition of the new assessments the whole outstanding balance has been remitted.

16. The gross revenue imposed in the three preceding settlements is given in the following statement :—

	1st summary settlement	2nd summary settlement.	1st regular settlement.
	Rs.	Rs.	Rs.
Bannu ...	1,04,163	1,13,467	1,47,977
Marwat ...	1,13,840	1,23,417	1,13,513
DISTRICT ...	2,18,003	2,36,884	2,61,490

\* In these figures the assignments to the Syads and Ulama in the form of a favourable rate of assessment are not included. If these assignments were included in the gross revenue as in the regular and revised settlements the district totals for the summary settlements would be Rs. 2,25,069 and Rs. 2,43,342 respectively.

### CHAPTER III.—PROGRESS SINCE LAST SETTLEMENT.

Cultivated area.

17. The statistics of area in acres are summarised in the following statement :—

				Cultivated area.	Irrigated area.	Unirrigated area.	Total area.
Tahsil Bannu	...	1877	...	139,012	81,907	57,105	297,157
		1907	...	165,064	79,557	85,507	
Tahsil Marwat	...	1877	...	226,424	20,641	205,783	775,224
		1907	...	337,006	41,501	295,505	
DISTRICT	...	1877	...	365,436	102,548	262,888	1,072,381
		1907	...	502,070	121,058	381,012	

Between 1877 and 1907 there has been an increase of 37 per cent in the cultivated area of the district and of 17 per cent in the irrigated area. The greatest increase in the cultivated area has been in the *Thal*, where both Marwats and Wazirs have brought much land under cultivation during the last 30 years. The extension of the Lohra canals in Marwat and the improved efficiency of Kachkot irrigation account for the increase in the irrigated area in that tahsil. The apparent decrease in the irrigated area of the Bannu tahsil is merely nominal. Although land formerly under perennial Tochi irrigation has now been excluded from the "Nahri" area and in so far as this land is concerned the reduction in the irrigated area is real, there can be no doubt that much land, which received nothing but flood irrigation at the last settlement, was then classed as irrigated. In all probability, if the same standard of classification were adopted the increase in the area under Kurram irrigation would be found to more than balance the reduction in the area ever under perennial irrigation from the Tochi.

18. The reports of the regular settlement nowhere contain any estimate of the average area cropped annually or of the area occupied by the principal crops. In his produce estimates Mr. Thorburn adopted the somewhat unusual procedure of treating every cultivated acre as cropped once a year and of allowing for periodical failure of the harvest by assuming outturns representing the average yield of an acre over a cycle of years. In the absence of statistics as to the harvests 30 years ago it is difficult to arrive at any conclusion as to the distribution of the crops then and now.

Some light, however, may be thrown on the subject, if it is assumed that the proportion of the cropped area occupied by each of the principal crops in Mr. Thorburn's produce estimate represents the actual conditions of the time. On this assumption a table has been drawn up and is given below exhibiting the average distribution of the principal crops per 100 acres matured 1877 and 1907 :—

Crop.	Bannu.		Marwat.	
	1877.	1907.	1877.	1907.
Kharif ...	29	29	23	13
Rabi ...	71	71	67	87
Maize ...	12	18	50	3
Bajra ...	8	3	19	5
Jowar ...	3	2	1	1
Moth ...	...	...	2	1
Sugarcane ...	3	4	...	...
Cotton ...	2	1	...	...
Wheat ...	55	47	54	49
Gram ...	50	9	18	34
Barley ...	13	7	3	2
Clover ...	2	6	...	...
Other ...	50	2	250	5
Total ...	100	100	100	100

There is some reason to believe that during the years of the regular settlement, the summer rains were exceptional a fact which goes some way to account for the high place occupied by *bajra* in both tahsils and the apparent falling off in the total area of the *kharif* in Marwat. The latter

phenomenon is still more easily explained by the great extension of cultivation in the sandy tracts of the *Thal*, where there is practically no *kharif* harvest and the *rabi* crops gram and wheat are of all importance. The increase in the area under maize is attributable in the Marwat, tahsil to the increase in the area under irrigation and in the Bannu tahsil in part to the extension of Kurram irrigation and still more to the increase of double cropping wherever this is possible. With the increase of population the Bannuchis have been driven to make more of their land : the area under sugarcane has increased : while the area under clover which invariably follows a *kharif* crop and indicates double cropping has risen from 2 to 6 per cent. On the whole the figures given in the table above correspond very accurately with the known facts as to the progress of agriculture in the last 30 years, *viz.*, the extension of cultivation in the *Thal*, where there is no *kharif* and gram is the staple crop, the increase in the area under irrigation and the wider cultivation of maize in Marwat, and the improvement in the efficiency of agriculture in the richest parts of the district.

19. Owing to the method adopted by Mr. Thorburn in arriving at his produce estimate in tracts liable to failure of the harvest it is difficult to institute any comparison

Outturns. between the outturns assumed at the first settlement and those sanctioned in the revised settlement. But it would seem that on the whole they were very similar. Thus in the sandy circles of Marwat Mr. Thorburn took the average yield of wheat to be 106 seers per acre, assuming that the acre was cropped annually and allowing for failure by reducing the outturn. As it is now known that on the average 89 per cent of the cultivated area is sown every year in these tracts and that 26 per cent of the sown area fails, it is clear that Mr. Thorburn's rate of yield is equivalent to 161 seers per acre matured. This is practically the same as the rate of yield sanctioned in this settlement, *viz.*, 165 seers per acre. On the other hand in the irrigated circles where failure of the harvest is very rare, the outturns sanctioned in this settlement in many cases exceed those of the last settlement by over 20 per cent. That this result cannot be attributed to the improved efficiency of agriculture is clearly brought out by the fact that the crop experiments of the last settlement fully justify the outturns now assumed which are further supported by the large number of crop experiments carried out between 1901 and 1906 and covering over 375 acres of matured crops. Despite the heavier outturns assumed in the present settlement the rates of yield, on which the produce estimate has been built up, are well below those sanctioned for similar tracts in any other district of the Province. The increased value given to the cropped acre by the adoption of the present outturns has resulted in a considerable enhancement of the value of the gross produce and of the half net assets as compared with the estimate of the last settlement. It must, however, be borne in mind that this enhancement has been attended by no corresponding improvement in the circumstances of the *zamindars* and that, any considerable enhancement of revenue based on the higher estimate of the outturns accepted in this settlement may completely derange their domestic economy and render the standard of living to which they are accustomed impossible.

20. In the following table is exhibited the number of the population as enumerated in 1881—1891—1901 :—

Population.					1881.	1891.	1901.
Bannu ...	...	...	...	...	107,159	120,324	130,444
Marwat ...	...	...	...	...	75,581	84,145	96,332
District	...	...	...	...	182,740	204,469	226,776
Increase per cent during each period					...	12	11

Amongst the Marwats and Wazirs the increase in the number of the population has only kept pace with the increase in the area under cultivation. With these tribes the pressure of population on the soil is in no way heavy being under 180 per square mile of cultivation. On the other hand the congestion amongst the Bannuchis is serious. Between 1891 and 1901 there was no increase in the number of the agricultural population in the purely Bannuchi tracts. In the richest part of the valley the density of the population is 1,069 per square mile of cultivation and it would seem that population has here reached the limit which the soil can support.

21. The figures for agricultural stock recorded at the regular settlement are so unreliable that a comparison between the former and present figures can serve no useful purpose. The number of agricultural stock recorded in the present settlement is given below :—

Tahsils.	AGRICULTURAL STOCK.										
	Bulls and bullocks.	Cows.	Male buffaloes.	Female buffaloes.	Young stock.	Sheep.	Goats.	Horses and ponies.	Mules.	Donkeys.	Camels.
Bannu	18,030	19,247	150	6,293	14,369	18,343	7,636	2,174	1,178	8,662	1,581
Marwat	20,907		19,480			55,102		990	14,784	2,983	...
District	38,937		59,539			81,081		* 4,343	23,446	4,564	230

\* Includes Government animals.

It is sufficient to say that the district is not self-sufficing in the matter of live-stock and that the import of cattle and *ghi* every year exceeds the export. Cattle-breeding is impossible in the *Thal* and southern Marwat. Owing to the distance of water from the villages the Marwats even sell their plough cattle after sowing the *rabi* harvest. Though some parts of the district are more favourably circumstanced than others, the district as a whole derives no income from agricultural stock.

22. The people of the Bannu district are entirely dependent on the produce of their fields for a living. In most frontier tahsils military pensions amount to a large sum but there are not fifty natives of this district serving in the regular army. There are practically no miscellaneous sources of income. Out of their surplus gram and wheat the Marwats of the sandy tracts have to purchase the clothes they wear, the *ghi* they eat, the oil they burn and the oxen with which they plough. In this respect there has been no change during the last 30 years.

23. The district is divided into 388 estates. The vast majority conform to the ordinary *bhayachara* type. Tenures in the Nar and Landidak colonies were originally *zamin-dari* but with probably all in course of time become *bhayachara*. In Marwat the communal system of shifting severalty was at one time general and the tribal lands were subject to periodical re-distribution under the custom of "*khula vesh*" by which every man, woman and child received an equal share. The *vesh* tenure survived longer in Marwat than elsewhere owing to the fact that any improvement of the sandy land was impossible and that the more careful agriculturists were therefore less opposed to any exchange of land than would be the case in an irrigated tract. This tenure still obtains in four villages and a re-distribution has been carried out during the progress of this settlement. In some of the *Thal* villages acquired by the Marwats after annexation *dadhas* or ancestral shares were the measure of ownership up to the revised settlement when the south-east corner of the district was partitioned amongst the numerous owners and possession became the measure of ownership. Amongst the Bannuchis and Wazirs the *vesh* system

never prevailed. The lands were no doubt originally divided in accordance with ancestral shares but tenures are now all *bhayachara*. Fifty-four per cent. of the cultivated area of the district is in the hands of peasant proprietors. At the last settlement over 70 per cent. was said to be cultivated by the owners. There can be no doubt that during the last 30 years the landlord class has been growing at the expense of the peasant proprietors. At the same time if land cultivated by mortgagors and by small owners as tenants of their neighbours were taken into account, it would probably be found that two-thirds of the land is cultivated by peasant owners.

Occupancy tenants are found only in south-east Marwat where they owe their position to their having brought the land under cultivation. Occupancy tenants pay the land revenue and one-fifth of the gross produce. The vast majority of tenants are tenants-at-will. According to the statistics prepared from the village records there has been little change in the size of the holdings during the last 30 years. The average cultivated area in acres per owner is now 3·8 for the Bannu tahsil and 6·7 for Marwat as against 4 and 6·0 in 1877. In the case of the Marwats and Wazirs these figures are of little value as so many tribesmen own land in more than one village. With these two tribes the average cultivated area per owner is probably not less than 10 or 12 acres. The Bannuchi holdings on the other hand are very diminutive averaging less than 2 acres per owner.

24. Cash rents are rare and form no guide to assessment; rents are commonly paid in kind in both tahsils. Before the division of the produce between landlord and tenant certain deductions are made from the common heap. In the first regular settlement the deductions from the gross produce allowed for menials' dues amounted to 12½ per cent for the Marwat and 11 per cent for the Bannu tahsil. In the present settlement these items have been reduced to 9 per cent and 7 per cent respectively, as the system of paying village menials a regular allowance every harvest is being gradually replaced by a system of cash payments according to the work actually performed. This share of the produce is divided between the reapers, blacksmith, carpenter, cobbler, crop watcher, weigher and *mullah* who blesses the harvest. Details of these charges will be found in the assessment reports.

At the last settlement no deductions were made in connection with the charges for irrigation. At present over a large area the custom known as *kashajara* prevails. The *kasha* is a hired labourer employed by the landlord to do canal labour. Under the *kashajara* system the owner takes one-eleventh of the gross produce from the common heap, pays three-quarters of the grain so received to the *kasha* and reserves one-fourth for himself. In calculating the share of the crop taken by the landlord, this arrangement is on the whole equivalent to a deduction of 5 per cent. from the gross produce. The process by which this result is arrived at is given in the Marwat assessment report. Accordingly in the present settlement a deduction of 5 per cent of the gross produce has been made in the case of all crops grown on irrigated land with the exception of the Bannu circle and land irrigated from the private canals. In the case of the Bannu circle comprising the valuable lands in the vicinity of the city it was difficult to calculate with any exactitude the deductions to be made in connection with the expenses of irrigation. In some villages the *kashajara* system obtains, in some the tenants are responsible for all canal labour, in others the owners are required to provide logs and matting for the dams. In the end a deduction of 2 per cent was allowed in this circle.

For the whole Marwat tahsil the share of the gross produce taken by the landlord averages 37 per cent. as against 41 per cent. the figure of the last settlement. The apparent fall in the rent rate of this tahsil is due to the exclusion of one-fifth of the produce of the lands irrigated by the Lohra canals from the amount divisible between landlord and tenant, as this one-fifth is taken as "*abiana*" by the canal owners before the division of the produce between landlord and tenant is made. As between landlord and

tenant there has been little change in the rent rates during the last thirty years. In the *Thal* and on inferior irrigated land rents as low as one-third or one-fourth of the produce are met with, but generally speaking for irrigated and unirrigated land alike one-half of the produce remaining after the deduction of canal and menials' dues is the standard rent rate of the tahsil. This is a very high rental for sandy land yielding an outturn of less than 6 maunds per acre matured. But in Marwat as elsewhere the rents imposed by peasant proprietors approximate rack rents. Such rents are therefore a somewhat dangerous guide in assessing the revenue to be paid by a community chiefly composed of peasant proprietors.

In the Bannu tahsil rents have doubled in the Wazir circles during the last 30 years and now stand at one-third of the gross produce against one-sixth at the last settlement. In the highly irrigated circles tenants pay as before two-thirds of the produce the landlords finding both seed and manure. In all a deduction over Rs. 1,50,000 was made from the landlord's share of the produce on account of the expenses in connection with seed and manure. Elsewhere on irrigated lands the rent rate is one-half of the gross produce after the deduction of menial and canal dues. For the whole tahsil the landlord's share of the gross produce now stands at 48 per cent as against 36 per cent at the last settlement.

Both in the estimate of the gross produce and in the estimate of the share of the produce taken by the landlord at the last settlement, the value of the straw was omitted. Throughout the district the landlord takes the same share of the straw as he does of the grain. The inclusion of this important item in the estimate of the present settlement has added two and half lakhs of rupees to the value of the gross produce or roughly one lakh of rupees to the share of the produce taken by the landlords.

Alienation and indebtedness.

25. The principal figures relating to transfers of land are given in the following table :—

*Mortgages.*

			Bannu.	Marwat.	District.
Cultivated area mortgaged at last settlement	...	...	18,324	81,160	99,484
Cultivated area now mortgaged	...	...	35,094	148,328	163,422
Percentage of total cultivated area	...	...	21.22	38	32
Cultivated area mortgaged to money lenders	...	...	6,602	37,241	43,843
Consideration money per acre for area now under mortgage	...	...	Rs. 81	Rs. 30	Rs. 67

*Sales.*

			Bannu.	Marwat.	District.
Cultivated area sold 1878-1905	...	...	31,772	35,909	67,681
Percentage of total cultivated area	...	...	19.22	10.5	13
Cultivated area sold to money lenders	...	...	1,685	7,305	8,990
Average price per cultivated area 1878-1905	...	...	Rs. 146	Rs. 45	Rs. 93

The most striking features in the statistics are the frequency of sales in the Bannu tahsil and the large area under mortgage in Marwat. In the case of the Bannu tahsil the statistics are swollen by the inclusion of land which has changed hands more than once during the last 30 years. At the same time there can be no doubt as to the frequency of sales in this tahsil a fact which must be attributed

Alienations and indebtedness.

to the Muhammadan Law of inheritance, the constant sub-division of holdings already economically too small, the extravagance of the Bannuchis and the ease and cheapness with which transfers can be effected. In the Marwat tahsil the system on which the tribal lands have been partitioned is largely responsible for the area under mortgage. The lands of the individual owners are often scattered over several estates at a great distance apart: for convenience of cultivation and concentration of agriculture a system of reciprocal mortgages has sprung up. The bulk of the transactions in both tahsils are between *zamindars* and furnish no evidence of indebtedness as regards the cultivating class as a whole. At the same time the area passing into the hands of money lenders has been steadily on the increase and the secured debt owing to this class now amounts to over 2½ lakhs of rupees. The unsecured debt as compared with the ordinary Punjab district is not large as the hereditary village *sunniya* giving book credit from generation to generation is not found in Bannu.

The introduction of the Land Alienation Act in 1904 has put a stop to further alienations in favour of money lenders. It must be admitted that indebtedness is now more serious than was the case at the last settlement. But in a district where members of agricultural tribes have been able to find 44 lakhs of rupees to invest in mortgages this indebtedness can hardly be traced to the severity of the assessment.

Value of Land.

26. The increase in the value of land during the last 30 years has been very remarkable.

							Bannu.	Marwat.
							Rs.	Rs.
Price per acre 1878-1884	...	...	...	...	...	...	91	32
Ditto 1899-1905	...	...	...	...	...	...	186	45
Number of year's purchase of revenue represented by price per acre 1899-1905							134	90

The contributing causes which have brought about this rise in prices are no doubt the pacification of the border, the improvement in communications, the rise in the value of agricultural produce, and in the irrigated tracts, the density of the population and the competition for the land. The number of year's purchase of the land revenue represented by the price per acre illustrates very fully the leniency of the assessment previous to the revised settlement.

27. Bannu is still the most inaccessible district in the North-West Frontier Province but communications have materially improved since the last settlement. The Kohat and Dera Ismail Khan roads have been metalled, the Kurram and Gambila rivers have been bridged, a line of rail has been constructed along the left bank of the Indus and the district has been brought into closer touch with the great markets of India. In the greater part of the district where the production of food grains exceeds the consumption, the *zamindars* have reaped the full benefit of the improvement in communications and the consequent rise in prices. But in the most thickly populated tracts of the Bannu tahsil, where sugarcane is the principal crop and the cultivator does not produce enough or only enough grain for his own consumption, it is very doubtful whether the change has been of any advantage to the *zamindar*. The railway has brought Peshawar *gur* and foreign sugar into the Derajat markets: the price of Bannu *gur* has been practically stationary during the last 30 years and *gur* is often the only commodity which the Bannuchi *zamindar* has to sell.

In the following table are given the main statistics relating to prices with a comparison between the prices assumed in Bannu and those assumed

in the neighbouring settlements of Kohat and Dera Ismail Khan. The prices are expressed in annas per maund :—

	LAST SETTLEMENT.		* Gazette prices for 21 years 1878-1902 omitting 4 exceptional years.	COMMUTATION PRICES IN PRESENT SETTLEMENT.		Kohat.	Dera Ismail Khan.
	Bannu.	Marwat.		Bannu.	Marwat.		
	Annas.	Annas.	Annas.	Annas.	Annas.	Annas.	Annas.
Wheat ...	19	16	28	26	26	28	27
Barley ...	11	11	20	17	16	17	18
Gram ...	16	12	25	21	19	24	21
Rice ...	20	...	62	24	24	21	53†
Maize ...	13	13	26	21	21	24	26
Jowar ...	12	12	24	18	18	22	20
Bajra ...	16	13	31	24	24	23	23
Cotton ...	49	...	68	60	60	53	201‡
Gur ...	49	...	51	50	...	...	...
Tobacco ...	53	...	...	70	...	...	...
Moth ...	16	16	...	24	24	27	26
Turmeric ...	20†	...	...	20	...	...	...

\* Omitting years—  
 1879 } Kabul war.  
 1880 }  
 1897 Tirah expedition.  
 1900 Famine.

† Wet turmeric.  
 ‡ Husked.  
 § Ginned.

It will be seen that there has been a general rise in prices during the last 30 years and that the prices now assumed are with few exceptions much higher than the prices assumed at the last settlement. At the same time for all grains exported from the district gram, wheat, and maize, they are in every case lower than the prices assumed in Dera Ismail Khan and Kohat, and there is little danger of the average prices ever being forced below those now adopted for the valuation of the produce. It has been necessary to assume separate rates for barley and gram in the two tahsils as the available data clearly point to the prices for those grains in Marwat being lower than in Bannu.

In the assessment reports the general rise in prices was set at 59 per cent for the Marwat tahsil and at 41 per cent for the Bannu tahsil. The method on which this calculation is based is that laid down in the Settlement Manual which assumes that there has been no serious change in the distribution of the crops during the period of expiring settlement. It is possible to form some conclusion as to the result of the rise in prices taken in conjunction with the change in the distribution of the crops if the outturns sanctioned for the present settlement are applied to the table given in paragraph 18 and the resultant produce valued at the prices prevailing at the two different periods. By this method it will be found that in 1877 one hundred acres of crops were worth Rs. 948 in the Bannu and Rs. 499 in the Marwat tahsil: 100 acres of crops are now worth Rs. 1,374 in the former and Rs. 815 in the latter tahsil *i. e.* an increase of 44 and 64 per cent, respectively. Thus for the district as a whole the conclusions arrived at in the assessment reports as to the enhancement of revenue to be expected from the rise in prices may be accepted without reserve.

28. From 1904 to 1907 a record was maintained of the imports and exports of the district. The full figures are given in the Gazetteer. Here it is sufficient to note the export of agricultural produce.

Year.			Wheat.	Gram.	Gur.	Maize.	Total.
			Rs.	Rs.	Rs.	Rs.	Rs.
1904-1905	...	...	2,00,411	2,06,365	1,65,628	14,331	5,86,725
1905-1906	...	...	4,97,540	4,03,068	3,63,005	22,024	12,86,637
1906-1907	...	...	3,54,709	1,32,169	2,68,009	17,026	7,61,913
Average	...	...	3,50,887	2,43,864	2,65,547	18,127	8,78,425

The bulk of the agricultural produce of the district goes to Dera Ismail Khan or Isa Khel, whence the greater part of the wheat is despatched to Karachi. In the assessment reports it was estimated that the surplus production of food grains amounted to 340,388 maunds per annum. The city and cantonments absorb some 85,000 maunds per annum leaving roughly 2½ lakhs of maunds for export. The value of the average export of gram, wheat and maize 1904-1907 exceeds 6 lakhs of rupees but with the exception of the gram crop of 1906 the harvests during this period were above the average. Still it is fairly safe to conclude from the above figures that no over estimate of the outturn of the principal grains has been made and that on an average the export of grain and *gur* together does not fall short of 7 lakhs of rupees in value.

29. In the preceding paragraphs the progress of the district since the last settlement has been traced in detail. It remains to summarise the various conclusions in their relation to the assessment. The following facts justify an enhancement of revenue :—

Summary of progress.

- (1) The pacification of the border.
- (2) The increase in the cultivated area.
- (3) The increase in the irrigated area.
- (4) The complete colonization of the Nar and Landidak tracts.
- (5) The improved efficiency of agriculture.
- (6) The rise of rents among the Wazirs.
- (7) The rise in the value of land.
- (8) The rise in the price of food grains.
- (9) The under estimate of the outturns of irrigated land at the first settlement.
- (10) The surplus produce supported by the trade returns.

On the other hand the following considerations caution moderation in assessment :—

- (1) The census returns 1891-1901 as regards Bannuchis.
- (2) The smallness of the Bannuchi holdings.
- (3) The high rental in Marwat.
- (4) Diminution of the supply of water in the Tochi.
- (5) The deficiency of agricultural stock.
- (6) The absence of subsidiary sources of income.
- (7) The character of the people.
- (8) The danger of excessive enhancement.

#### CHAPTER IV—HALF NET ASSETS.

30. In 1902 the forecast report as to the probable results of the re-assessment was submitted by Mr. J. S. Donald, C.I.E., who estimated the enhancement that might be taken from the Marwat tahsil at 90 per cent and from the Bannu tahsil at 57 per cent of the previous revenue. The Financial Commissioner in his review of the report reduced these figures to 50 and 45 per cent, respectively. This estimate was accepted by the Government of India and the re-assessment of the district was sanctioned under Revenue and Financial Secretary to Chief Commissioner's Notifications Nos. 6—H and 7—H, dated 26th September 1903. The re-assessment has been carried out in accordance with the Punjab Settlement Manual issued in 1900 and commenced October 1903, the standard of assessment being the half net assets of the proprietors.

### 31. The first step was to divide the district into assessment circles.

**Assessment circles.** In the first regular settlement there were thirteen assessment circles. This arrangement was generally based on the physical features of the country and the advantages of irrigation. But for the tracts owned by Wazirs tribal considerations were held to be of more importance than similarity of agricultural conditions. More than one Wazir estate would otherwise have been included in the Bannuchi circles. As time goes on and the Wazirs become more closely assimilated to the regular plain-dwellers, it may be necessary to rectify the boundaries of these circles. But that time has not yet come and the Wazir circles have been maintained intact in the present settlement.

For assessment purposes the number of circles was reduced from 13 to 10. In the following table are given the circles of the first regular settlement and those sanctioned for the re-assessment :—

Tahsil.	CIRCLES.	
	1877.	1907.
Bannu ... ..	1. Bannu.	1. Bannu.
	2. Trikha.	2. Trikha.
	3. Lohra.	3. Lohra.
	4. Nar.	} 4. Nar-Landidak.
	5. Landidak.	
	6. Eastern Wazir.	5. Eastern Wazir.
	7. Western Wazir.	6. Western Wazir.
Marwat ... ..	8. Pakha.	} 7. Gadwad.
	9. Gadwad.	
	10. Shiga.	} 8. Shiga.
	11. Shiga Khatina.	
	12. Tandoba.	9. Tandoba.
	13. Nar.	10. Nar.

In the assessment reports separate rates were drawn up for the ten circles given in the last column of the statement above but during the course of the settlement it became clear that the reduction in the number of circles had been carried too far and that the distinction between the Pakha and Gadwad circles of the Marwat tahsil was too real to admit of their permanent amalgamation. Accordingly the previous orders were revised and separate statistics will be maintained for these two circles during the currency of the revised settlement. Thus under the final orders the number of circles will be eleven, the amalgamation of the Pakha and Gadwad circles being cancelled.

In the following table are given the main characteristics and the locality of the different circles adopted for assessment purposes :—

Circles.	Locality.	Characteristics.
1. Bannu ... ..	Both banks on the higher reaches of the Kurram.	Superabundance of irrigation, double cropping, valuable crops, certainty of the harvests, dense population.
2. Trikha ... ..	Both banks of the Kurram below the Bannu circle.	Only second to No. (1) in advantages of irrigation but affected by swamps and saline efflorescence.

Circles.	Locality.	Characteristics.
3. Lohra	Centre of Baran and Tochi Doab.	Dependent on Tochi floods, Landidak canal and Sungari branch of Kachkot, inefficient irrigation.
4. Nar-Landidak	Lower reaches of Kachkot and Landidak canals.	Zamindari tenures—Landlords living on rents. A limited supply of water for irrigation.
5. Eastern Wazir circle	North of the Thal	Sandy soil. Wazir cultivators.
6. Western Wazir circle	North-west of the district	Stiff soil. Hill-torrent irrigation. Wazir cultivators.
7. Shiga	Southern Marwat and the southern Thal.	A light sandy soil yielding only <i>rabi</i> crops.
8. Gadwad	Western Marwat	Stiff soil and hill-torrent irrigation in north and west. Mixture of stiff and sandy soil in south and east.
9. Tandoba	South of Kurram Gambila Doab with villages on the opposite bank of Kurram.	Lohra canals. Lower Kurram canals. A heterogeneous circle.
10. Marwat-Nar	South of Bannu Nar	See No. 4.

### 32. The soil classifications of the last settlement were most elaborate.

Classes of soil.

classes :—

- |                  |     |   |   |
|------------------|-----|---|---|
| 1. Nahri dofasli | —   | } Land irrigated by perennial canals. {   | Producing 6 crops or more out of eight. |
| 2. Nahri ekfasli | ... |   | Producing less than 6 crops.            |
| 3. Rodkahi       | ... | Embanked land irrigated by hill-torrents. |   |
| 4. Shiga Khatina | ... | Sand and clay mixed.                      |   |
| 5. Shiga         | ... | Sand.                                     |   |
| 6. Barani        | ... | Other unirrigated land.                   |   |

In the Bannu circle the grades of irrigated land are so numerous that no soil classifications could be devised that would prove satisfactory in the distribution of the land revenue. The distinction between *dofasli* and *ekfasli* was useful in framing an estimate of the gross outturn, but is of little permanent value. Elsewhere the soil classifications were more satisfactory.

33. To arrive at the value of the gross produce of the district it was next necessary to ascertain by circles and soils the average area annually under each crop. The crop inspections of previous years afforded the necessary data for this process and an average was struck from the total areas recorded as matured from *kharif* 1899 to *rabi* 1905, inclusive.

For these six years the average area matured in the *kharif* harvest amounts to 67,437 acres and in the *rabi* to 287,872 acres. The character of each of the twelve harvests in the selected period may thus be represented in the form of a percentage as follows :—

	1899.	1900.	1901.	1902.	1903.	1904.
Kharif	68 Bad.	104 Average.	92 Poor.	120 Good.	130 Good.	86 Poor.
	1900.	1901.	1902.	1903.	1904.	1905.
Rabi	75 Bad.	106 Average.	67 Bad.	105 Average.	124 Good.	123 Good.

In selecting the harvests which are to form the basis of the produce estimate, it is always difficult to choose a cycle which shall be representative of the average conditions likely to prevail during the next twenty years. Of the twelve harvests given above, four were good, three bad, two poor, and three average. The cropping on irrigated land is fairly constant from year to year but, as is natural in a district of short rainfall, the variations in the cropping of the unirrigated area are very considerable. Of the 67,431 acres matured in the *kharif* 43,691 acres were under irrigation. The *kharif* harvests 1899 to 1904 were certainly in no way above the average, as regards unirrigated crops and there can be therefore no danger in accepting this cycle for the *kharif*. In the *rabi* of the average area matured 64,951 acres were protected by irrigation and it therefore remains to decide how far the 222,921 acres of unirrigated crops may be taken to represent the average harvest on unirrigated lands. More than half of this area lies in the Shiga circle of Marwat and therefore a comparison of the average now taken with the figures for previous years in this circle may be expected to throw some light on the value of the cycle 1899-1905 for assessment purposes. The average *rabi* cropping in the Shiga circle for the last eighteen years is given below in acres :—

Year.	Sown.	Matured.
1888-1893 ... ..	138,913	113,931
1894-1899 ... ..	139,350	115,093
1900-1905 ... ..	149,437	113,573

In the light of these statistics for the largest *barani* tract in the district there can be no hesitation in accepting the cycle 1900-1905 for the *rabi* harvest. In conclusion a few words of caution are necessary. The *patwaris* have heretofore failed to make full allowance for the area of failure and up to the year 1902, the date fixed for the commencements of the *rabi* crop inspection, March 1st, was too early to admit of an accurate record of the harvest being made. Wheat that appears healthy early in March is often burnt up by the beginning of April. The *kharif girdawari* too is sometimes liable to serious error. The greater part of the sugarcane crop is still standing in February. Severe frost in January may reduce the outturn by 50 per cent a good two months after the crop statistics have been compiled. Such errors however are common to every cycle that might be chosen. Absolute accuracy cannot be claimed for any statistics and crop statistics are very far from being any exception to the rule. Despite their inaccuracies the records of the harvests are of paramount value as a guide to assessment provided only they are used with due caution.

In the following table are given the main statistics for the six years selected as a basis for the produce estimate :—

Year.	BANNU.		MARWAT.		DISTRICT.		Percentage of sown area which matured.
	Sown.	Matured.	Sown.	Matured.	Sown.	Matured.	
1899-1900 ... ..	131,120	115,263	228,358	150,777	359,478	266,040	74
1900-1901 ... ..	154,436	146,137	299,757	232,518	454,193	378,655	81
1901-1902 ... ..	150,595	125,668	261,744	131,938	412,339	257,606	62
1902-1903 ... ..	163,683	150,405	301,701	234,622	465,384	385,027	82
1903-1904 ... ..	166,507	158,900	316,338	279,847	482,845	438,747	90
1904-1905 ... ..	158,998	151,993	288,411	253,689	447,409	405,782	90
Average ... ..	154,226	141,394	282,719	213,914	436,945	355,308	82

34. In the preceding chapter the percentage of the average matured area occupied by the principal crops in each tahsil has been noticed and the changes that have taken place since the last settlement explained. The figures are now given for the whole district :—

Crop.							Average area matured.	Percentage of total matured area.
							Acres.	
Wheat	...	...	...	...	...	...	170,443	48
Barley	...	...	...	...	...	...	14,461	4
Gram	...	...	...	...	...	...	84,900	24
Bajra	...	...	...	...	...	...	14,062	4
Sugarcane	...	...	...	...	...	...	5,898	2
Maize	...	...	...	...	...	...	32,465	9

35. The subject of outturns has already been dealt with in its relation to the agricultural efficiency of the district and the moderation of the outturns assumed in this settlement as compared with those adopted elsewhere in the Province has been noticed. For all details the assessment reports should be consulted. Here it is sufficient to set out the outturns assumed for the more important crops in the circles and on the soils where they are chiefly grown :—

Crop.	KHARIF.			Crop.	RABI.		
	Circle.	Soil.	Mds.		Circle.	Soil.	Mds.
Maize	Bannu ...	Nahri dofasli ...	14	Wheat	Bannu ...	Nahri dofasli ...	8
	Nar ...	Ekfasli ...	6		Eastern Wazir.	Barani ...	5
Sugarcane	Bannu ...	Dofasli ...	22	Gram	Shiga ...	Shiga ...	5
Bajra	Gadwad ...	Rodkahi ...	5	Barley	Nar ...	Nahri ekfasli ...	8

36. The gross produce of the district, having been ascertained by means of the results given in the preceding paragraphs, was next valued at the commutation prices given in paragraph 25. The results are compared with the estimates of the last settlement in the following table :—

TAHSILS AND DISTRICT.						GROSS PRODUCE ESTIMATE.		
						1877.	1907.	Increase per cent.
						Rs.	Rs.	
Bannu	...	...	...	...	...	9,99,263	29,18,721	102
Marwat	...	...	...	...	...	7,54,456	17,31,489	129
District	...	...	...	...	...	17,53,719	37,50,210	113

The figures for the Marwat tahsil require no explanation in the light of the increase in the cultivated area, 49 per cent, and a rise in prices equivalent to 59 per cent. In the Bannu tahsil the increase in the cultivated area has been only 19 per cent and the rise in prices only 41 per cent. The fact that the gross produce of this tahsil is now estimated at double its former value must be put down to the improved efficiency of agriculture, illustrated by the increased cultivation of sugarcane, to the under estimate of outturns at the last settlement, and to the inclusion of straw as well as grain in the produce of the district.

37. The rents given in paragraph 23 were next applied to the value of the gross produce and finally the half net assets were worked out as given below :—

TAHSILS AND DISTRICT.						1877.	1907.	Increase per cent.
						Rs.	Rs.	
Bannu ...	...	...	...	...	...	1,80,967	4,11,964	127
Marwat	...	...	...	...	...	1,56,078	3,24,091	107
District	...	...	...	...	...	3,37,045	7,36,055	118

It has already been explained in paragraph 23 that the share of the produce taken by the owners has fallen in Marwat and risen in Bannu since the last settlement, a fact which accounts for the percentage of the increase in half net assets being higher in the former tahsil and lower in the latter than the percentage of increase in the gross produce.

According to the assessment instructions the limit of the Government demand is Rs. 7,36,055 the value of the half net assets of the proprietors.

## CHAPTER V.—THE NEW ASSESSMENT.

38. To assess up to the half net asset standard, an enhancement of 181 per cent as compared with the previous revenue, was under any circumstances out of the question. Theoretically the limit of the Government demand is in no way affected by the revenue which the people have been paying in the past. In practice it is impossible to disregard this side of the question. No system of deferred assessments will induce revenue payers once accustomed to a certain standard of living to adjust their expenditure to their incomes if reduced beyond a certain point. Any enhancement which involves a revolution in the domestic economy of the *samindar* is certain to provoke the most serious resentment, even if the rates imposed are low in comparison with those prevailing elsewhere. If a district is to remain prosperous and contented, the degree of enhancement is a factor in the assessment which cannot be ignored. The local considerations pointing to moderation in assessment were fully discussed in Chapter III. Of these the most weighty are no doubt the congestion in the Bannuchi circles and the absolute dependence of the Marwats on their gram and wheat. The revenue imposed at this settlement was therefore pitched well below the half net assets.

In the following table is given the gross revenue proposed, sanctioned and finally imposed by circles and tahsils :—

*Statement showing the former and present revenue percentages of gross produce, half net assets and total enhancement by Circles, Tahsils and District.*

Tahsil.	Circle.	Former assessment 1877.	Proposed assessment.	Sanctioned revenue.	Revenue finally imposed.	Per cent. of gross produce.	Per cent. of half net assets.	Per cent. of enhancement.	REMARKS.
		Rs.	Rs.	Rs.	Rs.				
Bannu.	Bannu ...	89,228	1,30,000	1,25,000	1,25,072	12'0	54	40	
	Trikha...	15,158	23,000	23,000	22,831	12'0	53	51	
	Lohra ...	16,960	17,300	17,300	17,298	13'0	61	2	
	Nar-Landidak.	10,172	25,800	25,500	25,679	12'6	64	153	
	Eastern Waziri	8,800	23,300	25,000	25,000	7'0	50	184	
	Western Waziri	7,659	13,300	14,500	14,600	11'0	77	90	
	TOTAL TAHSIL	1,47,977	2,32,700	2,31,300	2,30,480	11'4	56	56	
Margat.	Shiga ...	59,070	9,5000	90,000	90,010	10'8	56	52	
	Pakha-Gadwad	35,995	45,000	42,000	42,002	11'7	61	17	
	*Tandoba ...	11,568	*54,619	50,000	48,510	13'0	72	319	*A fluctuating assessment was proposed for this circle and it was estimated that the collections would average Rs. 54,619.
	Nar ...	6,830	20,000	21,000	20,256	13'0	69	196	
	TOTAL TAHSIL...	1,13,513	2,14,619	2,03,000	2,00,778	11'6	62	77	
	GRAND TOTAL OF THE DISTRICT.	2,61,490	4,47,319	4,34,300	4,31,258	11'5	59	65	

39. The preceding paragraph gives the revenue imposed on the cultivation of the district. In addition to this sum are the assessments on the date-palm groves of the Trikha circle and on the flour mills situated on the various canals. At the last settlement no separate assessment was imposed on date-palms but Mr. Thorburn noted that 4,819 trees had been enumerated and taken into account in the assessment. It is also stated in his settlement report that in the distribution of land revenue the revenue payers as a rule imposed a rate of two annas a tree on date-palms growing on unassessed land or inside the village site. At the present settlement 10,762 female date-palms were enumerated of which 1,286 stood on cultivated land. These latter were excluded from assessment as no allowance was made in the measurements, for the area overshadowed by the trees and not bearing crops. The annual value of a tree in fruit was found to be from Rs. 2 to Rs. 5 and the share of an owner, leasing the tree, from Rs. 1-5 to Rs. 3-5; but trees do not bear fruit every year and no reliable statistics could be obtained as to the average annual produce of a tree. Accordingly the rate used in the distribution of the last settlement was adopted for the present assessment and a sum of Rs. 1,113 was imposed on the date-palms of this circle.

At the last settlement Rs. 900 were imposed on the 78 mills of the district. The number of mills now working is 76. Several small mills have been abandoned and six large mills constructed since the last settlement. The net profits of the mill owners were first ascertained from experiments as to the quantity of grain each mill could grind in a given time but the chief guide to assessment was the sum which mills leased by their owners brought in every year. As a large number of mills are leased annually, it was not difficult to arrive at a fair estimate of the value of the various mills. An assessment of Rs. 1,753 was therefore imposed on the 76 mills of the district, the rate of assessment being from one-sixth to one-fourth of the net profits of the owners.

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40. Including the assessments imposed on date-palms and mills the gross revenue amounts to Rs. 4,34,124, equivalent to 59 per cent of the half net assets or 11·5 of the gross produce. Thus the present settlement involves an enhancement of 66 per cent as compared with the previous revenue. The forecast prepared by the Deputy Commissioner anticipated an enhancement of 67 per cent for the whole district, an estimate which was reduced by the Financial Commissioner to 46 per cent. That the enhancement so much exceeds the anticipations of the Financial Commissioner is chiefly due to the fact that, at the time the forecast report was prepared, it was not fully realised that many of the conditions which had necessitated leniency of assessment in the first settlement had now ceased to have any force. Thus at the first settlement the unsettled state of the Wazir circles and the expenditure recently incurred by the grantees in colonizing the Nar and Landidak lands compelled the settlement officer to go very much below the normal rate of assessment in five of his circles. In the same way the forecast report did not bring to light the fact that the large area in Marwat which has come under irrigation from the Lohra during recent years produces a much higher grade of crop than the irrigated area of the last settlement dependent on the brackish water of the lower Kurram canals. The *zamindars* of the Tandoba circle from being the poorest in the district have become the richest. It is only in these tracts, *viz.* in the two Wazir circles, the Nar and Landidak colonies and the Tandoba circle of Marwat that the rate of enhancement exceeds the estimate of the Financial Commissioner.

In view of the progress of the district since last settlement, the revenue now imposed does not err on the side of severity. In this connection the progressive leniency of successive settlements is worthy of notice. In the summary settlements the Government demand was 25 per cent of the gross produce; in 1877 this proportion was still further reduced to 14 per cent; it now stands at only 11·5 per cent. Finally the weight of the new assessment in Bannu may be compared with the assessments imposed in the three other districts of the Province recently under settlement—

			Per cent of half net assets.	Per cent of gross produces.	Enhancement.
Dera Ismail Khan	...	...	*75	*13	*17
Kohat	...	...	74	12½	44
Hazara	...	...	55	10	67
Bannu	...	...	59	11½	66

Next to Hazara Bannu will be the most lightly assessed of any district in the Province.

41. The amount of the assessment having been decided, the method of assessment had next to be determined. At the first regular settlement a fixed assessment was imposed on irrigated and unirrigated lands alike. At that time no defence was considered necessary for a fixed assessment wherever it could be imposed. Since the construction of the great Government canals in the Punjab, differential crop rates have come to be regarded in the words of an eminent authority as the "mainspring of all canal economy, improvement and extension." The extension of the system of fluctuating assessments to unirrigated tracts has been a later development. In the Bannu district the possibility of the transfer of the canals to the Irrigation Department necessitated a reconsideration of the whole system of assessment as regards all irrigated land. In the same way it was argued that a fluctuating assessment was peculiarly appropriate to the unirrigated tracts of Bannu where the crops are dependent on a scanty rainfall and have always been considered notoriously insecure.

The people themselves had no two opinions on the subject. They one and all expressed the most decided preference for a fixed assessment. It was particularly noticeable that nowhere was the opposition to any innovation so pronounced as among the Marwats whose fellow-tribesmen of Mulazai in the Dera Ismail Khan district were at that very time paying their revenue in the form of a fluctuating assessment. In the end it was decided to maintain the fixed assessment throughout the district and here it will be as well to examine the grounds on which this conclusion was arrived at. It is simplest to give preference to the question of the assessment of unirrigated lands. Broadly speaking these fall into two natural divisions, the sandy plains of the *Thal* and Southern Marwat and the stiff clay country between the Gambila and the Bhitanni hills.

#### Sandy soil.

In the former tract complete failure of the crop is unknown and the fluctuations in the matured area are much less than might be expected in the light of the rainfall returns: in every village crops and conditions are fairly homogeneous in bad years, suspension of revenue affords relief almost to the same extent as fluctuating crop rates. A comparatively heavy assessment has always been imposed on this tract and no extraordinary difficulty has been experienced in its realization. The area in the hands of money lenders is now no doubt very much larger than it was thirty years ago but there has been no such wholesale expropriation of peasant proprietors as to suggest that none but capitalists can survive under a fixed assessment. On the other hand a system of fluctuating assessment would be extremely difficult to work in this part of the district as the *vesh* system has left an indelible mark on the shape of the fields. It is no uncommon thing to find a field a yard wide and a mile long. All the fields are long narrow strips where the *Patwari* with the best intentions in the world would find it difficult to grade the crops, as he would have to do, field by field. Further there is no doubt whatever that in the Marwat tahsil with its unsavoury revenue traditions the *zamindars* would be subjected to all kinds of exactions at the hands of the *Patwari* and *Kanungo*. As a precautionary measure it has been provided that in the event of the fixed assessment breaking down in any of the villages of the Shiga and Gadwad circles fluctuating rates may be introduced. But as the average soil rates are little higher in these circles than they were thirty years ago when prices were 60 per cent lower, this contingency is very remote.

#### Stiff soil.

In the west of the district the conditions prevailing in the Pakha circle were found to be almost identical with those in Dera Ismail Khan: the harvests are extremely insecure and the working of the fluctuating system presents no greater difficulty than in the neighbouring district. It was found in the end unnecessary to abandon the fixed assessment. At the present settlement the enhancement of revenue in this circle was merely nominal; the former demand if not realized with regularity has in most cases been paid in full: there is consequently little danger of the fixed assessment breaking down. As an experiment every village in turn was formally given the option of a fluctuating assessment. Without exception they elected for a fixed assessment. In this circle as in Shiga and Gadwad a system of alternative fluctuating rates has been prepared. In the event of a village falling into hopeless arrears or the people electing for the change, the fluctuating rates can be substituted for the fixed assessment. It must be understood that, once a fluctuating assessment is introduced, no reversion to a fixed assessment will be permitted during the course of the settlement. The rules regarding alternative fluctuating rates will be found in the appendices.

In the case of the Wazirs holding land in the *Thal* or the west of the district, the leniency of the assessment coupled with the fact, that a large proportion of the nominal revenue is remitted in return for frontier service, renders it unnecessary to introduce a change in the method of assessment, which is in this case open to the further objection of being likely to lead to friction between the revenue officials and the wilder spirits of the tribe.

The method of assessment to be adopted for irrigated land was a more complicated problem. It is necessary to preface any discussion of the subject by stating that the canals have been dug by the people, that the state has spent nothing on their construction or their upkeep and that Government has therefore no claim to water rates or any charges which represent interest on capital; in fact the capital outlay has been the people's and the limit of the Government demand is the half net asset standard. As things stand at present the area of crops sown and matured varies very little from year to year; there is neither reason to assess the water apart from the land nor to substitute fluctuating rates for the fixed assessment

Unless the State undertakes the purchase of the system outright or so improves the available water supply as to render the produce of land more valuable, no charges on account of water can fairly be imposed on the the cultivators. The vested interests in the canals are so valuable that the former alternative is out of the question if Government management is to pay even a moderate return on the capital outlay. As regards the second alternative the avowed object of the proposed charges is to extend irrigation to tracts at present waste or unirrigated, not to increase the supply of water to land already under irrigation. In fact the danger is that under the management of the irrigation department the supply of water to the existing canals may be curtailed. On this point there has been the greatest apprehension amongst the *zamindars*, and it was necessary for the Revenue Commissioner to allay the excitement on this score by the grant of a written undertaking to the effect that no scheme would be entertained, which involved any reduction of the area under crops or rendered impossible the cultivation of the grade of crops now grown on irrigated land. It is understood that, if the irrigation department take over the Bannu canals, sufficient water will be given to the lands now under irrigation to enable the *zamindars* to maintain the present standard of agriculture and that all surplus water made available by scientific management will be passed off to new irrigation. Thus as regards land now classed as irrigated no change of conditions is contemplated, and therefore no change in the method of assessment is necessary or desirable. A fixed assessment is thoroughly appropriate to a tract in which fixed conditions prevail. The above arguments do not, of course, cover the substitution of paid for statutory labour, but in this case a special canal cess can easily be imposed in addition to the fixed assessment.

New irrigation on the other hand will be liable to both land revenue and water rates. In the event of Government extending the sphere of irrigation to unassessed land, a dry rate of eight annas per acre will be imposed as fixed land revenue. If unirrigated land already assessed comes under irrigation, no change will be made in the fixed land revenue. In both cases water rates, presumably differential crop rates, will be charged by the irrigation department, but these must be drawn up later in accordance with the circumstances of the time. One other difficulty was experienced in the assessment of irrigated land. On the two private canals from the Lohra the owners have for some years been at liberty to give or refuse water to a cultivator as they pleased. Accordingly in the Marwat assessment report I was driven to propose a fluctuating assessment for the Tandoba circle. With the application of the Minor Canals Act to the district and the inclusion of these two canals in Schedule II, this difficulty was removed. With the consent of the canal owners a record of rights was prepared for the two canals and a sphere of irrigation was defined for each, within which the canal owners are required to supply water to the irrigators. Fixity of conditions having been secured, a fixed assessment was imposed here as elsewhere but as in the Shiga and Gadwad circles fluctuating rates have been drawn up which can be substituted for the fixed assessment should circumstances render this course necessary. These rates will be found in the appendices.

In conclusion I need only add that the retention of the system of fixed assessment has given the greatest satisfaction in the district, and evoked many expressions of gratitude.

42. The detailed soil and crop rates are given by circles in the appendices. Owing to the different systems of soil classification adopted in the present and the regular settlement a comparison between the soil rates given in Mr. Thorburn's settlement report and those now sanctioned for the district is impossible. But in the following table will be found a comparison between the irrigated and unirrigated rates of the two settlements. The rates given for this settlement are the rates obtained from the sanctioned assessments which bring out some Rs. 3,000 more than the sum actually imposed.

Tahsil.	Circle.	Rate per cultivated acre.			
		Irrigated.		Unirrigated.	
		1877.	1907.	1877.	1907.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bannu	Bannu	2 10 8	3 10 8	...	...
	Trikha	1 5 4	1 14 5	...	...
	Lohra	1 3 6	1 4 0	...	0 12 0
	Nar-Landidak	0 11 6	1 10 0	...	...
	Eastern Wazir	0 11 8	1 6 9	0 3 3	0 5 11
	Western Wazir	0 12 0	1 9 0	0 2 0	0 7 0
Total Tahsil		1 11 0	2 7 6	0 3 0	0 6 4
Marwat	Shiga	...	...	0 7 10	0 7 11
	Pakha	...	...	0 7 7	0 6 6
	Gadwad	...	...	0 7 1	0 7 1
	Tandoba	0 10 3	1 8 2	0 5 10	0 5 10
	Nar	0 10 9	1 9 0	0 7 6	0 8 10
Total Tahsil		0 10 6	1 8 5	0 7 7	0 7 6
District		1 8 0	2 2 0	0 6 9	0 7 3

From the above table it will be seen that the new rates for unirrigated land in Marwat are practically the same as those imposed at the last settlement and that the only unirrigated rates which have undergone any enhancement are those for the Wazir circles, where the previous assessment was admittedly nominal. In view of the rise in prices some explanation is no doubt demanded for the apparent leniency of the present settlement as regards the unirrigated lands of the Marwat tahsil. The explanation is very simple. In the first place, as has been noticed before, the previous assessment of the unirrigated tracts of Marwat was extremely severe and out of all proportion to the assessment imposed on irrigated land. In the next place the land, which has come under cultivation since the first regular settlement, has naturally been of inferior quality to that first broken up by the tribe.

On the other hand with the exception of the Lohra circle, where there has been a deterioration in the efficiency of irrigation, the rates for irrigated land have every where undergone a considerable enhancement

The previous assessment of irrigated land in the two Wazir circles and the Nar and Landidak colonies was merely nominal. With the extension of the Lohra canals in the Tandoba circle, the character of the agriculture in that tract has undergone a complete change ; more valuable crops are grown and outturns are generally much heavier than was the case 30 years ago.

The rates imposed in the Bannu and Trikha circles are in regard to the value of the produce and the prevailing rents the lowest in the whole district outside the Wazir circles, but the pressure of the population on the soil and the smallness of the holdings rendered any further enhancement in this direction out of the question. For the whole district the soil rates on irrigated land average Rs. 2-2-0 and on unirrigated Re. 0-7-3 per cultivated acre, the corresponding crop rates being Rs. 1-15-0 and Re. 0-11-0 per acre matured. Per head of population the average incidence of the new revenue is Rs. 1-14-0 and per holding to Rs. 4-10-0

#### 43. The sanctioned soil and crops rates are given in the appendices.

Distribution of the fixed assessment. In the assessment of villages crop rates were on the whole more useful than soil rates and in the Bannu circle differential crop rates worked out on the harvest statistics of the preceding six years formed the basis of the village assessments. At the same time full allowance was made in every case for any divergence from the circle standard. The internal distribution of the revenue was in most cases left to the people themselves. In the majority of villages arbitrators were appointed and these were assisted in their work by the *Tahsildar* or *Naib Tahsildar* of the circle. In the *barani* tracts of the district, where the productive capacity of the land is very much the same, the task of distribution presented no great difficulties. In the Bannu circle the most minute distinctions are recognised between field and field. Advantages of soil and irrigation were of course taken into consideration, but above and beyond this every yard of distance from the hamlet, involving as it does additional trouble and expense in the carriage of manure, was reckoned as a disadvantage to be included in the *bach*. Fortunately a very careful *bach* had been prepared for this circle in the first regular settlement and in many cases the *samindars* elected to maintain the former arrangement unchanged. The soil and crop rates drawn up for assessment purposes were seldom used in the distribution of the demand over the holdings. In most cases the cultivated area of a village was graded into three or four classes and the revenue distributed accordingly. In few cases was any sum imposed on waste land. In *vesh* villages the revenue was occasionally distributed on the "*khulas*" or shares : but, as *khulas* are of equal value and soil distinctions are nowhere marked in these villages, no objection was taken to this arrangement.

In the Bannuchi villages the separate ownership of land and water creates some difficulty in the distribution of land revenue. The natural corollary to this system would appear to be the separate assessment of land and water. But the difficulty is more apparent than real. Strangely enough no charge is ever made for the use of water. The ownership of water simply gives priority of right in irrigation. Water and land may in some villages be sold separately but no man will buy land unless he has water : thus water is never sold and land left without any means of irrigation nor is land ever sold and the water applied to waste. Duality of assessment was avoided in the first regular settlement by the insertion of a provision in the irrigation code that should water not be supplied in the customary and recorded way, the district officer may either re-distribute the assessment rating seven-eighths on the water and one-eighth on the land or may require the whole body of water-owners to allot an appropriate share to the land. In the 30 years succeeding the regular settlement, it has never once been necessary to enforce this provision. The same conditions have been maintained in the revised code of irrigation, and it is most improbable that any difficulty will arise in this connection.

#### 44. In all thirty petitions for reconsideration of the assessment were presented and rejected without exception. The number

\*Applications for revision and appeals. of appeals was 18 of which only two were accepted, the revenue of Nar Sher Khan Isakhel being reduced from Rs. 1,400 to

Rs. 1,300 and the revenue of Nar Kulli Khan Pasanni from Rs. 600 to Rs. 480. Objections to the method of distribution were surprisingly few for a district which has earned the reputation of being the most litigious in the North-West Frontier Province.

45. The assessments have in accordance with the Chief Commissioner's Terms and settlement and instal- orders been announced provisionally for a term of twenty years. The revised assessment came into force from *kharif* 1907 and the settlement will therefore expire with the *rabi* harvest of 1927.

The dates fixed for the recovery of the revenue are given in the following table :—

			<i>Kharif.</i>		<i>Rabi.</i>	
			1st instalment.	2nd instalment.	1st instalment.	2nd instalment.
Tahsil Marwat	...	...	15th January.	Nil.	1st July.	1st August.
Tahsil Bannu	Bannu circle	...	15th December.	1st March	15th July	Nil.
	Other circles	...	15th December.	1st January	15th July	Nil.

The second instalment of the *kharif* revenue in the Bannu circle is deferred to March 1st to enable the *zamindars* to dispose of their sugarcane which is not cut as a rule till January and February.

46. The regular cesses will be as follows :—

		Rs. A. P.	
Local rate	...	8 5 4	per cent of land revenue.
Lambardari	...	5 0 0	" " " "
Total	...	13 5 4	

These cesses will also be charged on mill revenue and date-palm revenue. In the case of villages enjoying frontier remissions cesses will be charged on the gross revenue as in the other districts of the North-West Frontier Province and not on the net revenue as formerly in Bannu. In addition to the above cesses it has been proposed that an irrigation cess of 2½ per cent be charged on the revenue of all canal irrigated land with the exception of land defined as being within the sphere of either of the private canals. This cess will be credited to the excluded local fund known as the *Nagha* fund and utilized on the improvement of the canal system and the maintenance of the district irrigation establishment. At the same time it has been proposed that a contribution equal to the total value of the irrigation cess shall be paid by Government every year and credited into the *nagha* fund which will this be drawn from three sources :—

- (1) The irrigation cess.
- (2) The Government contribution.
- (3) Fine levied on defaulters who have failed to supply labour for canal clearance, constructions of dams, etc.

47. In many villages the enhancement of revenue exceeds 100 per cent. In accordance with the resolution of the 16th of January 1902 on the land revenue policy of the Indian Government revenue payers have been given some time to adjust their expenditure to their reduced incomes. Under the system of progressive

Progressive assessments.

assessments sanctioned by the Chief Commissioner the payment of the sums detailed in the table below have been deferred as follows:—

			1907—1910.	1910—1911.	1911—1912.	1912—1914.	1914—1927.
			Rs.	Rs.	Rs.	Rs.	Rs.
Deferred	...	...	68,387	40,862	36,100	25,700	Nil.
Net revenue	...	...	3,65,737	3,93,262	3,98,024	4,08,424	4,34,124

In all the amount surrendered by Government in progressive assessments amounts to Rs. 3,33,523. In villages under progressive assessment, the amount deferred is in every case a definite fraction of a rupee and in the *bach* paper bound up with the new record of rights the actual rates for the initial, intermediate and final demands have been given so that no difficulty should be experienced when the period of deferred assessment comes to an end.

48. The subject of assignments is discussed in the last chapter of this report. In all these amount to Rs. 50,216 or 11·6 per cent of the gross revenue, but with the progressive assessments the payment of assignments amounting to Rs. 1,817 is deferred for three years. After seven years, when the term of the progressive assessments has expired, the net revenue of the district will be Rs. 3,83,908. The initial demand 1907-1908 amounts to Rs. 3,65,737, gross revenue or Rs. 3,17,338 net revenue as against Rs. 2,61,490 and Rs. 2,26,347 the gross and net assessment of the last settlement

49. In addition to land revenue proper, water dues have been imposed on the two private canals of Marwat under section 8 (ii) (c) and (d) of Act III 1905. The figures dealing with this assessment are given below—

Canal.			Estimated gross profits.	Estimated net profits.	Assessment.
			Rs.	Rs.	Rs.
1.	Ghulam Muhammad Khan	...	24,782	18,261	3,550
2.	Daurana Khan	...	18,709	13,780	2,750

The payment of one-third of these water dues is deferred for five years on the analogy of progressive assessments. The water dues represent 80 per cent of the limit of the Government demand *viz.* one-fourth of the net assets of the canal owners and are also roughly equivalent to one-fourth of the land revenue of the tract irrigated by the two canals. In deference to the wishes of the canal owners and in consideration of the fact that spheres of irrigation have been defined, the water dues are in the form of a fixed assessment. It has further been provided that should there be any considerable transfer of land from one canal to another for purposes of irrigation, one-fourth of the fixed land revenue of that land will be similarly transferred from one canal owner to the other as representing the corresponding water dues. Similar adjustments can be made for any considerable decrease in the irrigation due to failure of the water supply or deterioration of the soil. In the event of new land being brought under irrigation, water dues will be calculated at the rate of eight annas per cultivated acre. Finally should it become necessary to substitute for the fixed land revenue of this tract the alternative fluctuating rates given in the appendix, it will probably be advisable to revise the water dues in a corresponding manner. In this case a rate of eight annas per cropped acre will be levied from the owners of the two canals. No cesses are levied on water dues.

## CHAPTER VI—REVISION OF THE RECORDS.

50. The present settlement included not only the reassessment of the district but also a special revision of the record of the rights. At the first settlement "the Wazirs,"

Maps.

Mr. Thorburn has written "were as obstructive as they dared to be and gave little information." It is therefore not surprising that the maps and records of the two Wazir circles have been found very misleading. Elsewhere the work of the last settlement was extremely accurate, the mapping of the most highly irrigated portion of the Bannu tahsil being particularly admirable. It was, however, decided that the whole district should be remeasured in the present settlement. In the Kurram basin, which includes all but a small area of the district, the survey was carried out on the square system and triangulation was only employed to locate base lines for the squares in the two estates of Pezu and Paliana which lie outside the ring of hills encircling the district. As an instance of how wedded some settlement officials are to the square system it is perhaps worthy of mention that the *Naib Tahsildar* in charge of the south-east circle at first carried his squares out of the Marwat plain through the Darra Tang gorge and so along the Kurram banks and round the Sheikh Budin range until he arrived at level ground whence he began his survey of Paliana. No attempt was made to measure the district on one base line. The settlement *Patwaris* were with few exceptions raw recruits and the district *Patwaris* were most of them very distantly acquainted with the square system. With such a staff the extreme accuracy required for a survey on one base line was unobtainable. To avoid accumulative errors in measurement a separate base line was laid down in every village or where the villages were very small, four or five villages were measured on one base line. The position of the base lines has in every case been marked by stone pillars. The unit of length in measurement was the *karam* of 5 feet 6 inches, the chain being 55 feet or ten *karams*. The table of area measure was as follows :—

9 square karams	= 1 marla.
20 marlas	= 1 kanal.
8 kanals	= 1 acre.

The maps of the last settlement were drawn on the scale of 30 *karams* to the inch in the highly irrigated villages of the Bannu tahsil and of 60 *karams* to the inch elsewhere, equivalent to 32 inches and 16 inches to the mile respectively. In the irrigated circles it was found that maps on an even larger scale than 30 *karams* to the inch were required. In the present settlement the irrigated portion of the district has been mapped on the scale of 20 *karams* to the inch or 12 inches to the mile. Elsewhere with the exception of certain estates in the Wazir circles where the scale has been 80 *karams* to the inch the maps have all been prepared on the scale of 40 *karams* to the inch or 24 inches to the mile. I now regret that the survey of the Wazir estates, measured on the 80 *karam* scale, was not carried out on the same scale as that of the unirrigated tracts of Marwat. 80 *karams* to the inch is perhaps too small a scale where there is any cultivation. At the next settlement it may be advisable to re-survey these estates on a larger scale. For the rest of the district it is hoped that it will be possible to bring the maps of this settlement up to date without a fresh survey. The original field maps were made on English mapping sheets. Where these show any signs of wear and tear from frequent handling, tracing cloth copies are attached to them. A tracing cloth copy has been made in every case for the *Patwari's* record and a copy on cloth for daily use. From the original maps a reduction or index map has been made by the *Patwaris* on the scale of 240 *karams* to the inch or 4 inches to the mile. A *mujmili* map of the whole district was prepared by compiling the index maps of the various estates. As the settlement *masavis* were reduced by the topographical survey party in Bannu for their one inch to the mile map, which is shortly to appear, no copy of *mujmili* map has been furnished to the Survey Department, nor has any attempt been made to prepare a topographical map of the district from the *mujmili*. Reductions of the *mujmili* map are to be supplied to the revenue officials of the various circles and are bound up with the English village note books.

In every case the maps have been coloured in accordance with the instructions in the Punjab Land Measurement Manual. The original mapping sheets are filed in tin-lined *almirahs* in the district *Kanungo's* office. The tracing cloth copies with the *Patwaris* are to be kept on wooden rollers which have been provided for the purpose.

51. Some difficulty was experienced in mapping the fields of *vesh* villages or of villages in which the *vesh* tenure, though extinct, has left its mark on the shape of the fields.

The fields are all long narrow strips, in some cases less than a *karam* in breadth and over a mile in length. In the settlement of the Peshawar district similar difficulties were encountered when Sir Louis Dane, K.C.I.E., aptly described such fields as "length without breadth." In Peshawar the *vesh* system was declared extinct and the fields converted into squares. Apart from the survival of the *vesh* in several villages of Marwat, the plan of converting the fields into squares would have been of little advantage in this tahsil. On the plains of Marwat sandstorms obliterate every mark during the hot weather. When the time comes to sow the autumn crop, the *zamindars* have to locate their fields and field boundaries in their own way. This they do by forming in line on the edge of a ravine or some permanent land mark and advancing abreast across the ground putting down tufts of rush or fragments of broken pottery to mark their boundaries. Thus the remeasurement of every field takes place once a year: as things stand now the people require no outside assistance in this task: to convert the fields into squares would render it necessary that the *Patwari* should be called in every year to adjust the field boundaries, an opportunity which a corrupt *Patwari* might be trusted to make the most of. Given that the fields were to remain as before, their reproduction on a map of moderate scale was out of the question. Many of the old settlement maps are quite illegible as all that appears on the 60 *karam* scale is a forest of lines at an infinitesimal distance apart, amongst which it is impossible to distinguish the field numbers. Eventually it was decided to omit from the maps the parallel boundary lines between the fields. The boundaries of the *chak* alone are shown and in the map is written "field number 1 to field number 65," as the case may be, and "north to south" or "east to west" according to the direction in which the field numbers run. The *jamabandi* contains the area and all details of ownership as to every field. It is thus fairly simple to plot out any field on the ground in the event of a boundary dispute, a very rare occurrence in this part of the district, as every *zamindar* is fully acquainted with the method by which his field boundaries are defined.

52. In the following table is given a comparison between the areas brought out by the settlement survey and by the revenue survey of 1877.

Difference per cent.					NUMBER OF VILLAGES.		
					Bannu.	Marwat.	Total.
1 per cent and under	...	...	...	...	78	66	144
1 per cent to 2 per cent	...	...	...	...	86	52	138
2 per cent to 3 per cent	...	...	...	...	23	25	48
3 per cent to 4 per cent	...	...	...	...	22	5	27
4 per cent to 5 per cent	...	...	...	...	8	1	9
Over 5 per cent	...	...	...	...	19	3	22
Bannu tahsil	...	...	...	...	10.9	Difference per cent.	
Marwat tahsil	...	...	...	...	1.8	"	"
District	...	...	...	...	4.1	"	"

It will be seen that according to this table the difference between the survey and settlement areas is 1·3 for the Marwat tahsil and 10·9 for the Bannu tahsil : but it must be explained that the boundaries of the two surveys are not the same. The Survey Department included in their maps a large area in the Bhitanni and Wazir hills while in this settlement the base of the hills was accepted as the boundary, this having been laid down as the principle in the first regular settlement. For example the Wazir village of Gumatti comes into the revenue survey map, while the settlement measurements go no further than the mouth of the pass. In the same way a large area was measured with this district which belongs to Kohat, while within the district itself part of the Marwat was wrongly included in the Bannu tahsil. Under the circumstances the only method, by which any satisfactory comparison could be arrived at, was by reproducing the settlement boundaries on the survey map and calculating the area omitted from the former and included in the latter. Excluding such areas it would appear that final results compare as follows in acres :—

Tahsils and District.						Survey.	Settlement.	Difference per cent.
Bannu	...	...	...	...	...	300,385	297,292	1·03
Marwat	...	...	...	...	...	785,606	775,275	1·3
DISTRICT	...	...	...	...	...	1,085,991	1,072,567	1·2

In many villages considerable difficulty was experienced in comparing the survey with the settlement areas owing to the village boundaries in the two maps being different. In the case of villages with tri-junctions in the stream of the Kurram, where no tri-junction pillar is to be found, the tri-junctions adopted by the survey parties were frequently incorrect. The revenue survey was of great assistance but it is unfortunate that the boundaries of the survey maps are not those of the settlement measurements. All cases, in which the difference between the survey and settlement areas exceeds 2 per cent, were the subject of special enquiry and in every case satisfactory explanations have been given.

Over the whole district, so far as I can ascertain by the method I have described above, the difference between the two surveys is only 1·2 per cent which is fairly equally distributed over the whole area. This is equivalent to an error of ·59 per cent. in linear measurement. I trust that this result will not be considered unsatisfactory while I think we may fairly claim some credit for the rapidity with which the survey was carried out.

53. The arrangement of estates at the last settlement was in Marwat  
 Estates. mainly dictated by tribal considerations, while it is often the case that the tribal lands do not consist of one compact block but are scattered over the country intermingled with blocks belonging to other tribes. Thus it came about that a number of *chaks* measured with one estate were embodied in the records of another. The system has many disadvantages but tribal considerations are still paramount; the statistics of 30 years have been compiled for the estates in their present form. In a few cases, where the change was comparatively simple, rectification of the village boundaries was made but on the whole it was better to leave things as they are rather than to revise the boundaries of over half the estates in the tahsil. In making village or crop inspections it will always be necessary for the district officers to bear in mind the fact that there may be large tracts of land attached to an estate but situated at some distance from the main block from which the village takes its name. The only important changes in the constitution of the Marwat estates were the sub-division of two unwieldy estates named Chauki Jand and Vanda Tala into 5 and 4 estates, respectively. In the Bannu tahsil the Bannuchi estates were with one or two exceptions, which have been rectified in this settlement, compact blocks in which no changes were necessary. The estates in the two Wazir circles on the other hand were both large and unwieldy.

Thus three Wazir estates were broken up into eleven. The constitution of these estates follows, as far as possible, the tribal divisions of the various clans. It was impossible, however, to so arrange that the owners of an estate should belong exclusively to one tribe or section. Thus the old Bakka Khel estate was broken up into two estates Bakka Khel and Takhti Khel. In the latter estate the great majority of the owners belong to the Takhti Khel branch of the Bakka Khel tribe, while the two other sections of the tribe, Sardi Khel and Narmi Khel, predominate in the former estate. At the same time Takhti Khel owners are found in the Bakka Khel estate and members of the other two sections in the Takhti Khel estate. It is necessary to give prominence to these facts, as they are of some importance in connection with the working of the Frontier Crimes Regulation and the confiscation of frontier remissions and might otherwise be overlooked.

For the whole district the number of estates in the revised settlement stands at 388 against 372 the number at the first regular settlement.

Documents of the standing record.

54. The standing record contains the following documents.

- (1) The preliminary proceeding (*Robkar ibtidai*).
- (2) The field map (*Shajra kishtwar*).
- (3) The genealogical tree (*Shajra nasb*).
- (4) The *jamabandi*.
- (5) List of revenue assignments.
- (6) Mutation sheets.
- (7) List of wells.
- (8) List of mills.
- (9) Irrigation custom (*Riwaj-i-abpashi*).
- (10) The order of the settlement officer determining the assessment (*Hukm tashkis*).
- (11) A copy of the order distributing the assessment over holdings (*Hukm bach*).
- (12) The administration paper (*Wajib-ul-arz*).

The *robkar ibtidai* requires no special notice and the field maps have already been described.

Ordinarily the genealogical tree of the proprietors was carried back for four generations only from the senior member of the family alive in the village. In Wazir villages, however, where disputes regarding shares are frequent, the *shajra nasb* was taken back in every case to the original ancestor given in the *khewat* of the first regular settlement. In the same way for those villages of Marwat, where ancestral shares are still the measure of ownership, the table was carried back to the original ancestor of the *taraf*. In the Nar and Landidak colonies again the table goes back to the original grantee. Thus it is hoped that in cases, where disputes arise as to ancestral shares, it will be unnecessary to go beyond the new *shajra nasb*.

Considerable assistance in the work of revision was derived from the fact that the district staff was augmented in March 1903, and that detailed *jamabandis* were prepared for every estate during that year. In all 34,508 mutations were then discovered and attested before the settlement began. *Khatauni* slips were next prepared before the field measurements and then, as each field was plotted, its area was calculated in the field book and entered in due course with all details in the *khatauni* slip. These were checked in turn by the *Kanungo*, *Naisb-Tahsildar*

\* The field books of the settlement are now in the custody of the district *Patwaris* and should be kept up to date.