

**REPORT ON THE
LAND REVENUE SYSTEM
OF BURMA**

REPORT
OF THE
COMMITTEE APPOINTED TO EXAMINE THE
LAND REVENUE SYSTEM OF BURMA

VOLUME II.—Evidence.



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QUESTIONNAIRE

RELATING TO THE

BURMA LAND REVENUE SYSTEM.

A Committee has been appointed to examine the Burma Revenue System and compare it with revenue systems in selected provinces of India. The investigation is to include—

(a) The survey, preparation and maintenance of Land Records of all areas included in existing surveys, as well as the best method of extending surveys of reasonable accuracy to areas not at present so included.

(b) The organization of the Land Records staff, and whether supervision over the Revenue Surveyor is adequate or not, or whether the actual maintenance of village maps and records may not be entrusted to a cheaper village agency, paid by a commission on the land revenue, the Revenue Surveyors becoming Revenue Inspectors, but reduced somewhat in numbers and the present Inspectors becoming Assistant Superintendents of Land Records.

(c) The existing system of settlement, including the question whether a change should not be made, and, if so, how, to a system of fixed assessments and permanent survey numbers.

(d) How far the Land Records establishment should be made better use of in conducting settlement operations?

(e) The actual assessment of the land revenue, the more complete differentiation of the soil areas and the possible application of the soil unit system as a method of differentiation from village to village in the determination of rates.

(f) The system of recording the demand and collection of land revenue with particular reference to the question whether it is not possible to substitute a form of receipt book kept in the possession of every occupant of land, for the system of tax tickets prepared in the district office now in vogue.

(g) The system in vogue of using coercive processes for the collection of land revenue, the system on which land revenue is collected from non-resident holders, and the method on which commission is paid to village headmen.

(h) The distribution of revenue accounts and registers between the Revenue Surveyor, the Township, the Subdivisional Officer and the District Office and the extent to which any changes seem advisable in this distribution.

(i) The better utilization for detailed practical use of the information collected regarding landholders, non-landholders, tenants, and rents paid to landholders and to occupants who are not landholders.

(j) The extent to which absenteeism prevails among landholders in Burma, as compared with absenteeism among occupancy ryots in ryotwari tracts in India and how far land is passing into the possession of non-cultivators who are becoming merely rent collectors collecting rents from tenants at will, and the extent to which tenants in the Lower Burma districts stand in need of protection.

(k) The system on which large grants should be permitted to capitalists desirous of growing commercial crops on a large scale, and what system of tenure should be adopted to protect the indigenous population of the tracts in question from becoming mere tenants at will, or labourers of such capitalists.

(l) Any other matter connected with the administration of land revenue, land tenure, record of rights, assessment and collection of land revenue, which may come to the notice of the Committee as being matters on which they desire to make a recommendation to the Government of Burma.

After such examination and comparison the Committee is to make recommendations concerning any changes which they consider expedient in the Burma Revenue System.

2. The following questionnaire has therefore been compiled. The Scheme of questions deals first with the assessment and collection of revenue as they concern Government, and the Settlement, Land Records and Executive Departments, then with the legal aspect of the revenue records and then with their economic aspect. These main heads are followed by questions relating to survey, to the organization of the Land Records service and its relation to other departments, and to the revenue system in special areas.

I.—THE REVENUE SYSTEM IN ITS FISCAL ASPECT.

A.—THE BASIS AND STANDARD OF ASSESSMENT.

(i) *Land Revenue Proper.*

(1) How far are crop measurements a safe basis for estimating outturns in Upper and Lower Burma respectively, records of prices a safe basis for valuing produce and enquiries into out-of-pocket expenditure on cultivation a safe basis for reckoning cost of cultivation; in particular, what allowance, if any, should be made for the labour of the cultivator and his family and how should the cost of plough cattle be calculated? Is the net produce as at present calculated a satisfactory basis for assessment, and how can defects, if any, in the present instructions or procedure be remedied?

(2) If the net produce basis is maintained what proportion is suitable in Upper and Lower Burma; how far are the prescribed standards observed, how far should uniformity of incidence be aimed at and how may this be attained? (*See* paragraph 224 of Report on Settlement of Tharrawaddy, 1913—15.)

(3) How far can rents be used either as a basis for or guide towards assessment?

(4) How far is the existing assessment fluctuating and is it desirable and feasible to substitute fixed assessments, reducing rates proportionally?

(5) If fluctuating assessments be maintained is it desirable to retain the present variations of this system by which in some places crops are exempted from assessment if they yield less than one-fourth of the average; in others they are exempted only if total failures; in others land is exempted only if uncultivated, as in notified kwins in Lower Burma; and in others the whole occupied area is assessed, as in unnotified kwins?

(6) To what extent is it necessary and desirable to fix the assessment on the crop grown, *e.g.* onions, or tobacco, rather than on the land?

(7) Whatever method of assessment be adopted, what allowances should be made, *e.g.* for insecurity or unfertile patches or fallow areas, in calculating the factors on which the assessment depends? (*See* paragraph 20 of Review by Committee on Settlement of Hanthawaddy, 1907—10.)

(8) How far are the provisions in paragraph 433 to 437 of the draft Land Records Manual relating to the granting of temporary rebates suitable as regards (a) Lower Burma, and (b) Upper Burma?

(9) What is the most suitable period for the duration of Settlements?

(ii) *Service Rates and Taxes.*

(10) Where land is improved by Government irrigation or drainage on what principle should the land be assessed; how should the water-rate be calculated; should the Public Works Department receive a share of land revenue in addition to the water-rate, and, if so, what share?

(11) Where a cultivator improves land, are the arrangements for protecting him against undue enhancement of the revenue satisfactory? (*See* Land Records Manual, Chapter IX, Part B.)

(12) Is the information now given in the tax ticket adequate?

B.—SETTLEMENT DEPARTMENT.

(13) Is it desirable and feasible to adapt assessments more closely than at present to local or individual circumstances by a greater differentiation—

(i) of Tracts, *e.g.* by grouping villages or kwins within the primary tract with reference to their assessable capacity and varying the assessment rates according to groups; or

(ii) of Main Kinds, *e.g.* as rice land, by recognizing well-fed, tank-fed and rain-fed rice land; or as dry land, with reference to its geological formation, as Alluvial, Black, Red or White Soils, or as Clay, Loam or Sand; or

(iii) of soil classes by introducing a longer series of soil classes to accommodate soils of different values?

(14) At present the results of the proposed rates are considered with reference to assessment tracts. Should they be considered with reference to smaller units such as the village tract or kwin?

(15) How far is it desirable or possible to entertain objections to classification, areas, rates of assessment or accuracy of record by individuals singly or in groups, at what stage should objections be

entertained, and what procedure should be adopted to give facilities for assesseees to raise objections?

(16) What use is now made of the data for assessment other than crop measurement, such as rents, land values, and the other matters referred to in paragraph 40 of the Settlement Instructions? In what manner are the data verified, *e.g.* by reference to Registration Offices, and at what stage, and how they are utilised either for assistance in soil classification or in determining the pitch of rates? How far can share-produce rents be utilized?

(17) Can the existing Assessment Tracts, Main Kinds and Assessment Classes be regarded as permanent? To what extent is it desirable that classification should be permanent, and how may this be obtained?

(18) A revised procedure for the conduct of settlement operations has been suggested by Mr. R. E. V. Arbuthnot, as given in the Appendix. How far do you consider these proposals suitable? Would it be desirable to introduce attestation of the Land Records Registers as part of the operations referred to in clause (v)?

(19) How far is the dual control at present exercised by the Financial Commissioner and Settlement Commissioner necessary?

C.—LAND RECORDS.

(20) How far are the revised Land Records forms already circulated with their connected instructions suitable?

(21) Is it desirable or possible to substitute for the annual tax ticket a receipt book to be kept by the cultivator showing from year to year the revenue paid?

D.—EXECUTIVE DEPARTMENT.

(22) How far is verification of the assessment adequate; are the assessment rolls and tax tickets sufficiently checked?

(23) Are the rules relating to reduction of demand for partial or total failures or for fallows satisfactory and suitably applied?

(24) Are the rules relating to the grant of fallow rate on application and the grant of remission satisfactory and suitably applied?

(25) What is the actual procedure at present observed in Township and other offices in recovering revenue and do owners, particularly absentee owners, receive adequate notice of the processes for the recovery or remission of revenue before land is—

- (i) resumed, or
- (ii) sold?

How does the Township Officers ascertain whether resumption or sale is the appropriate action in the event of default; if he acts on the report of the surveyor, how does the surveyor obtain the necessary information?

(26) Is it the practice for headmen to apply for the remission of land revenue which they are unable to recover, and, if so, what action is taken on the application?

II.—THE REGISTER OF HOLDINGS AS A LEGAL DOCUMENT.

(27) How far can the Register of Holdings as it now stands be regarded as a Record of Rights?

(28) Do the enquiries at settlement into the nature and origin of individual, joint and public rights provide an adequate basis for a record of rights and should steps be taken at re-settlement to record them in greater detail so as to provide such a basis?

(29) Is it desirable that the Register of Holdings should be brought up to date at re-settlement and should the Register so revised be attested?

(30) How far are mutations by succession, sale, mortgage or redemption actually at present brought on to the Register and how can the record of mutations be improved?

(31) If the record of mutations is unsatisfactory (*e.g.* as regards successions or redemptions, etc.), should the surveyor, for purposes of assessment only, record the cultivator in occupation even although no formal report of mutation has been received, and should the Register of Holdings be supplemented by a system of voluntary registration conferring a clear title as on the Torrens system?

(32) (a) How far is the provision of the Transfer of Property Act that every transfer which affects property exceeding Rs. 100 in value should be registered, carried out in practice?

(b) How far is the information now furnished to the Land Records Department by Registration Offices regarding transactions affecting land complete, and of assistance in keeping the Register of Holdings up to date?

(33) How far are the Registers and Maps of the Land Records Department accepted as reliable in Civil Courts? How far is it the practice in subordinate Civil Courts for uncertified copies of maps to be accepted in evidence? In some Provinces the Land Records Department assists the Civil Courts in giving effect to decrees affecting land. How far is this desirable and feasible in Burma?

(34) Do deficiencies in the present system result in serious administrative difficulties or do they hamper the collection of revenue?

III.—SETTLEMENT AND LAND RECORDS STATISTICS AS MATERIAL FOR ECONOMIC ENQUIRIES.

(35) How far are the statistics now recorded by Settlement Officers and the Land Records Department of use in providing information regarding agricultural economy?

(36) Can better use be made of the statistics now recorded?

(37) Can the statistics be simplified by omitting matter which is unnecessary or cannot be utilized?

(38) Can they be improved, *e.g.* by constructing index numbers for the cost of living of cultivators and cost of cultivation?

(39) How far can the information which they purport to supply be more suitably obtained by special enquiries?

IV.—SURVEY.

(40) How far is the regular and special survey staff adequate and competent to maintain the maps and survey according to the prescribed system?

(41) At present each parcel of land classified as a separate Main Kind if separately held constitutes a separate holding; would it be preferable to treat as a separate holding each parcel classified in a separate soil class so that no holding should include two rates, or should a single holding include the whole of any continuous parcel of land held by one man irrespective of Main Kinds and Soil Classes?

(42) Should the details now recorded annually by the Land Records Department concerning soil class and rate of assessment, name and status of occupant, tenant and mortgagee and areas under different crops or fallow which are now shown both in the map and register be recorded solely in the register or a field book without any corresponding entry in the map?

(43) Should each field boundary be separately plotted (so far as this is prescribed under the present rules) or should holding boundaries be plotted without interior details—

- (i) in the case of embanked lands, and
- (ii) in unembanked lands?

(44) How far are the present arrangements satisfactory as regards—

- (i) the reprinting of maps, and
- (ii) the colour printing of soil classes?

V.—ORGANIZATION.

(45) Do the present relations between the Land Records Service, including the Commissioner of Settlements and Land Records, Deputy Director and Assistant Director, the Superintendent, Inspector and Surveyors and the Executive Department, including the Commissioner, Deputy Commissioner, Subdivisional Officer and Township Officer, make for the most efficient working of the Land Records system? If not how could they be improved either by bringing the Land Records staff into closer relations with the Revenue Department or by strengthening the position of the Superintendent?

(46) Should the subordinate staff be brought more directly under the control of Superintendent by giving them headquarters at the headquarters of the District, Township or Inspector's charge, and how far would this prejudice the record of mutations?

(47) Is the present proportion of Inspectors to Revenue Surveyors (about 1 to 9) adequate?

(48) How can the Settlement Department make better use of the Land Records Staff and Records, and the Land Records Department make better use of the Settlement Records; how far can this be effected by associating the Settlement Officer with the Land Records work of the district or the Superintendent of Land Records with the Settlement Officer?

(49) How far could the work of the Revenue Surveyor be entrusted to a less highly trained staff of village surveyors, and if thus

relieved could the Revenue Surveyors and Inspectors be allotted some of the revenue functions of the Township Officer? Is re-organization along these lines desirable—

(a) with the present fluctuating assessment,

(b) if a fixed assessment be substituted for the present system?

(50) How far are the present arrangements for the training of officers in Revenue and Land Records duties satisfactory in respect of—

(a) Revenue Surveyors, Survey Teachers, Land Records Inspectors and Superintendents of Land Records,

(b) Members of the Commission, Provincial and Subordinate Civil Services?

VI.—SPECIAL AREAS.

(51) How far is it necessary on the score of expense or otherwise to modify the ordinary system in poor, remote or undeveloped areas?

(52) How far will it suffice in such localities to reduce the work to such survey as is necessary for assessment and to omit the collection of statistics?

(53) How far is it feasible in such localities to substitute for the present assessment on the matured area an assessment on the area sown or on the area occupied?

(54) To what extent is it advisable in such localities to delegate the assessment of individuals or holdings to *thamadis*? Does the present system of lump assessments on *kwin*s work satisfactorily and is it desirable to extend it? Is the *kwin* or the village-tract preferable as a unit?

(55) How far is a reversion to *thathameda* desirable in such localities?

(56) In localities where *thamadis* now distribute land revenue assessments, how far are they assisted by surveyors and how far is it desirable that such assistance should be provided?

(57) How can cadastral survey most conveniently be extended as required and how far should it be extended in advance of occupation?

(58) How far are the existing arrangements satisfactory in respect of surveys of Grants, Leases, Fisheries and Town Lands?

APPENDIX.

PROPOSALS BY MR. R. E. V. ARBUTHNOT, FINANCIAL COMMISSIONER, FOR A REVISED SETTLEMENTS PROCEDURE.

(i) On arrival in the district the Settlement Officer will arrange for crop reaping to be carried out over the whole district as at present. These crop reapings will be carried out each year for three years.

(ii) During the first year the Settlement Officer will tour systematically through the whole district in order to make himself acquainted with the conditions of the district and frame his scheme of assessment tracts, main kinds and soil classes.

(iii) In the course of these tours he will study the effect on the district of the expiring settlement and enquire into the existing economic conditions. The points to which he should pay special attention are the increase or decrease in occupied areas and in the areas under various staple crops during the period of the expiring settlement, the fluctuations in land revenue, *thathameda* or capitation-tax, the facility or otherwise of the collection of revenue, the increase or decrease in rented areas and in rental sale and mortgage values as indicated by the Land Records Statistics, the actual prices prevailing at the time of his enquiries and the average prices for a term of years immediately preceding the settlement as compared with the standard prices assumed at the previous settlement.

(iv) At the end of the first year the Settlement Officer will submit to the Commissioner of Settlements and Land Records a preliminary report for the whole district. This report will be divided into two parts. The first part will embody the main facts relating to the district and to the expiring settlement which are at present embodied in Chapters I, II, III and V and in parts 1 and 2 of Chapter VI of the Settlement Report. The second part will contain his proposals for the formation of assessment tracts, main kinds and soil classes, for the prices to be assumed for the various staple crops and for the formation of price tracts. The report will be accompanied by Report Statements 1, 2, 3, 4, 5, 6, 7, 8, 9, 11 and 14 as at present prescribed. This report will be considered by a Conference consisting of the Deputy Commissioner, Commissioner and the Commissioner of Settlements and Land Records and will be submitted by the Commissioner of Settlements and Land Records to the Financial Commissioner for the approval of Government. The Settlement Officer will meanwhile carry on his operations on the assumption that his proposals will be approved.

(v) Meanwhile during the first year sections of the settlement staff will commence work in the township or townships selected for the commencement of detailed operations. Within these townships they will for each kwin systematically collect statistics of sales, mortgages, tenancies, do the crop marking, prepare errata statements and carry out cost of cultivation, cost of living and (in Upper Burma) *thathameda* enquiries. The statistics of tenancies, sales and mortgages will, as at present, be collected in the field, ordinarily by a Settlement Clerk, who will, also do crop marking and prepare errata statements. These statistics will be checked on the ground by the Inspector. The Inspector in going over ground will note on the map the various kinds of soil and also the limits of any flooded or irrigated land.

(vi) As soon as the statistics of the township have been completed they will be tabulated kwin by kwin, and as soon as the limits of the assessment tract have been fixed they will be combined by assessment tracts. At the same time the correction of the kwin area statements and the making of the preliminary entries showing the field numbers and the area of each field in the classified area statements will be taken in hand.

(vii) In the following field season classification will be carried out in the areas for which detailed enquiries have been made during the

previous field season. The Settlement Officer will thus be able to commence his classification—

(a) With a thorough knowledge of the physical features of the district as a whole, of the main distinguishing features of assessment tracts into which the district should be divided, and of the various kinds of soil to be found in the district. He will also have acquired a knowledge of the past and the present economic conditions of the district.

(b) He will further have before him to assist him in classifying the result of at least two years' crop cutting as well as the complete sale, mortgage and rental statistics recorded by holdings for each kwin in each assessment tract.

(viii) At least ten days before the Inspector visits a kwin for the purpose of classifying, a notice should be sent to the headmen to be published by beat of drum, informing the cultivators of the date of the visit and warning them to attend.

(ix) After the Inspector has completed his classification he should explain to the villagers the system adopted and afford any cultivator who desires it an opportunity of inspecting the map. The cultivators should be informed that they will have an opportunity of appealing against the Inspector's classification to the Assistant Settlement Officer. The Assistant Settlement Officer when he visits the kwins for the purpose of checking the classification should likewise give due notice of his visit. While checking the Inspector's classification he will hear and decide on the ground any appeals against the classification by the Inspector. If any cultivator is dissatisfied with the Assistant Settlement Officer's decision he should be informed that he may appeal to the Settlement Officer whose decision shall be final.

(x) While one portion of the settlement staff is thus engaged in classifying the area for which detailed enquiries had been carried out in the first field season another portion will be engaged in carrying out similar enquiries in the area which will be classified in the following season.

(xi) As soon as the classification of each township has been finished the compilation of the statistics for that township will be completed and the Settlement Officer will frame a scheme of detailed rates for each main kind and soil class in each assessment tract and prepare an assessment report for each township. This report will contain particulars for each assessment tract as given at present in Chapter IV and in Parts 3 and 4 of Chapter VI of the Settlement Report. A separate report will be submitted for each township.

(xii) The township report will be considered by a Committee consisting of the Deputy Commissioner, the Commissioner and the Commissioner of Settlements and Land Records. The Commissioner of Settlements and Land Records will submit the report with the recommendations of the Committee to the Financial Commissioner for the sanction of the Local Government.

(xiii) While the report is under the consideration of the Government detailed enquiries and classification will be proceeded with in the remaining townships, the enquiries being held a season in advance of

the classification. It may be anticipated that sanction to the assessment report first prepared will be received before the detailed enquiries and classification are completed for the rest of the district.

(xiv) On receipt of sanction to the assessment proposals for a township the Settlement Officer will proceed to work out the assessment at the sanctioned rates in detail by assessment tracts. He will prepare for each kwin a statement showing in detail by holdings:—

(a) the existing demand in the current year under the old settlement; the numbers and areas of the holdings and the statement of demand will be taken from the Revenue Surveyor's Register;

(b) the total demand on the whole holdings at the new rates; and

(c) the demand and the new rates on the area assessed in the previous year.

(xv) The rates sanctioned by Government will be adopted as standard rates which will ordinarily be applied throughout the assessment tracts but the Settlement Officer will be at liberty to vary the standard rates in the case of specially poor and backward village-tracts, or in cases where the imposition of the sanctioned rates will involve an unduly large enhancement on any kwin or village-tract provided that the Settlement Officer may not vary in any case by more than $12\frac{1}{2}$ per cent. from the sanctioned rates without the sanction of the Commissioner of Settlements and Land Records.

(xvi) When the statement for a village-tract has been completed a copy will be made over to the headman and a notice published that the register can be inspected on application to the headman and the Settlement Officer will hear objections to the assessment on a certain date which shall be at least one month after the date on which the statement has been made over to the headman.

(xvii) In regard to objections the following limitations to the right of raising objections seem necessary:—

(a) No objection should be permitted in regard to the classification of any field or holding.

(b) The cultivators of a village-tract or of a kwin may object to the assessment proposed and ask for a reduction of the standard rates either on the ground of special circumstances which entitle the village to special consideration or on the ground that the resulting enhancement due to the imposition of the new rates will be excessive;

(c) An individual may object to his assessment on the ground that the enhancement on the aggregate of all his holdings in the assessment tract under the new rates will exceed 50 per cent.

(xviii) If the Settlement Officer after hearing the objections decides that any objection is well grounded, he may in the case of (b) reduce the rates for the whole village-tract or for the whole kwin or for a particular class of land in the village-tract or in the kwin either permanently or for a term of years. In the case of (c) he may grant a certificate of temporary reduction permitting the holding or holdings to be assessed at a special rate for a term of years provided that during that period the holding remains in the possession of the applicant or his heirs. Any reduction exceeding $12\frac{1}{2}$ per cent. on the sanctioned rates will be subject to the sanction of the Commissioner of Settlements and Land Records.

(xix) After the objections have been disposed of, the Settlement Officer will submit for publication by the Local Government a statement of rates for each kwin together with a brief note explaining the reasons for the departure from the standard rates and a statement showing the financial effect of the rates finally proposed as compared with—

(a) the existing assessment ;

(b) the assessment proposed in the assessment report.

(xx) After all the assessment reports have been disposed of and the statement of rates submitted for sanction, the Settlement Officer will submit a brief final report for the whole district reviewing the operations and summarising the final financial results.

PART I.

Replies to Questionnaire by Revenue and Judicial Officers.

Mr. W. E. Lowry, I.C.S.
 Officiating Financial Commissioner, Burma.

Preliminary Remarks.

The value of these notes is unequal. My knowledge of Land Records is fairly extensive and up to date ; of Lower Burma Settlement it is fairly extensive but not particularly up to date ; of Upper Burma Settlement it is neither extensive nor up to date.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Crop measurements if checked with other figures, *e.g.*, outturns as stated by the owner for purposes of rent and the statements of the cultivators as to the actual yield are the best available basis for estimating outturns. At the same time I am inclined to agree that as regards paddy the fields should not be selected on the ground by crop selectors. The Assistant Settlement Officer in office can indicate the field which he thinks is likely to be in an average position, *e.g.* not too close to a village and of an average size in the middle of one of the existing soil classes. If the field is fallow or an unassessable failure a near field should be substituted by the crop selector. Fields damaged by insects or late ploughing or assessable partial failures will be reaped and taken into account. In determining the average outturn of the tract they will be included in the average but in deciding the soil class the fact that for definite reasons they are in the year of settlement below their usual outturn will be taken into account and the soil class in the kwin will not be lowered because of an unduly low outturn. Thus to get the outturn of the best soils in a tract the arithmetical average would be struck—

Kwin 24	...	36.51	(heavily manured)
Kwin 25	...	22.26	(about one-third destroyed by insects)
Kwin 28	...	33.24	
		3)92.01	
		31.67	
			31.67

So long as the cultivators agreed that the best soils in these kwins were alike they would be assessed at the same rate on the basis of a $31\frac{2}{3}$ (or say 30) outturn regardless of the reaped fields giving 22 and 36.

In the case of $\frac{1}{2}$ land growing different crops in different years it is probably most satisfactory to reap the same field yearly and in this way to discover the annual value of its outturn rather than the outturn of individual crops.

I have had no practical experience of the reaping of crops which cannot be reaped on one visit, *e.g.*, chillies.

The question of taking into consideration complete failures in Upper Burma is a difficult one. As already explained partial failures

can be taken into consideration by including them in the crop cuttings ; but complete failures have to be considered with reference to the frequency of bad seasons. I would therefore exclude from crop cuttings all complete failures including failures which although not complete are not assessed under the 25 per cent. rule. The Land Records figures will show what percentage of the area in each tract is a complete failure on the average. This should be allowed for not in fixing the assumed outturn but at a later stage of the calculation of the net profit. This is the mistake that was made in the Sagaing Settlement, with the result that in theory the assessment in certain cases would have been a minus quantity. The point to be considered is that the cost of cultivation of a complete failure is less than the cost of cultivation of a matured field as there is no expense for reaping. No attempt has been made hitherto to estimate the cost of cultivation of failed fields, but there is no reason why it could not be done. In that case the cost of cultivating a holding would be a certain amount for the average percentage of matured fields and a certain amount for the average percentage of non-matured fields. The proportion of non-matured fields would be calculated as explained above. This would give the total cost of cultivation and the total yield of matured fields, and these could be divided between the area of the whole holding. This seems a rational way of taking into consideration the effect of failures.

The Land Records figures for prices are the only ones available over an especially long period to enable a fair average price to be struck. The only alternative it seems is to take the price of the export market and make a constant deduction for cost of carriage from the kwin to the market. By export market is meant the market where the produce of the district is disposed of.

As regards the cost of cultivation I have elsewhere in replying to these questions given my opinion that the cost of cultivation should be worked out on the principle of allowing the cultivator full value for the work done by himself and his family, in exactly the same way as if they were hired labourers ; that is to say, they should be allowed the standard wage, and an allowance should be made for the food consumed by them whilst at work on the same scale as is allowed for labourers' food.

The cost of plough cattle under the present method of calculating the cost of cultivation is a very difficult problem. Mr. Grantham dealt with it at considerable length in the Myaungmya Settlement Report, I believe, but I do not entirely accept his method of calculation. Here again I would go on the principle that the cultivator should be allowed the full value of his own cattle's work as if they were hired at current rates. This is simple ; and it seems to me to have the merit of being equitable also.

The above suggestions indicate methods in which the calculation of the net produce can be improved. At present I can see no more satisfactory basis of assessment, but it must be confessed that any assessment at acre rates presses severely upon a man whose holding is not of an economic size. At the same time it would be exceedingly difficult and probably not desirable to attempt to assess a cultivator at a lower rate because his holding was not of the most economic

size for working, *i.e.*, to assess him on his net profits per household rather than on his net profits per acre.

2. I do not think that any hard-and-fast rule as to proportion is possible, at any rate under the present system where the cost of the cultivator's own labour is not allowed for. If we allow for his own labour and food the balance might be divided into five equal shares—two for Government and three for himself. Rents are now about twice the revenue, *i.e.*, the revenue is one-third of the surplus. Under this proposal the revenue would be two-fifths the surplus but the surplus would be less under the suggested method of calculating the cost of cultivation, so the result would be above the same so far as the revenue is concerned.

3. Rents at present are unreliable when compiled by the Land Records Department because they include a good many doubtful cases under the head of full rent and do not show soil classes. The tenant statistics collected by the Settlement Party are not as numerous as they might be. Rents might be made more useful and ought to be valuable in the Lower Burma paddy plain. The draft Land Records Manual contains my ideas for making the Land Records figures more useful and accurate.

4. The existing assessment fluctuates with the cultivated area of the holding in Lower Burma and with the matured area in Upper Burma. It also varies with the crop or crops. It is therefore distinctly a fluctuating assessment except in backward areas where the Lump Sum Assessment System has been introduced. In some parts of Lower Burma I would be prepared to have fixed assessments subject to remissions for fallow, or complete failure. In that case it would not be necessary to reduce the rates in any way. Where the outturn of a holding fluctuates violently I do not think that the cultivator paying a fixed assessment would be grateful in a year when he was getting his maximum outturn even though he was paying less than the full theoretical rate. He certainly would feel that he had a grievance if we suddenly started making him pay a fairly heavy assessment in years when under existing rules he would get complete remission. Even if the system of fixed assessments were introduced I very much doubt whether we should be able to collect the revenue in Upper Burma in years of complete failure. Fluctuating assessments mean extra labour; but they seem to be just and have the advantage of being understood by the people.

5. The chief difficulty in dealing with fluctuating assessments is to avoid putting too much power as regards assessment and crop failures into the hands of the revenue surveyor. I would simplify the procedure as much as possible especially in the direction of having the same procedure for irrigated tracts in Upper Burma as for Lower Burma. On the other hand, in precarious upland tracts the revenue surveyor must necessarily be given more power in the matter of assessment and crop failures than in Lower Burma or in irrigated areas of Upper Burma.

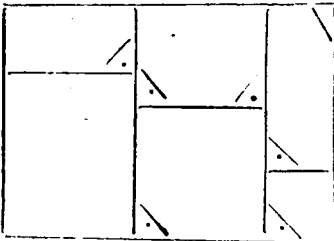
There is a difficulty in dealing with crop failures which are not absolutely complete in the non-precarious areas in Upper Burma, *e.g.* for two years past a certain area in Pynmana-subdivision has averaged over 3,000 remission cases a year. The crop was not a "total

failure abandoned unreaped" so the revenue surveyor had to assess it in full. Direction 134 A (or B) allows a Deputy Commissioner, Upper Burma, to remit a proportion of the assessment in any area equivalent to the proportion of the failure in exceptional years. The distribution of the demand is then done by *thamadis*. I do not know how this works in practice or how revenue would be recovered in case of a defaulter. I would suggest that all unirrigated *ya* crops in Upper Burma should be treated as precarious and all unirrigated paddy should be treated as semi-precarious and the revenue surveyor allowed to exempt from assessment all unirrigated paddy yielding less than $12\frac{1}{2}$ per cent. of the normal crop.

6. Crop rates are justified in the case of sugar if $1\frac{1}{2}$ years are allowed for the crop. Betel-vine may also be treated separately. But I doubt if there is any adequate reason for other crop rates. The area under onions, sweet-potatoes, etc., is too small for special rates to bring in any real addition to the revenue and high rates discourage valuable crops. On the other hand, if land were assessed on its capabilities, e.g. if tobacco land were assessed at tobacco rates even if it grew jowar only the tendency would be to grow the most valuable crop that the land would produce. Soil rates therefore encourage valuable crops whilst crop rates discourage them. There would be no insuperable difficulty in assessing land suitable for groundnut (or tobacco) as an alternative crop; the amount it could pay if under sessamum could be worked out and the amount it could pay if under groundnut. The actual rate would be the mean of these two rates.

7. The fallow area pays nothing in Upper Burma and only 2 annas in Lower Burma. Small unworkable areas need not be taken into consideration. Failures complete or partial would be allowed for as already explained.

In the case of small unworkable areas within the holding boundary I recommended and still recommend the "Excision Dot." This means that although the plot is shown within the holding and within the soil class it is excluded on the analogy of a *dies non*. A sample is given below. So long as the small corners were not cultivated they should be marked with a large green dot which would save a lot of colouring on the map to show that they were not in the holding area and were not irrigated paddy. If worked at any time the Exclusion Dot would be replaced by a crop symbol.



8. At present I can see no better plan than rebates. Intermediate rates are based on an entirely wrong principle. It is the individual who needs protection and this can only be done by some sort of a rebate certificate. The procedure in granting rebates depends on the form taken by the Settlement Instructions when revised. If the rate is fixed before the Settlement Officer goes round he could give rebate certificates.

9. I have no remarks to make on this subject. The present period seems to me to be working well enough as a general rule. Settlements

are frequently made for shorter periods and, on the other hand, they have often been extended for good and sufficient reasons.

10. No district is wholly irrigated and I would settle the irrigated portion just as if there were no water rate to be considered. At the end when rates were being proposed I would work out a combined land and water rate which would leave the cultivator in a somewhat better position than the cultivator in the unirrigated portion of the district, *e.g.* suppose in the dry area the rates left the average cultivating family Rs. 180 a year to live on the rates in the irrigated area should leave the average cultivating family Rs. 240 to live on. (This would be one of the points to be settled by the Local Government on the preliminary report.)

The combined rate (land and water) would have to be split up for accounts purposes. This could be done as follows. Take the unirrigated area and work out the rate per occupied acre over a period of years. Suppose it came to 8 annas per acre. This would represent the land revenue for the period before settlement. To get the revised rates, this 8 annas would be raised by the same percentage as the notified dry rate was raised over the unirrigated area, *e.g.*, by 25 per cent. from Re. 1 to Re. 1-4-0 per acre.

This gives the Public Works Department a share in the land revenue because the average dry rate taken to represent the land revenue share is not the assessed rate, but the actual average payment (allowing for failures and fallows).

11. Very little use is made of Land Improvement Loans and it is now proposed to limit them to Rs. 500 (larger improvements being undertaken by the Rice Control Profits Trust) in order that small schemes for the benefit of individual cultivators may be carried through with the minimum of red tape. If this plan is followed the cultivator will have got back his outlay with interest in a short time.

The Deputy Commissioner cannot reclassify and so until the next settlement the cultivator gets all the benefit of the improvement. If the Settlement Officer when settlement comes round thinks that the cultivator has not yet got back his outlay with interest he can give him a certificate entitling him to a rebate for so many years after which the full revenue will be assessed. A certificate by the Deputy Commissioner is almost unknown and is still less frequently necessary. I only remember one: it was in Yamethin and protected four fields from enhanced assessment until 1922, *i.e.*, for a period during which no enhancement was possible.

12. Yes; in view of the fact that the cultivator can inspect the assessment roll in the village headman's hands which gives him any details not on the tax-ticket. But I have proposed an assessment list with very little information in it to take the place of the assessment roll in the village headman's hands and in that case the tax-ticket should contain more details. I am considering whether in lieu of the present assessment roll the revenue surveyor should not make these entries direct on to the tax-tickets which could be given to him in paged books. The Revenue Office and the headman would check the amounts in the tickets with the amounts in the Assessment List, but it would be the duty of the Land Records Inspectors to see that all amounts in the List agreed with the amounts in Register I.

B.—Settlement Department.

13. All the things mentioned in this question should be considered by the Settlement Officer in fixing his assumed outturn but the fewer details are carried on to the Land Records maps the better. Elsewhere I have suggested six Main Kinds divided by Townships into Price tracts but not soil tracts which would be dealt with by having standard outturn classes A = 5 baskets per acre, B = 10 baskets, C = 15 and so on.

The Settlement Officer might decide that in any given kwin—

- (i) Best tank-fed alluvial = 40 baskets per acre, *i.e.* H class.
- (ii) Second best tank-fed alluvial = 30 baskets per acre, *i.e.* F class.
- (iii) Third best tank-fed alluvial = 20 baskets per acre, *i.e.* D class.
- (iv) Best rain-fed loam = 30 baskets per acre; *i.e.* F class.

On the Settlement maps (ii) and (iv) could be shown separately but on the Land Records maps they would be class F.

One advantage of this scheme would be that each kwin would be considered on its merits. Now if an isolated kwin is much better or much worse than its neighbours it does not get assessed on its merits because the tract is almost always a geographical block without solitary kwins belonging to other tracts within its boundaries.

The above assumes that within the price tract in the Township the cost of cultivation is not sufficiently varied to make a serious difference in the assessment rates. If there should be any such marked difference the price tract might have to be subdivided. But this would, I think, be rare unless land was being brought under cultivation for the first time and even then, I think, normal cost of cultivation should be assumed and any temporary abnormal cost might be allowed for by intermediate rates.

14. The second clause of the reply to Question 13 answers this question.

15. I have elsewhere suggested that the Settlement Officer should in his first year prepare a glorified forecast which would contain the proposed rates based on general principles. These preliminary rates could be published and the Settlement Officer could hear general objections to them. The Inspector's or Assistant Settlement Officer's classification can be objected to and there can be an appeal to the Settlement Officer as he goes round.

Preliminary rates would be published in the villages before the Settlement Officer started his work on classification and the Inspector's classification should be explained by him to the cultivators as he goes round. These steps would enable the people to know what is proposed and the Settlement Officer's tour programme should be published before hand in the villages concerned. The Settlement Officer's forecast and the Government resolution on it would be published in blue book form and could be objected to by persons interested before the Settlement Officer's report was received and the rates finally sanctioned.

16. I rather doubt whether rents, etc., are used at any stage until the actual rates are being discussed. Nor do I imagine they are verified to any extent

I would cut out all doubtful cases and let the revenue surveyor record only rents that were really competition rents and would treat all other cases as not being "full rents," *e.g.* whatever rent was paid by a son to his father would be excluded. Also rents reduced for any reason whatever would be excluded. We should then get fewer statistics but they would be more reliable. So with mortgages; the Surveyor's figures should cut out all cases where land and cattle and jewels were lumped together in one mortgage deed. If this were done the Surveyor's figures would be ready for the Settlement Officer in his preliminary year by kwins and he could compile them by tracts. They would thus be available for use as he went round instead of not being ready till the close of the season.

17. Assessment Tracts, Main' Kinds and Assessment Classes cannot be regarded as permanent so long as each Settlement Officer is allowed to follow his own fancy. We have far too many Main Kinds. They may perhaps be wanted by the Settlement Officer for assessment purposes, but I think that the Land Records should recognise only the following:—

Paddy	...	{	Unirrigated.
		{	Irrigated.
Other crops	{	At soil class rates	{ Unirrigated.
			{ Irrigated.
		At crop rates ...	{ Unirrigated.
			{ Irrigated.

[This does not go into the question of whether crop rates should exist. It merely recognises the fact that they do exist.]

Within these Main Kinds I would convert all the other Main Kinds and soil classes, etc., into assessment classes showing the assessment rate on the map in lieu of complicated symbols, *e.g.*—

Paddy unirrigated	{	Rs. 4-8	}	}	instead of	{	TZ IA
		Rs. 4					TZ I
		Rs. 3-8					TZ II
		Rs. 3					TZ III and so on.

As regards Assessment tracts I would take the Township and split it, if necessary, into Price Tracts and would omit Soil Tracts altogether by having standard soil classes for all Burma. Thus A=5, B=10, C=15 (and so on) baskets per acre. It might occasionally be necessary to subdivide a Price Tract on account of striking differences in the cost of cultivation but this would be rare. [Moreover, some more satisfactory method of dealing with the cost of cultivation may be evolved.] A Price Tract is tolerably permanent unless a railway is built and under this scheme soils would only affect classes and not tracts.

As regards soil classes I would as far as possible treat the kwin as having one soil class only—not worrying about minor differences—and then pick out the extra specially good and the extra specially bad. I would reduce work by not attempting statistics for these extra specials and would assess them conventionally at a fixed percentage above or below the general rate. It might be necessary to split a

kwın before doing this. This was actually done at Sagaing in order to get rid of an assessment tract.

It is certainly desirable that classification, etc., should be as permanent as possible and the above suggestions are made with a view to fixing certain broad classes which would not vary. Within these classes the Settlement Officer would have scope for individuality. But if these broad classes were fixed it would be possible to compare the figures for these classes at Settlement with those at Re-settlement.

It would be a most useful work if the Commissioner of Settlements and Land Records could gradually evolve about six different sets of Settlement Instructions for the different parts of Burma so that neighbouring districts should be settled on exactly similar lines. The general instructions would apply to all districts, but there would be a separate chapter for each of the following for example :—

Lower Burma—Level plain.

Lower Burma—Flooded areas.

Lower Burma—Maritime (Arakan and South Tenasserim).

Upper Burma—Irrigated.

Upper Burma—Upland.

Upper Burma—Mogaung.

18. Mr. Arbuthnot's proposals seem suitable as far as the end of No. 10. His suggestions as regards the Township Reports are unworkable. They are strongly reminiscent of the original instructions to Revision Settlement Officers which had to be discarded without ever being brought into force. At present the Settlement Officer in an ordinary Lower Burma district deals with three or four townships in a single year. Tharrawaddy for instance which now has nine townships was settled in two years. Under Mr. Arbuthnot's proposal an extra year would be added whilst the Settlement Officer was touring round the district, as proposed in paragraph 2 of his note. This in itself would bring the duration of the settlement up to three years and one can hardly contemplate that settlements should be allowed to take longer than at present if we exclude the preliminary year for consideration. Under Mr. Arbuthnot's proposal the Settlement Officer has to write a report for each township separately; after this the Settlement Commissioner, the Commissioner and Deputy Commissioner will consider the report (apparently the Settlement Officer's presence on the Committee is not intended); and after the Committee have discussed the Township Report it will be sent up to the Local Government for sanction. The Settlement Officer has then to work out holding by holding the assessment at the new rates after publication after which he has again to make a tour of the township hearing objections. The working season for purposes of soil classification, etc., runs from the 1st of February to the 15th of May, a total of $3\frac{1}{2}$ months. I do not see how it is in any way possible for the Settlement Officer to deal with three or even four townships in the manner described above in the course of $3\frac{1}{2}$ months. In view of the shortness of the open season after the crops have been removed from the ground I strongly deprecate any attempt to devote any portion of his time whatsoever to the writing of reports and working out the rates. Nor do I see how it would be possible for the Settlement Commissioner or the

Divisional Commissioner to spare time for three or even more conferences every season for each district under settlement; and judging by the difficulty of disposing of the Settlement Reports in previous years it may be doubted whether the Settlement Officer who had to hear objections to the rates fixed by the Local Government would get away from the district within a year of the completion of his report on the last township. He cannot get away earlier because after the Local Government has sanctioned the rates in the last township he not only has to hear objections in that township but has to write a District Report. Mr. Arbuthnot's proposals admittedly add one year at the beginning of each settlement and I should be inclined to calculate that in addition to this they will at least double the duration of settlement operations, so that a two-year settlement would now take four or even five years. If, however, instead of Township Reports we reverted to the old system of Annual Reports, Mr. Arbuthnot's proposals might possibly be put into force except that there would be great difficulty in hearing the objections by the cultivators to the rates fixed during the last year. The objections which may be made are not necessarily such as require the presence of the Settlement Officer himself. Paragraph 17 lays down that classification cannot be objected to, but the standard rates may be objected to on the ground of special circumstances which entitle the village to special consideration, or on the ground that the resulting enhancement due to the imposition of new rates will be excessive. The Settlement Officer will presumably have gone into the effect of the proposed rates on each village and an appeal to him is not likely to give satisfaction to the villagers. I am inclined to let the appeal be to the Commissioner of Settlements and Land Records who before passing orders could consult the Settlement Officer if he were still in the country and had not taken leave. The third ground of appeal is that the enhancement on an individual holding exceeded 50 per cent. This could be dealt with by the Deputy Commissioner under standing orders by which intermediate rates or rebates are permitted.

At the same time I do not like the proposals as they would stand even after amendment.

I would suggest a preliminary year in which the Settlement Officer would go round the district seeing how far the data upon which the last settlement worked were in need of revision. He would not collect elaborate statistics but he would for instance discover that the cost of cultivation had apparently gone up by 20 per cent. and the assumed price of paddy by 30 per cent. in a certain tract in which the proportion of the net profit originally taken was $\frac{1}{6}$. He would report that taking all these factors into consideration the proportion might be raised to $\frac{1}{6}$ giving rates of I=Rs. 5, II=Rs. 3-12-0, III=Rs. 2-8-0. Or he might report that owing to the Yandoon embankment the changes were so great that any forecast would only be guess work. He would during the first rains write, in fact, a glorified and intelligent forecast on which a conference would sit. They would then decide that *assuming the Settlement Officer's provisional figures proved correct* the rates should be as above and get the Local Government's orders thereon. The Settlement Officer would then do

the settlement on the ordinary lines and would have to justify any changes he proposed. He would also have these provisional rates announced in the villages and would hear objections at the same time as he did soil classification, etc. He would then be able to consider the objections when making his final proposals.

This scheme departs very little from existing practice, adds only a year to the Settlement and obtains all the advantages desired by Mr. Arbuthnot.

The attestation of Land Records Registers should not, I think, even if desirable in itself, be undertaken by the Settlement Officer. A great deal depends upon the form finally adopted for the Land Records Registers. The present system by which names may be entered in the registers of owners who legally are not owners at all, seems to be thoroughly unsatisfactory. But if once we could arrange some system by which no name should be altered in a Land Records Register without a revenue proceeding to account for the change I do not think it will be necessary for the Settlement Officer to have a general scrutiny of titles. If any case were brought to his notice in which the wrong person were entered in the Land Records Registers as owner, he might be entitled to open a Revenue Proceeding and dispose of the matter, unless it was one in which the Civil Courts had jurisdiction. But even so, I think it will be preferable that the Revenue Proceeding should be held by the Deputy Commissioner rather than the Settlement Officer.

19. I certainly would not recommend that the Commissioner of Settlements and Land Records should deal direct with the Local Government unless the Excise Commissioner, the Director of Agriculture and the Registrar of Co-operative Credit Societies were placed in the same position. In that case it is not very clear what would be the functions of the Financial Commissioner and Development Commissioner. Until it is known what form the new constitution will take it is impossible to decide what will be the ultimate relation of the Commissioner of Settlements and Land Records to the Financial Commissioner.

But if anything like the existing form of Government continues I think that the Commissioner of Settlements and Land Records should become a kind of Secretary to the Financial Commissioner for all land revenue (including *thathameda*, etc.). The Excise Commissioner should be the same for Excise and the existing Secretary should deal with the remaining subjects of which income-tax is the chief. There would be one office, *i.e.*, half the Financial Commissioner's office expenses would be saved and there would be no official letters passing between the Commissioner of Settlements and Land Records and the Financial Commissioner. The Commissioner of Settlements and Land Records would act independently to exactly the same extent as now but instead of writing officially to the Financial Commissioner he would consult the Financial Commissioner and take his orders and then write direct to the Local Government using the Financial Commissioner's name as his Secretary does at present. There would be no loss of independence but a great gain in office efficiency coupled with a saving of time and expense.

C.—Land Records.

20. I have now proposed four Registers in place of the eight that remained after revision. These four are still under scrutiny, but they serve entirely different purposes and have no reduplication of work that can possibly be avoided. They seem to me to be as great an advance on the revised registers as these were on the existing ones.

The Registers are now—

I.—Register of Holding and Assessments Roll.

II.—Survey.

III.—Season and Crop Report Statistics.

IV.—Land Revenue Administration Report Statistics.

21. The best form of tax-ticket cannot be decided upon until we know how far assessments are to be fixed. My idea is that we shall have to divide up our kwins into—

Class A.—Permanent cultivation where extensions are microscopic and can be ignored till next settlement.

Class B.—Impermanent cultivation where cultivation is so shifting or extending that our present system is the best.

As regards *A.*—I would suggest something on the lines of a lease which would state that as far as Government was aware

Maung was owner of Holding No. ... , area
 I
 II
 III

assessed at Rs. + Rs. ... cess and that he held this land on condition of paying this sum into the headman on a fixed date and that no other notice of demand would be given him. The headman would sign this lease in the proper place in token of having received the money and would also initial the Assessment List to show the money was collected.

In *A* class kwins Rule 77 would not apply and if a cultivator got fallow rate he would only get it by application to the Township Officer who would give him a refund order.

The form (similar to the lease form) should be in a book and not on a sheet, foolscap size. No alterations would be made in this book unless the transfer was legally valid. I think that Revenue and Civil Courts and Sub-Registrars of Deeds might enter transfers in a place provided in the book, making a note in Register Memorandum No. 1 that the book had already been corrected. This is a matter however which wants looking to all round and the above is a suggestion for consideration and not a considered and fixed opinion.

In *B* class kwins where the assessment is never the same two years running, I think the cultivator would refuse to pay without a tax-ticket and I don't think it would be safe. Suppose a list were sent to the village headman of the amounts to be collected he might possibly in collusion with a dishonest clerk have a bogus list prepared enhancing the amounts payable by illiterate persons or those who lived at a distance. He could trust that people at a distance would never have their books checked with the true Assessment Roll because they would never be present at kwin inspection. Frauds with tax-tickets are rare but I am suspicious of an assessment list and an entry in a receipt book.

D.—Executive Department.

22. How far is the verification of the assessment adequate? This I take to mean how far do we verify that a man pays just what he ought to pay.

In class A kwins (see Question 21) we waste time and energy in kwins inspections which are not worth while. In class B kwins we don't inspect enough.

My ideas of saving work and ensuring greater accuracy are embodied in the Land Records Manual. Until the new system is tried, I cannot say how far the present staff of Inspectors will be able to do the necessary supervision. Under present methods they don't always do enough check but with work much cut down they should be able to verify adequately.

Are the Assessment Rolls and tax-tickets sufficiently checked? On the whole yes. The only bad cases I remember in a long experience were—

(a) Four kwins transferred to another district between Settlement and the Notification of Rates continued to be assessed in their new district at the old rates. I doubt if this is possible now and even twenty years ago it required a peculiar combination of circumstances.

(b) A revenue surveyor deliberately took Rs. 5 off holding 17 say and added it on to holding 18 where there was already a fairly large increase due to extension of cultivation. Possibly holding 17 also had a reduction due to it. A check of page totals or kwins totals would not detect this and I see no way of ensuring that frauds of this sort shall be absolutely impossible.

(c) Occasionally a headman falsifies a tax-ticket.

(d) Occasionally a revenue surveyor falsely mutates names.

Genuine errors do not, I think, amount to anything very serious nowadays in the Assessment Roll (Register II) or the tax-ticket. I should not think that one in a thousand is wrong apart from errors going further back, e.g. in Register I or IA or on the map.

23. I held strong views on this subject but the rules have been recently altered on my representation and the worst features of the old system have been removed.

As regards fallows I do not think that the cultivator has any serious complaint. In Upper Burma they are not assessed and in Lower Burma wherever fallows are extensive they are automatically assessed at the 2-anna rate under Rule 77. I think a nominal fallow rate might well be introduced into Upper Burma as a means of getting abandoned land off the Land Records Registers. The reduced rate should be automatic and might be as low as half anna per acre.

As regards failures in precarious areas in Upper Burma the rules are adequate. Partial failures are allowed for when the Settlement Officer proposes assessment rates. Complete failures in Upper Burma and complete destruction by flood in Lower Burma are provided for. The definition of complete failures by flood in Lower Burma might be extended to any land abandoned unrecaped for any cause whatever.

Partial failures in Lower Burma might be dealt with by some less-laborious process than by marking the proportion of destruction field by

field. As a suggestion for consideration partial failures might be dealt with by suspension of revenue and not remission. In that case the opinion of *thamadis* might be taken. The owner would be responsible for the suspended revenue. Suspension is not altogether unjust because flood enriches the land by a deposit of silt and also because the Settlement Officer takes into consideration liability to partial failure.

24. No application is required in notified kwins. In any kwin destruction by flood can be dealt with without application. This really includes fallows (in practice if not in theory). The only cases where applications are required for fallow rates are:—

(1) Notified kwins where the areas destroyed are less than one-third of the total area.

(2) Notified kwins where the fallow is not due to flooding.

Except in districts where the private grazing ground problem requires special consideration (*e.g.* Akyab), I doubt whether there is any very great amount of fallow under these heads. Before any alteration of the rules is proposed, I consider that statistics concerning applications for fallow rates require to be compiled and studied.

25. I do not propose to discuss the actual procedure which is fairly well known.

The absentee owner does not get any adequate notice under the existing rules which go on the theory that it is the owner's business to see that the tax is paid. The result is that hard cases do occur.

A village headman cannot be expected to know anything about absentee owners. I suggest that any absentee owner should register his address in the District Land Records Office together with a list of all holdings on which he wishes to pay the revenue personally. The District Office would send him the tax-tickets by registered post and he would send the tax by money order or by Treasury chalan. This will not be difficult when holding numbers become permanent and the cost will be less than nothing because no commission would be payable on the collection and also there would be a saving in processes, etc. It would be the duty of the owner to see that the list was kept up to date every year. I have an idea that something of the sort was tried in Hanthawaddy.

There is no adequate way of knowing whether land should be sold or resumed unless the Record-keeper supplies a history of the holding which obviously cannot be done for the whole district before March 31st.

I would in all cases resume first. This will save the Township Officer his frantic scramble round his township at the end of March. He would merely resume all land on which revenue had not been paid on March 31st. The total demand would be remitted as irrecoverable and the land would be treated as bought in by Government for the amount of the arrear and costs. I would alter Rule 96 so as to allow of 2½ months' grace from February 15th which would be the same as one month's grace from March 31st as allowed by the Civil Code. Within that time the owner could either pay the arrear plus 10 per cent. (which I would raise to 25 per cent.) or prove a saleable title and demand a sale. After the end of April the Township Officer would dispose of the resumed land under whatever rules were thought

suitable. This avoids complicating the matter by sales to third parties which is the cause of all hard cases. If Government allotted the land it could always resume it after one year if the owner showed good reason for getting it back.

Government would lose very little by this and the gain in avoiding hard cases would outweigh any small cost to Government. The gain from these hard cases never goes to Government, but always to third parties, and if the percentage were raised to 25 per cent. there would be no reason to anticipate that people would default deliberately merely in order to postpone payment.

26. So far as I know the headman has no alternative but to apply to the Township Officer for recovery of the land revenue by process against the land. If the money is not recoverable the Township Officer sees to the remission. The village headman does not seem to have anything to do with remitting. This remark does not apply to capitation, which is in theory land revenue. The village headman might ask the Township Officer to remit the assessment on an assessee who had died leaving no property.

II.—The Register of Holdings as a Legal Document.

27. The present Register of Holdings can in no way be regarded at present as a Record of Rights. The revenue surveyor is now entitled to make an alteration in the record of ownership in spite of the fact that the mutation would not stand in a Court of law. So long as this is allowed the Register of Holdings can be regarded as nothing more than a record of the person or persons from whom land revenue can most easily be collected.

28. The enquiries held at settlement are certainly inadequate as a basis of a Record of Rights. The Settlement Officer puts down in the Register the person whom he believes to be the proper person to pay the land revenue. He certainly makes no pretence of being able to give a clear title to anyone. As a settlement record is not really a Record of Rights it is useless for the Revision Settlement Officer to revise it as suggested.

29. I would allow of no change whatsoever in any name in the Register of Holdings or whatever register may subsequently take its place without adequate documentary evidence such as the Registration Memorandum or the record of a Civil or Revenue Court; or in petty cases where the Transfer of Property Act does not apply, a report to the revenue surveyor. If the Revision Settlement Officer has reason to suppose that there is an erroneous entry in the Register of Holdings he should open a Revenue Proceeding and communicate his orders to the revenue surveyor quoting the number and proceeding.

30. Mutations must be divided into two classes :—

(1) those under the Transfer of Property Act or by the order of the Civil or Revenue Court, and

(2) Those where no such documentary evidence is required.

I think on the whole that in the course of a Surveyor's own enquiries and from the reports he receives mutations are recorded fairly satisfactorily. The greatest difficulty is in recording the names of

heirs where both the original owner and his wife have died. At the same time this probably reflects the legal position correctly, as the estate in such cases has most likely not been divided up. As regards possible improvements in recording mutations, I have already given my opinion that where a registered deed or a Court decree is required by law, a Surveyor should not be authorised to make the mutation without it. If this is held to be inconvenient from a revenue point of view, I would suggest that the column for owner in the revised form of Register I should be subdivided so as to show owners who, so far as the Revenue Surveyor knows, are the legal owners; and in another column those who, although willing to pay the revenue, are not the legal owners. This question wants somewhat careful working out in connection with some better system of giving certificates of landownership than exists at present.

31. I have already answered question 30 and indicated the lines on which improvements might be made; and it would seem that question 31 contemplates something of the same nature. I do not think that the Torrens System can be introduced into Burma in any shape or form so as to give a clear title, and most certainly I should be strongly opposed to any attempt by a Revenue Officer to usurp the functions of a Civil Court. The Revenue Officer could however conveniently summarize the facts as recorded in Revenue Registers for a period of years from which the validity or otherwise of the title might be judged; and I would allow him to give a clear title as against Government although not as between two conflicting claims to ownership.

32A. In view of the fact that a revenue surveyor can give quite a good title for practical purposes without a registered deed there can be no doubt that many mutations are not registered which ought to be, the result is that Government loses a considerable amount of revenue. It would, I think, be no hardship whatever to insist that wherever the Transfer of Property Act must be applied a surveyor should be debarred from mutating the names.

32B. The Registration Offices on the whole give the Land Records Department the information required, and there should be no difficulty in making arrangements for this information to be given promptly and unmistakably. The difficulty lies in the fact that deeds frequently show the holding number of a previous year; and sometimes, especially in the case of house sites in towns, do not specify the holding sufficiently accurately.

33. I should say that they are accepted as reliable records of occupation but not necessarily of rights. Also they would not be treated as conclusive evidence if they could definitely be rebutted.

I do not know whether uncertified copies are accepted. My ideas about uncertified copies are perhaps heretical but I think that a true copy should be equally a true copy whether certified or uncertified. The certification only means that the document is stamped in order to make it admissible in Court. I should like to allow the revenue surveyor to grant a true copy of his maps, etc., and allow the stamp to be affixed at any time.

I do not know what the last part of the question means in practice. The Land Records cannot evict the loser in the Civil Court but even

now it will show in its maps and registers the name of the person shown in the Court decree as the owner.

34. There are no serious administrative difficulties in working the present Land Revenue Code and the revenue is collected without any great difficulty. Improvements are possible but the present arrangements are known and work well.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. If by agricultural economy is meant enquiries into the most economical size of the holding, the most satisfactory rotation of crops, etc., the Settlement statistics do not give much help though the Settlement Reports may discuss these points.

36. The Settlement Report might be re-arranged :—

Part I.—Gazetteer (*i.e.*, description of the district).

Part II.—Economic enquiries.

Part III.—Assessment proposals.

Part I would be bound up with the Census Volumes for the various districts.

Part II would be reprinted in a convenient form for study.

Part III would concern assessments and nothing else.

37. Certainly. For one thing the Land Records Registers should give Tenant and Mortgage Statistics in a form that is useful to the Settlement Department, *e.g.*, showing area by soil classes.

Also it would be a vast saving to omit tables from the printed report except so far as they are absolutely necessary. They are rarely locked at except by the next Settlement Officer (who should have the originals to study) and they delay the printing till it is practically impossible for rates to be notified in time. A year's enhancement is lost on most settlements, largely for this reason.

38. Cost of living is not taken into consideration as it used to be.

Cost of cultivation involves much more enquiry than it is worth. I could never understand why an assessment tract should be assessed on a low profit because the owners preferred to do all the work with hired labour. I would work out the cost of cultivation solely with hired labour and allow this as the cost of cultivation throughout. This is not only fairer but it seems to me to make it easier to assess. Your so-called profits will be less but you will be safe in taking a higher percentage as revenue without hurting the man who is most to be encouraged, *viz.*, the genuine agriculturist.

39. If the Settlement Report had a separate chapter on agricultural economics the Settlement Officer is the best person to make the enquiry. But if you want to get synchronous enquiries you will want a special staff. It takes over 25 years to get round all the districts in Burma. It would probably pay to give the Census Commissioner a preliminary year and let him include agricultural enquiries in his work.

IV.—Survey.

40. I understand that our survey is of a very good quality. It is capable of improvement in detail but on the whole it is done well and without disproportionate expense.

41. I see no advantage in making a holding contain only one rate. It would greatly increase the number of holdings and make the map very intricate. It would make permanent holding numbering more difficult.

I have already proposed to reduce the Main Kinds to six at most and these should be kept in separate holdings as it will not be often possible to amalgamate them in a holding even if desired.

42. The draft Land Records Register contains my views on this point. There is far too much duplication of work.

43. Interior details are necessary if you want to have accurate crop marking (in which term I include fallows and failures).

44. I think that the Survey of India should establish a Map Printing Section at Maymyo under a proper Map Printer from home. The present arrangement is admittedly unsatisfactory both to the Press and to the Land Records Department.

The draft Land Records Manual contains my views on colour printing not only of soil classes but of holding boundaries, etc. The work at present is unsatisfactory.

V.—Organization.

45. I have written a note for Mr. Webb when he was Chief Secretary in which I proposed that the Deputy Commissioner's Revenue office, should be run by the Head Revenue Clerk and that Land Revenue should be put under the Superintendent of Land Records and an Assistant Superintendent of Land Records (*i.e.* the present *Akunwun*). This would make for efficiency as the *Akunwun* would be permanent instead of being a Myoök on special duty. Also the Superintendent of Land Records complains of having to do too much touring especially when he gets old and the *Akunwun* complains of being tied to office all the time. Duplication of work would be avoided and the present rush of work at special seasons would be shared between more officers.

I also wrote a note on the subject of the relations between Commissioners and Departmental Heads. The Commissioner should cease to be a Post Office for reports and returns. He should have the last word in matters of discipline, etc., but he should only be worried with reports and returns by getting extracts which the Deputy Commissioner thinks he ought to see, *i.e.*, matters of administrative interest and not departmental routine.

46. My ideas about collecting the staff at Inspector of Land Records' headquarters are given in the draft Manual. I think it absolutely essential for efficiency.

If my proposal about mutations is adopted the revenue surveyor will only receive reports in petty cases and these can be left without serious harm for him to ascertain when he takes the field.

47. I would reduce the number of revenue surveyors very considerably by cutting out needless work and would leave the Inspector of Land Records with the same jurisdictions as now but with 5 or 6 Revenue Surveyors instead of 9.

Every effort should be made to bring Inspector of Land Records' jurisdictions into line with townships. If an Inspector of Land

Records' charge strays into two townships he should always give separate totals for the two townships and all statistics should be totalled by townships in the Land Records Office and not by Inspector of Land Records' jurisdictions.

48. The present method seems to me to work pretty well. The ordinary Land Records work has to go on during Settlement and if the Superintendent of Land Records has his attention diverted the current work will suffer. But I do not know whether any special idea has been put forward and I should not wish to say that any plan of co-operation was impossible until I knew what was proposed.

49. A village surveyor is, I think, quite impossible in Upper Burma unless we are prepared to have much less accurate crop marking than at present. A *patwari* in Nagpur gets Rs. 18, I believe, which is presumably about the same as Rs. 25 to Rs. 30 here. There are twice as many *patwaris* in Nagpur district as Revenue Surveyors in a similar area in Upper Burma. The present system is, I think, very efficient and very cheap though it can be both cheapened and improved.

In Lower Burma the system could be cheapened by reducing needless work and giving the Surveyors larger charges.

The Township Officer's Land Revenue functions are very limited—

(a) He collects Land Revenue.

(b) He holds Revenue enquiries.

(c) He checks the work of the Revenue Surveyors.

If the Land Records Department were responsible for the collection of Land Revenue the Inspector would presumably take some of this work off the Township Officer. But the Inspector of Land Records cannot assist in (a) under the orders of the *Akunwun*. As regards (b) and (c) I think it is very desirable that the revenue surveyor's work should come under the scrutiny of the ordinary executive officers. It is a very salutary check on him.

I understand that there is no intention of ceasing to collect crop statistics even under a fixed assessment system and I do not think that any cheap agency can be found in Burma to do the work now done by revenue surveyors in Upper Burma. Even in Lower Burma I think my scheme as laid down in the draft Land Records Manual will be cheaper than any other system that can do the work as efficiently.

50. The draft Land Records Manual contains my ideas on the subject of training apprentices and I have no remarks to make as regards the training of other classes of officers, except on the subject of Survey Schools.

The Normal School course for embryo Survey Teachers does not seem to be a success and I am in favour of training our Survey Teachers at the Survey of India Training School.

But I think our Survey School system will have to be scrapped. Whatever scheme is adopted it will mean many less surveyors at least in Lower Burma, and therefore for a period of several years we shall not need any new surveyors at all. We shall have to absorb our superfluous men before we want any more. This means that our Survey Schools will close down and we shall have to use up our Survey Teachers as Record-keepers, Inspectors, etc. (The Commissioner of Settlements and Land Records is now considering a proposal to put Survey Teachers back in the ordinary cadre with a charge allowance.)

When we have closed down the Survey Schools we shall probably be able to make use of the men trained by the Survey of India in their school. The Surveyor-General seemed to think that some such scheme would ultimately be quite possible. Before a man went into a district as revenue surveyor he could take a three months' course of Revenue Law and Arithmetic at the Survey School.

VI.—Special Areas.

51. The present system is too expensive in such areas if they are brought under Supplementary Survey and too *kutchra* if they remain outside survey. I have proposed an improved method for areas outside survey in the draft Land Records Manual.

52. In the areas under fixed assessment we have had to give up the idea of collecting statistics I presume.

53. I do not like lump sum assessment though it saves a lot of work. Suppose that Rs. 5 is a man's full assessment and the lump sum is Rs. 3. The assessee does not feel grateful when he pays Rs. 3 instead of Rs. 5 and is distinctly aggrieved when he has to pay Rs. 3 instead of *nil* on a total failure.

54. I have not seen lump sum assessment actually being worked. The village tract should be the unit.

55. This seems much the best solution of the difficulty.

56. I have no experience of *thamadis* distributing land revenue assessments. But they do not seem to be an unmitigated success in distributing *thathameda* assessment to judge by Mr. Reynolds' enquiries in Magwe.

57. The present system works well enough for small extensions and for large extensions we have special surveys.

Cadastral survey in advance of occupation is likely to be labour lost, but I do not know what this question refers to particularly.

58. *Grants and Leases*.—In the new draft Manual I have suggested a staff of licensed surveyors to do the work. But it would be far more satisfactory if applicants for large areas employed their own men and produced their own map which the local Superintendent of Land Records would check. We should then avoid the present recriminations concerning the clearing of boundaries. If there were work for them I think there would be private surveyors in Rangoon, e.g., I think Mr. Torrens undertook survey. A man like Mr. Palmer, Deputy Director of Land Records, who retires at 55 in good health could probably run a Survey Agency with great profit to himself and to Government.

Fisheries.—No remarks.

Town Lands.—We want much less in the way of interior detail, see draft Land Records Manual for my views on this subject.

Mr. J. Mackenna, C.I.E., I.C.S.
Development Commissioner, Burma.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. It is about eighteen years now since I was connected with Settlement or Land Records work and my knowledge of the subject is therefore rather rusty. But in the old days we took crop measurements and enquired into cost of cultivation and the results were pretty satisfactory as they were based on the average of many enquiries so that I considered them a safe basis. The record of prices was not very trustworthy, but I understand that something has been done recently towards improving this. Rs. 100 for 100 baskets was generally taken as safe.

4. I do not altogether favour the idea of fixed assessments. On flooded and exhausted lands they would certainly be unsuitable. There is something to be said for them where there is not much fallow and the assessment and areas remain the same from year to year. Perhaps under such circumstances they might be sound, and I consider that an experiment on these lines might usefully be attempted in a district with fixed cultivation.

5. Even if fixed assessments were introduced I should like to see provision made for granting fallow rates in Lower Burma. In Upper Burma the question has not yet assumed importance but now that capitalists are applying for large areas and it is proposed to consolidate the law for both parts of the province with the introduction of landholder's right into Upper Burma, the assessment of fallow lands at a fallow rate might be advisable. However, small cultivators chiefly benefit by the present arrangement and I do not quite like the idea of assessing them more heavily.

B.—Settlement Department.

19. I consider that the Financial Commissioner and the Settlement Commissioner are both necessary, but it might be desirable for the Financial Commissioner to be a member of the Settlement Conference. This would reduce correspondence.

D.—Executive Department.

22 The degree of adequacy of the verification of the assessment depends a good deal on the energy of the district officers and we are always being told in reports that district officers do not display sufficient energy in this respect. The initial check, I mean comparison between the assessment roll and tax tickets, is, I consider, pretty satisfactory. I do not remember that I used to find many errors at inspection. I should like to see more inspections made after February, but I recognize that there are difficulties in getting hold of the surveyors and in collecting cultivators. It might be useful to introduce an inspection form for inspection of land records by Township Officers. These at present are largely formal and the main objection to introducing an inspection form would not apply.

25. So far as I remember, the people liables for land revenue receive adequate notice. They are usually pretty mart in paying up and I cannot recall any difficulties in this connection.

II.—The Register of Holdings as a Legal Document.

27. We generally look on the register of holdings pretty much as a record of rights but it is of course disputable in a court of law. The absence of any presumption attaching to the entries I consider a weakness of the register, and it would improve if more weight were attached to it by law. I consider that the present registers are probably accurate enough to be utilised as a record of rights.

30-31. As regards mutations, I remember a good many cases where mortgages were shown as sales. It is very difficult to deal with this matter as the people alienating their land are ready enough to allow the transactions to be described as a sale even in registered documents.

34. In my opinion, there are no serious administrative difficulties as a result of deficiencies in the present system.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. In the old days settlement reports were rather summary but recent reports contain pretty useful information regarding agricultural economy.

38. I should be inclined to leave index numbers alone; though possibly this device might be useful for cost of cultivation it is unlikely to give much assistance in estimating the cost of living on account of the difficulty of arriving at an annual Index Number.

V.—Organization.

45. The present relations between the Land Records and Revenue Departments have always appeared to me reasonably satisfactory. I do not remember hearing of Deputy Commissioners having friction with Superintendents. I should be chary of giving the Superintendents revenue powers and certainly consider that they would require to be carefully selected for this purpose.

48. When I first started settlement (revision so-called) the Settlement Officer was expected merely to ride or wade over the country and say off-hand how much enhancement could be taken leaving the work of the original settlement alone, and we were therefore expected to supervise resurvey over a large area in addition to settlement work. But this was soon found impossible. It would be useful, I think, if the Settlement Department worked on the Land Records registers of tenancies and mortgages instead of collecting all these particulars afresh, and perhaps with a view to improving the record before the Settlement Officer came the Land Records staff might be required to pay special attention to correcting their registers during the year preceding settlement, being relieved of special survey work in that year.

50. I consider that Superintendents of Land Records should have some training in settlement work. It has always been a complaint of theirs that they were not sufficiently conversant with settlement procedure. As regards members of the Commission I should like to see their training at the end of their first year instead of at the beginning when they have just come out. I should also prefer them to be sent to Settlement Officers for six months rather than to undergo training under Superintendents of Land Records. They should, however, be required to do at least one month's survey work which they could do quite well under the supervision of the Settlement Officer. I think training in the use of the theodolite has some use, but would not be disposed to insist upon it. The training should be preferably in Upper Burma. Members of the Provincial Service might receive the same training, but for the Subordinate Service the present arrangements seem adequate.

VI.—Special Areas.

51. The question whether holding surveys or detailed surveys are preferable in undeveloped areas has been engaging consideration. My inclination is to prefer holding surveys to detailed surveys, but it is possible that where holding surveys would entail demarcation it would be simpler to survey details right away rather than holdings.

55. In areas where land revenue is insignificant and the country so poor that lump sum assessments have to be resorted to, there is much to be said in favour of *thathameda*. It is simpler, and there would be an immense saving of labour and the result would be pretty equitable although there might be a decrease in the total revenue.

(k) With regard to the granting of areas to capitalists I am not prepared to offer a considered opinion. But I certainly think that the grant should be limited purely to waste land and that it may be necessary to import labour under arrangements similar to those in force on the tea estates in Assam to develop them properly. Some such system is probably necessary if we are to go ahead with sugar, rubber and cinchona, but there are of course political difficulties which would have to be taken into consideration before attempting to develop the country on these lines.

Mr. H. E. MacColl, I.C.S.

Legal Remembrancer and Secretary to the Government of Burma.

II.—The Register of Holdings as a Legal Document.

I am not sure how far I am requested to base my opinion on my own experience, but I cannot very well answer the questions 27—33 without importing my experience into my answers.

27. It was held in *Saraswati Dasi v. Dhanpat Singh*, I.L.R. 9 Cal., 431, that entries in such a public record as a register of holdings were not evidence of title or even of possession and that section 35, Evidence Act, referred to records in which a public officer made entries from his own knowledge, e.g. a Marriage Register. This

dictum of Sir Richard Garth has since been dissented from and it has been held that these entries are admissible in evidence under section 35, Evidence Act, but that their probative value must be decided by the Court in each case. I would draw attention to the following rulings:—

Ya Gyaw *v.* Mi Ngwe II L.B.R., 56,

Mi Sa U and 4 *v.* Nga Pyan, II U.B.R., 1904-06, Ev. 3, and

Mi Se Baw and 2 *v.* Mi Min Ya and 9, II U.B.R., 1907-09, Ev. 19.

28. I doubt whether it would be practicable to make further enquiries owing to the time that would be required. I do not know what is done at present when there is a dispute between two or more parties as to a right. I think that the fact that there is such a dispute should be recorded.

29. I think the register should be brought up to date. I am not clear as to what is contemplated as regards attesting the register. By whom is it intended that the register should be attested? It might be useful to have a mortgagee's signature to a statement in the register that he held the land on mortgage or the signature of a vendor to a statement that he had sold a holding but who would attest an entry recording the mere ownership of a holding?

30. My experience is that mutations are frequently not made for years and that transfers are not infrequently reported that have not taken place. I think that when a person applies for mutation of names notices should be served on the persons recorded as the owner and occupier and that mutation should not be effected unless service of the notices is proved except under the orders of the Township Officer.

31. I am afraid that I do not know what the Torrens' system is and I do not see how any system of voluntary registration can confer a clear title. I do not think a record of a title in a settlement or supplementary survey register can ever by itself be conclusive proof of title. I certainly think the name of the person found by the surveyor occupying the land should always be recorded. This is often useful in proving possession and in fixing the year in which a particular person was in possession, through a tenant or personally.

32. Burmans are notoriously lazy and careless and many transfers are not registered, because the registering has been put off until too late. In Upper Burma the majority of cultivators in the districts only half believe that a mortgage-bond or deed-of-sale is valueless unless registered and consequently a large number of these transactions are not registered and a good many are still even recorded on *parabai* without stamp and without signature.

33. An entry in a register or map cannot in itself prove a sale or a mortgage. It is in my opinion only evidence of title as possession is evidence of title. It does not directly prove a title, it proves a fact which raises a presumption of title. Entries in settlement registers and maps are far more reliable than entries in supplementary survey maps. I have come across some very bad errors. The following case was rather amusing:—

A piece of land belonging to A was shown partly in one kwin and partly in another originally. Then it was wholly shown in one kwin for a year or two, then it was wholly shown in the other. A sold the land to B and then died. B paid the revenue for years.

Then the land was shown in the maps of both kwins. B paid the revenue on the land shown in the map of one kwin but A's name appeared on the map of the other kwin. As A had died leaving no relatives, the Township Officer proceeded to sell the land shown as A's holding for the revenue, some Rs. 25. Of course everyone except the Township Officer knew that the holding had no existence and so no one bid at the auction except a Chetty who seeing as he thought several acres of land going for Rs. 25 snapped at them. When he tried to find the land which he had bought, he could not find it and the result was a suit which the original Court did not understand and which took me many hours to get to the bottom of.

This is the sort of thing which ought to be prevented if possible. It is not my experience that subordinate Courts often admit uncertified copies of maps but what I have frequently had to complain about is that Courts (1) accept maps showing the holding in dispute but not the surrounding holdings, and (2) are content with the map for one year only. Frequently the plaintiff puts in a map for one year and the defendant a map for another year and they differ. It is generally necessary to have maps for a number of succeeding years and for these maps to show not only the holding in dispute but surrounding holdings. This adds very considerably to the costs of a suit and any system which would do away with the necessity of tracing a holding year by year from maps that have to be put in evidence at the expense of the parties would be welcome. One step in the right direction would be to maintain the same number for each holding year after year. There may be difficulties in the way, but as it is done for field numbers I do not see why it should be impossible in the case of holdings. Fields are subdivided as well as holdings.

I imagine that the provision in the Civil Procedure Code enabling the Local Government to direct that execution against immoveable property should be transferred to the Collector was made to suit conditions in many parts of India where there are estates permanently settled as a whole which it is undesirable should be sold or subdivided. These conditions do not exist in Burma and to put section 68, Civil Procedure Code, into force would, I think, produce confusion and discontent and I do not think anything would be gained.

Mr. A. G. Cooke, I.C.S.

Commissioner, Meiktila Division.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

3. Rents in Upper Burma vary with outturn and range from 33 to 50 per cent. according to circumstances, *i.e.*, whether cattle and seed are supplied. The ideal assessment should be on the same principle but having no experience in Settlement I am unable to say how far rents can be utilised by the Settlement Officer. Fixed rents are rare in the dry zone.

4. Existing rates fluctuate with varying crops. I do not think it desirable to substitute fixed rates which are inelastic and would cause hardship.

5. The variations are due to difference in conditions. It is clearly impossible to have the same procedure in tracts where rainfall is steady and where it is precarious, in tracts where remission is almost the rule owing to drought or floods and those where it is certainly the exception. The system of allowing revenue surveyors to exempt for 75 per cent. failure is not theoretically defensible but unless the Township Officers are relieved of judicial work to an extent which does not seem probable, it is difficult to suggest any alternative method. The ordinary remission rules are very cumbrous and expensive and are therefore largely a dead letter. It is generally cheaper for the small holder to pay the demand. Kwin inspections by the Township Officers are very often mere eye-wash made long after the crops are reaped. If they were conscientiously done, the procedure laid down in Direction 135, Land Revenue Manual, might be extended by allowing the revenue surveyor to report cases in which failures of one-third or over in a kwin reached a certain percentage of the holdings, say 50 per cent. The Township Officer would then inspect the kwin and verify the report, whereupon the assessment would be modified subject to revision by higher authority.

6. Certainly on the crop. The capabilities of the soil are too little known to allow even experts to dogmatize on them.

10. The water or drainage rate should pay for the ordinary maintenance of the protective works and staff. A share of the land revenue should be taken towards a sinking fund on the capital. Renewed capital expenditure when necessary should also be amortized in the same way.

11. I do not remember any such case.

12. I think so.

B.—Settlement Department.

15. Settlement is assisted I understand by assessors (*thamadis*). If these are utilised properly I see no need for issuing notices for objections; but if they are issued, it should be pending settlement: the objections should be dealt with singly by the Settlement Officer who should of course record reasons for accepting or rejecting them.

C.—Land Records.

21. No. I don't think this would do. They would be treated as documents of title lost or tampered with.

D.—Executive Department.

22. Mistakes found on checking are much fewer in my experience than might be expected. I am not sure however that paragraph 542 of the Land Records Manual is always observed. The theory of the present system (the differentiation of the assessing and collecting departments) is sound and should be maintained.

23. Yes, as a rule. The power of entering failures ought not of course to be entrusted to a subordinate official such as a revenue surveyor, but without a considerable increase in the executive I see no way of avoiding this hardship to cultivators. Fixed assessments

would be a way out perhaps, but the agriculturist is a hand-to-mouth person and would not save from a good year to a bad. The result would be further debt.

25. The procedure followed is that laid down in the rules. The sale has to be confirmed under rule 174 but this is rare. No complaints of sale from absentee owners have been received by me. The Township Officer can always ascertain the general nature of the land from the kwin map and registers and would be guided by them I think as to the advisability of a sale.

26. I do not remember any such applications being made. They sometimes ask for refund of revenue paid in excess.

II.—The Register of Holdings as a Legal Document.

27. As between the State and individuals, it should be a strong *primâ facie* presumption. Also as regards leaseholds, between one individual and another. Otherwise it is, and I believe only professes to be, a register of occupation.

28. I cannot say from personal experience but from conversations with Settlement Officers, I understand that an enquiry into rights would be too intricate and lengthy and is not attempted when rights are in dispute. The Settlement Officer cannot obviously turn himself into a land court. No doubt he should make the record as complete as he can by entering the names of all co-heirs known and admitted. If this was not done at first settlement it should not be done I think at revision except with great caution. The questions of Buddhist inheritance law are extremely difficult and any alteration of the old register, *so far as it relates to the date it was issued* and even if admittedly defective, must be deprecated. It would open the door to fraud by antedating adoptions, redemptions, etc.

29. Yes. Yes.

30. Sale, mortgage and redemption I have generally found fairly well up to date, but succession and partition are often left unreported when settled without contest. Later when disputes arise, maps, etc., do not afford much assistance either to the parties or the court. It is difficult to suggest a remedy so as to protect the interests of people who won't protect themselves. Notices even about transfer of leaseholds in towns are usually ignored because reading them is too great an effort and the owner even if he or she read it would have great difficulty in identifying the description of the land.

31. Certainly not. This would lead to great abuses and make confusion worse confounded. I have not got details of the Torrens system at hand, but I am inclined to think from recollection that it is more suitable for a country where new land is being taken up than for one where cultivation has been established for generations.

32. (a) I believe that at present the failure to register is quite the exception.

(b) This would be difficult to say without holding a special enquiry. I have never found reason to think that the information from registration offices was if not complete yet of the greatest assistance so far as sales and mortgages were concerned.

33. As *primâ facie* proof of possession.
Not usually—very seldom I believe.

The Land Records staff are sometimes appointed commissioners for partition and give great assistance thereby.

34. I don't think so.

V.—Organization.

45. The suggested remedy does not commend itself to me. The assessment agency should be kept as distinct as possible from the collecting agency. Fusion will spell corruption or dishonesty. Defects there are no doubt but they are mostly due to the personal equation rather than to the system.

46. No: the control of the Superintendent must be exercised by touring. He must go to the surveyors and not they to him. Not only would the record of mutations suffer but the record of crops and failures.

47. No hard-and-fast line can be given. In Lower Burma the Inspector can supervise a larger number of charges than in Upper Burma. It is probable that smaller circles would give better results in the dry zone.

49. This was tried with the *taikthugyi* system and abandoned I presume for good reason.

The proposed reorganization is not desirable with the present system because the duty of accounting and power of remission ought to be kept in separate hands from that of assessment.

The power now given to Revenue Surveyors to write off assessments as "failures" is dangerous but apparently unavoidable in precarious tracts. The introduction of fixed assessments would no doubt obviate this difficulty but it is difficult to conceive a scheme and none is propounded which would not like Procrustes' bed cause hardship and discontent.

50. Considering what their pay was till lately the standard of efficiency is wonderfully good.

(b) Satisfactory.

Mr. R. B. Smart.

Deputy Commissioner, Yamethin.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. (a) Crop measurements as done at present are about as safe a basis in estimating outturns in both Upper and Lower Burma as can be devised, though perhaps less so in Upper than in Lower Burma. The drawbacks are that in Upper Burma, sufficient allowance is not perhaps made for failures. There is also a tendency in both parts of the province to select fields above the average of the class they are supposed to represent. The crop is threshed wet on the spot and a certain amount of chaff is left with the grain. These drawbacks are counter-balanced by liberal allowances (*see* paragraphs 162 to 165 of the Akyab Settlement Report) and on the whole the final estimate is not far off the mark. In Akyab in particular, the results of the crop reaping experiments approximated the admitted yield very closely (*see* Statement 10 of the Akyab Settlement Report).

(b) The average price over a long number of years is taken as the basis for the value of the produce. This allows a very large margin on the side of the cultivator. Liberal allowances are made for the cost of transit and no hardship is caused.

(c) The methods of calculating the cost of cultivation vary according to the idiosyncrasies of Settlement Officers. If assessments are to continue to be based on the net produce, some more definite system of arriving at the net produce should be introduced. At Akyab I allowed liberally for cost of plough cattle and for home labour and some extraordinary results were arrived at. The Arakanese are not very careful with their cattle and employ a great deal of labour. (Please see remarks in paragraph 150, Akyab Settlement Report.) It was not found possible to adhere to any fixed proportion of the net produce. The cost of cultivation enquiries are about the most interesting part of settlement and, as in Akyab, showed up the characteristics of the various classes of the people. These enquiries are, therefore, most useful and I would certainly continue them. About one-tenth of the gross produce gives as good results for assessment purposes as any other system. I am in favour of an assessment on gross produce.

3. Rents are a very good guide to assessment. They proved very useful in the Akyab district.

4. In Lower Burma assessments do not fluctuate much. In Upper Burma they fluctuate according to the season except in the irrigated tracts. Fixed assessments are a losing game. To begin with they have to be pitched at a low level and whenever there is a deficiency in the rainfall even this reduced rate will have to be still further reduced or remitted. However, I have not served in a district with fixed assessment and I cannot speak with certainty.

5. I am of opinion that remissions should be given more liberally than they are at present, especially in parts of Upper Burma. Now that administrative officers are to be relieved of the greater portion of their judicial work, it should be possible to grant remissions, where they are needed much more thoroughly than has been done in the past.

6. Unless the Government is prepared to forego a large amount of revenue which can be paid with ease on certain crops, crop rates appear to be necessary.

7. I do not see that any special allowances should be made for insecurity or for unfertile patches beyond the low rates which are usually suggested in such cases by the Settlement Officers. As regards fallow assessment, please see paragraph 153 of the Akyab Settlement Report and paragraphs 10 to 20 of the Financial Commissioner's note. The question of fallow rate seems to vary in the various parts of the province.

8. If the system adopted by me in the reclassification of soils in the Shwebo Canal Tract is followed, the extra enhancement on every plot of land is known and there would be no need to resort to the complicated system laid down in paragraphs 433 to 437 of the draft Land Records Manual. My system is very suitable to Lower Burma in particular.

9. No hard-and-fast rule can be laid down for the period of the duration of a settlement. For example, in Akyab, I suggested a shorter period than 20 years and gave good reasons, see paragraph 154, Akyab Settlement Report, but I was overruled.

10. My honest opinion is that Government irrigation works are constructed at far too high a cost and as a result, the Public Works Department grab all the revenue they can to show that the works are remunerative projects. I have had experience of two irrigation systems—the Shwebo Canal and the Ye-u Canal. The rates in the former were pitched too high as a result of the high cost of the canal and my proposed rates for the Ye-u Canal were quite unacceptable to the Public Works Department, because they did not provide as much revenue as they anticipated. The supply of water should be undertaken as a commercial proposition and the whole concern run on business principles. There are certain lands in these canal tracts more suited to wheat than to rice. The return from wheat to the canal revenue is very low. As a result the growing of wheat is not encouraged. I mention this to show that although wheat is the most suitable crop in some parts of the Canal areas, it does not serve the ends of the Irrigation Department to foster the growing of it. The value of the water should be the commercial value, not the value put on it by the Public Works Department owing to their extravagance. The water rate is really a cost of cultivation. The water ensures the stability of the crop and also improves the outturn for both of which the Irrigation Department should receive credit. In the Ye-u Canal tract, we were obliged to go through some intricate calculations to arrive at the credit due to the Irrigation Department. Some system should be adopted by which the Irrigation Department get a consolidated credit, that is, there should be no addition of a share of the land revenue to the water rate which should include the credit to them for improvement of cultivation.

11. I am afraid the arrangements are not satisfactory. Cultivators more often than not fail to apply for an exemption from enhancement.

12. As far as I am aware these exemptions are not noted on the tax-tickets, but I may be mistaken. I do not remember coming across any during inspections.

B.—Settlement Department.

13. I am entirely averse to greater differentiation of tracts, main kinds and soil classes than is done at present. The simpler a Settlement Report the better. For example, I might compare the slap-dash summary settlement of the Myingyan District with the subsequent regular Settlement of the same district. The former may be said to have been almost crude, the latter was a work of art. The former was understood by the merest tyro at settlement work, while the latter, I believe, proved an enigma to even the usually astute Secretariat *wallas*. I mean no disrespect to the learned author of this report as I think his report has proved that the differentiation of every plot of soil of a different kind met with is not essential. All that is necessary is to ascertain the relative value of these soils in the same tract and then to assess them at their value as was done eventually in this report. I sincerely trust that my remarks may not be taken to convey the impression that the Myingyan Settlement Report was a work of supererogation, on the contrary, it has proved useful in showing that it is possible to have wide tracts, no more than the essential main kinds and a limited number of soil classes. All that we have to ascertain is the assessable value of each soil class in a given tract.

14. No. I am not in favour of going into details of minute distinctions.

15. (a) *Classification*.—In the Myingyan Settlement, objections to classification were received first by the classifier, subsequently by the Assistant Settlement Officer and lastly by the Settlement Officer. This system was also followed in the Akyab Settlement. I do not think any further objections should be entertained.

(b) *Areas*.—The correct areas are taken from the area statement and I do not think any objections need be called for.

(c) *Rates of Assessment*.—At present cultivators have no opportunity to object to the rates. I think an opportunity should be given before the rates are finally imposed.

(d) *Accuracy of the records*.—The system adopted in Myingyan under which records were checked first by the Inspector and then by the Assistant Settlement Officer appears to be sufficient.

16. So far as the Akyab Settlement is concerned, the data for assessment referred to in paragraph 40 of the Settlement Instructions was used freely in discussing the rates. No reference was made to the registration offices, but each man usually turned up with a sheaf of registered deeds from which the information was copied into our statements. Share produce rents are difficult to deal with, but they were almost non-existent in Akyab.

17. Existing assessment tracts and main kinds should not need much amendment at re-settlement. Soil classes, however, will be in need of constant re-classification.

18. The procedure for the conduct of the settlement operations suggested by Mr. Arbuthnot appears to be generally suitable. It is practically the same as that adopted at Myingyan except that no classification is proposed for the first year, the report has to be submitted by townships, and provision is made for receiving objections to the new rates. I am sorry I have not the time to go into this in greater detail.

C.—Land Records.

20. and 21. A separate report will be submitted.

D.—Executive Department.

22. Where there are good Land Records Inspectors, the check is usually sufficient. This was not the case at Akyab.

23. The rules relating to the reduction of the demand for partial or total failure are not satisfactory. Township Officers are far too heavily worked to permit of their working these rules satisfactorily.

24. I have already referred to the confusion regarding the fallow rate in Akyab District; I do not know if the same state of affairs exists in other Lower Burma districts.

25. In the districts I have served in, land is seldom resumed or sold for failure to pay revenue except perhaps in the canal tracts. In Shwebo, people from adjoining districts habitually worked in the canal tracts and tried to evade payment of revenue by clearing out before the date of collection. Notice was always served on them before the land was resumed and no hardship was caused. Every case of this description came before the Deputy Commissioner.

26. It is the practice for headmen to apply for the remission of the land revenue which they are unable to recover. Notice is issued on the defaulter and he is invariably given an opportunity to pay before further process is issued.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings as it now stands can be regarded as a fairly accurate record of rights. It is only occasionally when a dishonest surveyor tampers with the records that it loses its value. I have come to this conclusion only after handling civil cases during the past month. Out of 20 land cases in which history sheets had been prepared the original settlement entries were found to be correct in every case. The two cases in which there were recent mutations the changes in each case were found to be wrong due either to the dishonesty of the surveyor or to fraudulent reports having been made to him.

28. and 29. The enquiries made at the settlement provide an adequate basis for a record of rights. I do not think it necessary to have the record checked and recorded in greater detail at re-settlement. The record is kept up by the surveyors from year to year and once it is laid down that this record is to be recognised, people will take a much greater interest in its maintenance.

30. and 31. Mutations are fairly well reported and once the register of holdings is given greater weight cultivators will be more ready to see that all changes are recorded.

32. (a) Transfers of immoveable property exceeding Rs. 100 in value are usually registered now.

(b) Registration Offices supply all information regarding transactions affecting land which come to their knowledge and this information is undoubtedly of help in keeping the register of holdings up to date.

33. The registers and maps of the Land Records Department are unfortunately not given much weight in the Civil Courts. If, as recommended above, it is recognised that the register of holdings is to be the record of rights, these maps and registers will be of great assistance to the Civil Courts. Uncertified copies of maps are not accepted in evidence. I do not think the services of the Land Records Department need be called in to give effect to decrees affecting lands.

34. The present system has not caused any administrative difficulty or impaired the collection of the revenue.

IV.—Survey.

40. I would invite attention to paragraphs 342 and 343 of the Akyab Settlement Report. Although in the Akyab District great difficulty was experienced in keeping the surveyors up to the mark, it was not found to be so in the Shwebo District.

41. The present system of marking holdings appears to be the most suitable.

42. I do not think the present system of marking the maps could be improved upon.

43. I certainly think each field boundary should be separately plotted as at present. Holding boundaries without interior details would be quite unintelligible.

V.—Organisation.

45.—47. A further report will be submitted.

48. I have always found Superintendents of Land Records very willing to help the Settlement Department. I do not think, however, that very much more can be expected from the Land Records Department, because at the time when their help would be most appreciated their assessment season is on and they cannot give it.

49. (a) With the present fluctuating assessment, the work of the revenue surveyors could not be entrusted to a less highly trained staff of village surveyors.

(b) If a fixed assessment be substituted for the present system it would be possible to employ a less highly trained staff.

50. (a) Please see paragraph 342 of the Akyab Settlement Report. Revenue surveyors are in need of a better training.

Mr. S. A. Smyth, I.C.S.

Commissioner, Irrawaddy Division.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. On fairly certain land, crop reapings for a period of three years are a sufficiently safe basis for estimating outturns both in Upper and Lower Burma. On uncertain land, for example, the flooded land in Lower Burma and third class *ya* land or paddy land in Upper Burma crop measurements are not a sufficient basis for obvious reasons. In regard to all crop measurements the tendency is to select for measurements fields bearing crops somewhat better than the average. This tendency is ineradicable. It would be better for the Settlement Officer to select at random in office certain fields in each soil class and to have these fields reaped each year throughout the settlement.

It must be remembered that crop measurements are checked by means of admitted outturns. On the whole, I think that outturns assumed by Settlement Officers are substantially correct when applied to matured areas.

Out of pocket expenditure on cultivation is not a sufficient basis for reckoning cost of cultivation as this system penalizes the small cultivator who cannot afford to hire much labour. The law of averages does not correct this defect, as some assessment tracts are on the whole poor and some rich. Allowance should be made for the labour of the cultivator and his family expended on operations for which there is a market rate for labour; that is, so far as the labour of the cultivator and his family can be calculated. The cost of plough cattle should be calculated on the same principle.

I think the net produce is the most satisfactory basis for assessment, but difficulty exists in ascertaining the net produce because it is almost impossible to calculate the cost of cultivation by soil classes. The result is that land of low fertility shows a non-existent or negative net produce. This is really not of much importance as rates on such lands must in any case be nominal. Except in regard to cost of cultivation the present procedure is good enough.

2. The proportion of the net produce which should be taken as revenue rate is a matter of expediency and must depend on the financial needs of Government. Prescribed standards are honoured more in the breach than in the observance. I think uniformity of incidence should be the rule and this may be attained by settling definitely the principles on which cost of cultivation should be calculated. The above refers only to lands of average certainty. It should be open to the Settlement Officer to vary the fraction on uncertain lands and on very rich and certain lands.

3. Rents cannot be used as a basis of assessment. I have discussed this in a note which I submitted in March 1916 regarding the inequity of the rates sanctioned by the Local Government for the Toungoo District. The chief reasons are:—

(a) Rents depend on availability of occupations other than agriculture and tend to approximate to the value of the gross produce *plus* the non-agricultural income of the tenant *minus* the tenant's cost of living and out-of-pocket expenses of cultivation. The non-agricultural income of tenants in Burma is generally fairly high so that an assessment based on rents would be based to a very considerable extent on non-agricultural income.

(b) Rents tend to vary with the size of the holding. A tenant with a large holding can afford to pay a higher rent than a tenant with a small holding.

(c) The rental value increases as the cost of living diminishes; hence tracts in which the standard of living is lowest will pay the highest proportional assessment—a most unsatisfactory result.

(d) The harder the tenant works and less out-of-pocket expenses he has the more rent he can pay; hence assessment on rents penalizes tracts where people work hardest.

(e) Rents vary according to pressure of population and various other factors, and do not correspond to the real value of the land for assessment purposes. As a guide towards assessment rents are fairly useless but they are sometimes useful as a guide to classification within the kwin.

4. As a factor bearing on this question, it may be mentioned that, owing to the increase of cost of cultivation, the income of the cultivator varies within much wider limits now than it did say 20 years ago. Now that the cost of cultivation absorbs one-half or two-thirds of the gross produce a difference of one-quarter in the outturn of the crop produces a great effect on income. The rules regarding the fluctuation of assessment are therefore not so efficient now as they formerly were, and it is necessary either to widen them or to abandon them in favour of fixed assessments. The scheme which I favour was advanced at a Conference held in Maymyo about 1912 or 1913 regarding the simplification of Land Records work, and is (a) fixed assessments by holdings in areas where crops are certain;

(b) fixed assessments by village-tracts in areas where cultivation is scattered ;

(c) fluctuating assessments in other areas ; the demand being calculated by kwins or main kinds and distributed by village assessors.

5. I do not think it is possible to make any logical rule regarding the yield which should be held to constitute a matured crop. Under the system proposed in the answer to the preceding question the fraction of one-quarter which has been found to work fairly well in practice might be applied in areas under fluctuating assessments.

6. It is neither necessary nor desirable to fix the assessment on the crop grown. The cultivator should be given the whole benefit of his extra industry in growing special crops.

7. It does not appear to me to be necessary to make any allowances under these heads. Insecurity should be allowed for by a variation of the fraction of the net produce.

8. Not at all I think—please see my letter No. 772—M.M.-3, dated the 18th October 1920, to the Commissioner of Settlements and Land Records.

9. It depends on the extent to which agriculture is developed in the area being settled. In fully developed areas the present period of twenty years seems suitable.

10. Please refer to proposals submitted to the Commissioner of Settlements and Land Records early in 1919 in regard to the Môn Canal area.

11. Arrangements appear to be suitable enough.

12. I have never heard of any demand for more information on the tax ticket.

B.—Settlement Department.

13. I am not in favour of any greater differentiation on any of these subjects than is at present practised. Tracts should be homogeneous and if properly formed it should not be necessary to subdivide them. Main kinds should be constituted only in so far as is necessary for the purpose of classification. It appears to me quite futile to divide soils up into Main Kinds according to their colour or consistency. The number of soil classes depends on the capacity of the classifier to distinguish fertility. Personally I never could distinguish more than three soil classes and, if primary tracts are properly formed, three soil classes ought to be sufficient in nearly every case.

14. I am not in favour of considering the results of proposed rates with reference to village-tracts or kwins.

15. This depends on public demand and I would certainly not provide for objections which are not likely to be made. All objections to classification and accuracy of record should be made on the spot. Objections to rates of assessment cannot be made until the settlement has been sanctioned. If they relate to facts no notice should be taken of them unless the facts are specified and evidence offered in which case a local enquiry might be necessary. If they are general in nature and it is not clear from the settlement report that the Settlement Officer has considered the matter carefully, he might be asked for a note on which the Local Government should pass orders. I do not

think there is any demand whatever on the part of the people for the setting up of special machinery to deal with objections.

16. These are not data but considerations. A Settlement Officer takes them into account and allows for them when he is making up his mind as to the assessment rates that he will propose. He does not calculate those rates on any of the statistics obtained under these heads. These statistics are not generally verified by reference to outside sources of information such as registration offices. Rents are useful in checking admitted outturns during classification. Share produce rents cannot, I think, be used as a basis of assessment; certainly not under the net produce system.

17. That depends on the extent to which conditions are stable and the previous number of settlements which have taken place in the settlement area. It is to be hoped that when the principles of settlement become more fixed it will not be necessary to alter so largely as is now done.

18. I see many objections to the proposed procedure but the answer to this question would necessitate a discussion extending over many pages. I think that, before the present procedure is condemned, it should be demonstrated that it is not efficient and I do not see that this has been done. I do not know what is meant by the attestation of Land Records Registers, but if it means turning them into records of rights I am entirely against the proposal.

19. I suppose that as the Financial Commissioner is the chief revenue adviser of Government it is necessary for him to have some control over settlements.

C.—Land Records.

20. Please see the letter mentioned in my reply to question No. 8.

21. The signature of the Deputy Commissioner on the receipt book could scarcely be obtained and the latter would not be an authoritative record.

D.—Executive Department.

22. The verification of the assessment is fairly adequate though mistakes and sometimes fraud are liable to occur in marking fallows and failures. The assessment rolls and tax tickets are usually quite accurate and very few complaints of inaccuracy are received.

23. The rules are not logical and cannot be so. Under the system referred to in the answers to questions 4 and 5 it would be possible for assessors to allow for differences of outturn which are not taken account of under the present system.

24. Applications for grants of fallow rate and remission have given a great deal of trouble and delay in dealing with them is very frequent and serious. Under the system referred to above applications for remission could be dealt with for the whole kwin by soil classes and this would be much quicker and more satisfactory and would cover the cases of those who, though entitled to remission, do not apply.

25. The rules in the Land Revenue Manual are generally followed and are I think fairly suitable

26. The headman generally applies for recovery and, if irrecoverable, the revenue is remitted.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings combined with the map constitutes evidence of title but is, of course, by no means conclusive. Their primary purpose is for the assessment of Land Revenue and they should not I think be made to serve any other legal purpose.

28. Certainly not.

29. Certainly not.

30. This varies with the interest taken by district officers in the matter. Not nearly all mutations are brought on to the register, the most frequent omissions being mutations by succession and redemption.

31. The surveyor should, for purposes of assessment, record the cultivator in occupation. Registration of title should be quite separate from the Land Records Department and should not be mixed up with registration of particulars required only for assessment.

32. (b) From inspection of Registration Offices I should think that the information furnished by them to the Land Records Department is fairly complete.

34. Not to my knowledge.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. to 39. The statistics give a general view of the condition of agriculturists but they cannot usually be utilised, without being supplemented, for the purpose of an enquiry on any particular aspect of agricultural economy. For the purpose of assessment they might be cut down by three-quarters. Index numbers for cost of living and cost of cultivation cannot be introduced until uniformity in recording these is in force.

IV.—Survey.

41. I favour the present system.

42. The present system is suitable enough.

43. The present system is suitable enough.

44. I think it is essential that soil classes should be colour printed.

V.—Organization.

46. The subordinate staff should be stationed as near its work as possible and not at headquarters.

47. I would like to see inspectors increased in numbers and made to exercise a more efficient check over revenue surveyors.

48. I think Land Records statistics should be recorded by assessment tracts, etc. Because this is not done they are largely useless to Settlement Officers.

49. I am not in favour of any less skilled agency than the revenue surveyor. The result would be that the maps on which the whole

system is now based and which are essential under any system would get into a mess.

50. Every member of the Commission ought, I think, to have a little training in settlement work.

VI.—Special Areas.

51. Fixed assessments should be introduced as proposed under question 4.

52. I would omit the annual collection of statistics and annual survey and have survey done and statistics collected only at settlement or re-settlement.

54. I think the village-tract is preferable as a unit. Lump sum assessments have, I think, worked satisfactorily and I consider it desirable to extend the system.

55. I would not revert to *thathameda*.

Mr. D. F. Chalmers, I.C.S.

Officiating Commissioner of Settlements and Land Records.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. I consider crop measurements as done by a Settlement Party for certain crops, the only accurate way at arriving at outturns. In Lower Burma where paddy is the staple crop I can suggest no improvement. In Upper Burma where a crop has to be picked twice or thrice it is less reliable, *i.e.*, cotton, chillies, and these crop measurements should be supported by further enquiries.

Prices reported by the Land Records Department tend to become stereotyped. The Settlement Officer in Lower Burma with a good export market can determine easily the price of paddy. In Upper Burma it is more difficult as local conditions tend to obscure the effect of an export market price. I am of opinion that if the Settlement Officer conducts his enquiries carefully he can arrive at the local value of produce. The cost of cultivation does not pretend to mathematical accuracy, but it is of the same degree of accuracy as the other factors entering into the Settlement Officer's calculations. A peasant proprietor ought to be able to work the greater parts of his holding by home labour. He can give information of the cost of hired labour at the busy season. It is difficult to determine what ought to be allowed for the cultivator and his family in different tracts where different methods are followed, but the Settlement Officer knows the unit a ploughman can work and as the enquiry into cost of cultivation is elaborate and accurate he can determine what the acre rate should be.

Cost of plough cattle should be calculated on the average price per yoke, divided by the average working life period. Certain precautions have to be taken in certain districts where the breaking of young stock to the yoke is followed.

I think the net produce is the safest basis, it tempers the wind to the shorn *ryot*. It ought also to put a premium on good and thrifty cultivation. I have been so long away from actual settlement that I am not prepared to offer an opinion.

2. I do not think one could venture on a definite fraction with safety as applicable to any one district; for Upper and Lower Burma conditions vary so much more that only a rash man would offer an opinion. The fraction would be lower in Upper Burma than in Lower Burma owing to the greater uncertainty of the crop and the market. Uniformity can only be obtained by the Settlement Officer keeping in mind the conditions ruling in his own and neighbouring districts. MacCallum's figures except for Syriam show that uniformity resulted to a remarkable extent though the Settlement Officers were not consciously working for it.

3. So far as fixed rents are ascertainable they are a distinct help in arriving at the fertility standard of the land, and can be used as a check against crop measurements and soil classification. They are useful in other ways as they give a fair idea of the net outturn of the holding after the cultivator has obtained a living. They can finally be compared with the assessment fraction taken, and are a guide to the pitch of the rates.

4. In Lower Burma it is more inelastic than Upper Burma. Fallow rates are not always applied for, and minor failures seldom result in an application before a Revenue Court. Where failures have been considerable relief is readily given, these of course in the majority of cases require the presence of the Township Officer or Remission Myoók. In Upper Burma the Revenue Surveyor does a considerable amount of this work as it is recognised that failures are more numerous and Township Officers cannot do the work and visit all the holdings.

I have no experience of the new methods proposed, but the Burman I think would prefer to pay on a fluctuating basis, and the feelings of the tax-payer ought to be considered.

5. The exemption from assessment when the yield is less than one-fourth is theoretically sound but it does not work very well in practice, as if there are considerable failures the Township Officer cannot get round in time to inspect all before reaping. The cultivator prefers to reap and take his four baskets or so, rather than let the grain "shed" in the hope of a problematical remission later.

Total failure total remission should be observed in the whole province, but it is difficult to work.

The certainty of crops in Lower Burma except in notified kwins permitted, when our revenue rates were low, of the denial of relief. Now that rates have been pitched high and are likely to go higher, some sort of relief will have to be given on failures.

6. Crop rates in theory do not permit of the land being put to its best use, but in some cases it is the only way of arriving at equitable assessment. To differentiate against a crop with a high crop rate when the crop is not an exhausting one to the land seems unsound, but in this imperfect world we have got to get things to work. The choice in many cases is between crop rates or double classification, *i.e.*, classify a kwin for paddy, then reclassify for plantains and sugar-cane.

7. If the soil classification was really based on actual outturn over a period of years then there would be no need for any allowance. Mr. Arbutnot's assumption that soil classification based on crop reaping measurements were above the actual yield is not I think borne out by facts. The tendency is I think to be 6 per cent. to 10 per cent. below the actual crop measurement taken over a whole district. If this is so then no allowance need be made.

8. They appear to me suitable.

9. Twenty years. This approximates closely to tenant farm-leases, and guarantees a certain fixity to the owner against enhancement.

10. The assessment of land under irrigation should be similar to that under dry crops. The greater security and certainty of the crop will allow of a higher fraction of the net produce being taken, than on similar land not protected.

The calculation of water rate has become a question of academic interest and a matter of accounts. Government before expending money on a scheme should determine the area likely to be cultivated, the probable yield in revenue and work the whole thing out as a business proposition.

The Public Works Department are entitled to (a) a reasonable rate of interest on the money expended, (b) the annual upkeep and repairs, (c) a sinking fund for items beyond (b).

If these three charges are met I see no reason to give greater credits. Unless one is going to set off remunerative works against protective works, and the latter are really charges against Provincial and Imperial revenue.

In Kyauksè we have an excellent example of the neglect of sound business methods. The minor canals have been paying their way handsomely, leaving a profit of over Rs. 2,00,000 a year, yet there has been inadequate expenditure on (b) and (c). The gains in Kyauksè have been spent on unremunerative (protective) works in Yamèthin and Meiktila. One district out of its plenty paying for two others, and its own works neglected.

If the (a), (b) and (c) charges are met the remainder, if any, becomes a land revenue credit. I see no advantage in splitting hairs on this point. The whole is a Government charge and a book adjustment. What good does it do to a cultivator who pays his Rs. 8.50 per acre to know that 4.50 is going to water-rate, 2.75 to Public Works Department share of land revenue and 1.25 to Land Revenue Proper?

11. Theoretically the instructions are sound. I doubt if in practice cultivators often ask for the certificate of exemption. Doubtless Settlement Officers take recent improvements into consideration and make allowances chiefly by soil classification to protect the pioneer against assessment due to his own capital and energy.

12. If the copying and checking against Register II has been properly done, the information on the tax-tickets is adequate for assessment purposes.

B.—Settlement Department.

13. (1) At present by the Settlement Instructions, a Settlement Officer working in any district has absolute liberty in determining

the number of primary tracts. These in combination with price tracts, in the majority of cases should give sufficient facilities and elasticity in assessment to meet the varying needs of the districts. It appears to me that if primary tracts are to be broken into sub-tracts the system will become very complicated, and the combinations possible between primary tracts, sub-tracts, and price tracts will be excessive. It will really lead back to the same results, as if a Settlement Officer had definitely broken his area into many primary tracts and used discretion in fixing price tracts.

(2) *Main kinds*.—The example given of breaking rice land into well-fed, tank-fed and rain-fed rice land is adopted at present, though I have no distinct recollection of having seen paddy lands irrigated from a well. If I understand the question rightly we are to leave a well defined factor, that can be seen and inquired into on the ground, and is understood by the people, and to commence classification on lines not quite understood by the Settlement Officer, unless he has had a chemical, and mechanical analysis made (by some expert in agricultural chemistry); to be applied by his subordinates who would be hazy about such geological formation as alluvial, black, red or white soils, or as clay, loam or sand. Though the people themselves by the name—fanciful in some cases—give help in classification, there are so many variations, and they shade off so imperceptibly, that people using the same descriptive name are only defining roughly the nature of the soil. I think if the Committee examine text-books on Agriculture they will find varying classifications, with considerable margins of difference on the percentages of sand, silt, clay and vegetable matter given to the main soil classes and sub-classes. The Settlement Officer, if his work was to be done in this scientific way, would require at least a scientific section attached to the Party in which Assistant Settlement Officers could get their samples of soils mechanically and chemically examined and classified.

(3) *Soil classes*.—To introduce the longer series of soil classes is theoretically sound, but we must consider the material the Settlement Officer has to work with, and the fact that judging outturns is a most difficult problem. If to reduce the margin between the classes you have to train men to be able to differentiate between soils that yield a 5-basket of paddy difference, or a 10 viss difference in cotton yield, I may say that a man who can do this has yet to be born especially when we bear in mind that he is working on the stubble in one case and a plucked field of cotton, that has been grazed over, in the other.

In England when a new tenant takes over crops and stock at valuation, nothing is left to chance. Part of the crop is always threshed, weighed and valued, and on these crop measurements the outturn is estimated of the balance. No eye judging of the crop, as it stands or the stubble as left in the field, is accepted. The foundations of the valuation are laid in fact, not guessing. I take it that what is meant is that in an ordinary kwin instead of having three classes as at present—if they exist—we should have in future 5 or 6. Anyhow we will give the soil classification a range of from 50 to 30 baskets per acre in a representative kwin, instead of as at present probably

47 to 33. In the first case you will have to work within a 5-basket range, in the second a 7-basket range. We would have a small area of very good soil at one end and a small area of a poor soil at the lower. The greater part of the kwin would fall into the 2nd, 3rd and 4th classes of assumption, if the kwin was a normal one. It looks more accurate on paper, but I doubt if in practice it would give any better results than at present, and would tend to confuse the man classifying. We must remember that any error in classifying tends to smooth out by our method of assessment. The gross produce of a kwin, if the classifiers are working on the 5-basket margin, is 25,000 baskets of paddy. If we assume that a half of this goes in cost of cultivation, and that a quarter of the net produce is taken as the assessment, then we have 3,125 baskets as the demand for the kwin; if a 10 per cent. over classification is made the assessment will be 3,437 baskets the difference 312 baskets in assessment as compared with a 2,500 baskets difference for soil classification. Our method tends to smooth out these errors. Another objection to over-classification is the greater possibility of error when the maps are made over to the Revenue Surveyor. The greater trouble in preparing and checking tax tickets, etc.

14. At present I think that from the correspondence on the Magwe Settlement Report it appears that Government is prepared to consider the results of proposed rates in any assessment tract, on any holding, and owners whose assessment has been increased by 50 per cent. can obtain relief by applying to the Deputy Commissioner. Nothing has been settled about relief necessary in cases where the assessment has been increased less than 50 per cent., but it might be possible to allow some relief here by placing the enhancement of revision settlement at 25 instead of 50 per cent. It might be possible to consider the individual's total assessment increase rather than the holding in giving relief. It is the individual who finally has to pay the tax. I understand the position at present is that any man's holding showing an increase of 50 per cent. in any one kwin can apply for relief, but we ought in equity to consider his other lands at the same time, as he may very well be only suffering a 25 per cent rise all over.

15. *Classification.*—In all sound classification the village *thamadis* are generally asked to classify the land in the kwins. They know more about its local peculiarities than the Inspector, but we must remember that the Inspector has far more experience in seeing larger areas; and with the combination of their local knowledge and his experience we ought to get a soil class line very near the mark. If the *thamadis* classify, and the Inspectors agree, it seems to me that nothing more is to be done. If they don't then the Inspector goes into the matter with the *thamadis* and may accept their line after hearing their arguments. If he does not, the *thamadis* know they have to meet alterations if they are not satisfied, and are in a position when the Assistant Settlement Officer comes round later, and they have time to turn the matter over in their minds, to advance a good case to the Assistant Settlement Officer for the modification of the Inspectors' line, where it is not in complete harmony with their views. It seems to me seeking trouble for a Settlement Party to go out of its way to encourage objections in classification. They have had two

good hearings and we must realise that they are interested parties and do not appreciate a rise in revenue.

As regards the areas the majority of the cultivators only object when the tax tickets received differ from those what they already possess. They are then apt to think some one is trying to encroach and vitiate their title. At present the Settlement Party is unable to correct errors in any holding in the field, but these are automatically put right during the recess. The rates of assessment enhancement resulting on settlement are eased by means of intermediate rates in the tract or kwin, but the tendency at present is to get down to the holding. I have already suggested that the individual would be a better unit. I do not see at present how the Settlement Officer can hear objections to the assessment rates, as he generally leaves the district before the notification issues. If objections are to be heard on the present system it seems to me the Appellate Court would have to go on circuit, say, six months after issue of notification, and I can see a possibility of two years' work for an officer on this duty in a district. The settlement would require to be completed two years or more before the rates come into force to permit this. If objections are to be heard thoroughly it means the attendance of Inspectors, Assistant Settlement Officers, etc., to support their decisions in soil classification, cost of cultivation, pitch of rates. I could imagine the Provincial Settlement programme being somewhat complicated after five years of this procedure. If the Settlement Officer is to be the Appellate Court as apparently foreshadowed, in Mr. Arbuthnot's scheme, we have actually to divorce an officer from his party, make him hear appeals from his own and Assistant Settlement Officers' decision. The popular party would find here excellent material for propoganda, a comparison between the Civil Court and Revenue Court procedures would not bring much credit to Government in the agitation that would follow.

16. *Rents, Land Values and other matters* referred to in paragraph 49 of the Settlement Instructions are most useful guides for soil classification, when used in connection with crop measurements. Rents and land values, at present, are not made full use of by the Settlement Officer as soil classification is going on before they are available. If they could be classified for each kwin they would be useful in supporting crop measurements in making soil classification within the kwin, if the rents are low it indicates that the pitch of the rates should follow suit. Share produce rents are more difficult to apply, but when these are investigated, they help considerably in giving admitted outturns for holdings, these can easily be worked out at acre yields and will confirm the crop measurement or if they don't an enquiry will immediately be set on foot to find out what is wrong with the crop measurement or the admitted outturn.

17. I do not think that the assessment tracts, main kind and assessment classes can be regarded as permanent for the following reasons :—

- (1) Geographical and geological change.
- (2) Change in irrigation.
- (3) Substitution of different staple crops.
- (4) Change in prices.

Crops like *pèbyugale*, for which fancy prices are given, pass readily from one main kind to another. Peas are generally considered *kaing* crops but with tempting prices we find them on *ya* and *mogaung* land. The same may be said of cotton. Earth-nuts should probably be a main kind in some districts, and are displacing purely *ya* crops, but on the whole main kinds are *quasi*-permanent. Alterations do take place on the margin, and it is often a matter of opinion where the main kind line should run. Some officers lay stress on the geological formation and would place certain soils in a *ya* main kind, whereas other officers lay greater stress on the kind of crop actually found on the ground and its relative prevalence.

18. *Mr. Arbuthnot's scheme*.—At present a revision settlement in Lower Burma takes two years and in the opinion of most officers this is too short by a year. In Mr. Arbuthnot's scheme a 4-year programme is indicated and it may take 5 years if the appeals are up to expectation. The Settlement Officer divorced from his party, heartily sick of appeals, at the end of the 5th year places his last record in the record-room and determines never to do another settlement if possible. I feel certain that the disgust will increase. The Commissioner of Settlements will find great difficulty in recruiting officers to carry on the work with any sort of enthusiasm. Considering the number of reports, the Settlement Officer will have to be provided with a Stenotypist, and an expert proof reader if he is to get through the work. Field work will suffer and good settlement work is based on that. It would of course be very useful to have all the statistics tabulated and ready for the area over which soil classification is going to take place. If we take Tharrawaddy District with nine townships, in the new scheme the Settlement Officer's work during the 1st year would be as follows:—

General conspectus of the district of the probable increase or decrease with the report on the proposals.

A conference to get these proposals sanctioned.

Second year.—Settlement Officer would be working as at present hearing appeals against soil classification, stirring the people up to make as many as possible and preparing detailed assessment for five separate townships. Another conference to pass these at the end of the second year. On receipt of these reports the Local Government will sanction the assessment, and the party will proceed to deal with the remaining four townships of the district. In the 3rd year the Settlement Officer would be hearing appeals against his own assessment in five townships, in addition to watching the party in the field at the other end of the district. Considering the shortness of the season he cannot do both thoroughly. Then follows assessment reports for the four townships and a conference. In the 4th year the party leaves the district, the Settlement Officer remains behind to hear appeals, clear up the general mess and write a further report. He will be lucky if he completes his work according to programme. There is something to be said for the Settlement Officer hearing appeals against the sanctioned rates. He would be able to restore his own rates if the Secretariat had unduly interfered with them, but I do not know if the Revenue Secretary, Financial Commissioner and the Local Government would appreciate

this. We would be able to kill effectually the Secretariat idea that because cultivators have apparently in the past paid revenue without issue of process, then at a re-settlement they are not entitled to any relief.

To summarise objections :—

- (1) The time and cost of re-settlements would be doubled.
- (2) Strained relations between the cultivators and party would be encouraged. They have always been most harmonious as far as I know.
- (3) Strained relations between the Settlement Officer and Assistant Settlement Officers as he would, in appellate work, be formally and publicly upsetting their work.
- (4) Calling of witnesses on appeal.
- (5) Too many reports.
- (6) Settlement Officer would be tied to proceedings instead of living on kwin maps and the field.
- (7) The Settlement Officer never can be an effective Appellate Court.

19. I consider that dual control very essential. The Commissioner of Settlements and Land Records should be directly under the Financial Adviser to the Local Government so that we can have one policy. If he is to correspond directly with the Government I can see hasty action being repented later at leisure. I do not think that the Commissioner of Settlements and Land Records as a Secretary to the Financial Commissioner would work very satisfactorily. It would tend I think to divorce him from field work, and he would not be so helpful to Deputy Commissioners in inspection and supervision as at present. A Secretary does not generally make an effective executive officer.

C.—Land Records.

20. I have not sufficient experience of the new forms to give a definite opinion, but from the officers consulted it appears that they are received with great favour and the subordinate staff once they have mastered them, consider they will reduce their office work by a third. It is somewhat early to form an opinion, and to appreciate their advantages and defects. Two years hence after practical experience an opinion would be really valuable.

21. I may be conservative, but I don't think the receipt book would work. It would get lost, burnt, or so worn that it might be useless. I have had no experience of such a system. The entries would be indifferently made and I can imagine considerable confusion. With tax tickets the writing is sometimes very bad and this in spite of the supervision of the *Akunwun's* office. A receipt book would be a work of art if all and sundry could try their prentice hands in writing it up. I am prepared to form a favourable opinion, only after practical experience of its working.

D.—Executive Department.

22. I think so. Villagers will in kwin inspection produce their tax tickets for examination if they consider anything wrong with them. Clerical errors do occur and alterations are sometimes made, but if one

can judge from the agitation going on at home, these demands are accurate compared with Somerset House efforts on income-tax.

23 and 24. I think fallow rates are given freely. Total and partial failures do not work so effectively, the difficulty is physical and the Township Officer if he has a large number of applications cannot effectively deal with the situation. Government is appointing I think more freely remission *Myóks* where failures are extensive and beyond the Township Officer's powers.

25. There is difficulty in serving an absentee landlord with notice of demand, as the *thugyi* does not often know his address and he is often not particularly keen in paying till the last moment.

If the land is undeveloped it has often to be resumed as no one will take it, even if land-holders' rights exist, for the amount noted in the tax-tickets and costs.

If sold, a third party's rights come in and lead to complications. It would be better often to resume rather than have these new rights accrue.

I believe in Hanthawaddy and Insein Districts certain facilities are given to absentee landlords to pay direct to the *Akunwun*, but I have had no experience of the working of the system.

People seem to overlook the fact that it is to the interest of the absentee landlord to see that his land revenue is paid when due. If an individual defaults on his insurance policy it is not considered a good defence to urge non-service of notice.

The Township Officer cannot in many cases find out from the Revenue Surveyor if land-holders' rights have accrued; this necessitates a reference to the record-room and it cannot be done in the time.

I think if revenue sales were scrutinised it would be found that they were often made on a speculative basis. Hangers-on of the Court and the *thugyi* buying in the land for the price of the tax-ticket and process-fees.

Resumption has its drawbacks, as there is no means of really preventing the defaulter from again squatting on the land if the *thugyi* for a consideration cares to wink at it.

26. The *thugyi* clears all he can in the time at his disposal, files cases for what he cannot recover, and after that leaves everything to the Township Officer. If the Township Officer cannot recover by process or sale, the land is resumed and the revenue written off by the Revenue Officer empowered to do so. The Committee would probably get an exact view of what is done by seeing the machine in motion during this revenue season in a district and township office.

II.—The Register of Holdings as a Legal Document.

27. I consider that the Register of Holdings is in the great majority of cases a Record of Rights.

There is a tendency not to report successions and inheritance. The heirs prefer the holding to stand in the name of their forefathers, and enquiry in the field often indicates that our record is a generation ahead of the *thamadis'* memory. They admit this almost always as correct when brought to their notice.

As a record of ownership and mortgage it is more correct than in changing details such as tenants and rents. The people on the whole accept it as correct, only when a civil suit arises and feelings are roused are they apt to challenge it.

28. The people generally accept the results of settlement as final, at least I have had little experience of them trying to go behind this record. I think that it would be advisable for Settlement Officers at re-settlement to go into this question. It would mean more work, but it would make the record more valuable, and I do not suppose our present record would be objected to in more than 10 per cent. of the holdings. The Settlement Officer could probably arrange a settlement of 50 per cent. of these amicably by the interested parties and could leave on record his opinion in the other cases where the parties were advised to go to a Civil Court for a decision.

29. Yes.

30. Mutations on succession I think is the weakest part of our record. Mutations on sales and mortgages are I think good ; where registration is not compulsory it is not so good.

Redemptions are not always reported. A custom in Taikkyi Township is growing I believe in which the owner mortgages his land to get his working expenses. The deed is executed and registered and on payment at harvest is returned to the mortgagor to be again used in the following year. It is almost impossible for the Revenue Surveyor to keep abreast of these biennial changes—

(1) By penalties for not reporting succession.

(2) By penalties for not reporting changes of title that do not require registration.

(3) By better co-ordination between Registration, Civil Courts and the Land Records Department.

31. The surveyor must not be given too much discretion otherwise he may abuse his powers. I do not know sufficient about the Torrens' system to express an opinion.

32. (a) I consider that on the whole the instructions in paragraph 611 are carried out. The weak point in our records as far as I know is that resulting from succession.

(b) The information supplied by the Registration Office is on the whole adequate for identification when the areas fall in the same registration office jurisdiction; there has been some trouble I understand when lands lying in two different districts are transferred in the same deed, in getting the mutation made, say, in Pegu District if the registration was done at Sawegyin.

33. They are generally accepted, I think, in many cases because no other record is available, and they have generally been prepared by a disinterested party for revenue purposes and not for purposes of litigation. Original settlement maps and records are generally not contested. I think courts are in the habit of insisting on certified copies, in most cases stamping is the only difference between certified and true copies. Civil Courts often ask for the services of the Inspector or Surveyor to survey land in their case work, and where a decree is for partition the Land Records staff is generally asked to make the partition according to the decree.

34. I have not in practice found defects in the present system lead to any serious administrative difficulties or hamper the collection

of revenue except in one case recently in Shwebo District where colonisation has been attempted in the Ye-u Canal area. The difficulties arose out of the failure of the Colonization Officer to demarcate the land given accurately on the ground and the fact that titles already existing were not observed.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. Settlement and Land Records both purport to report statistics of mortgages and tenancies and so far as they are recorded they appear to be correct, but in Land Records they are not true indications of the economic full value, as mortgages are really of two sorts, (a) seasonal, (b) permanent. In (b) in most cases where the mortgages approach the sale value we may take it the owner is going down hill towards the tenant and landless class. In (a) he is financially sound and is using his land to cover his loan and as a source of credit. Where there is a land hunger (b) tends to be excessive and approaches the sale value of the land. To get at facts exactly mortgages, rents and sales require scrutiny. Sale values may be deceptive as the purchaser may have been forced to take the land as it was the only thing offering in satisfaction of his debt though the value of the land did not truly represent that amount.

I think therefore with scrutiny the statistics can be taken as a true record of facts.

Tenancies.—Where agriculture is commercialised tenancies are valuable and accurate. In Upper Burma where the metayer or partnership system is in vogue rents are not very valuable, as they are collected for one year only, the tenants are shifting, and with violent fluctuations in prices and yields the enquiry tends to be misleading.

Outturns are essential for soil classification and forecasts are based on Settlement Officer's assumed outturns for tracts and soil classes; they give also the assumed total yield for the district if the anna estimate is anyway accurate; the home consumption and population being known we are in a position to say if a district is an exporting or deficit district in any year and whether scarcity is likely to result.

Consumption.—This used to be a very important item in the cost of living and *Wunza* was well understood by the people. On this enquiry the consumption per head of the population was determined for forecast purposes.

Cost of Cultivation.—Most Settlement Officers have some doubts about the accuracy of the debit that ought to be made for cattle and in cattle breeding and breaking areas, the instructions I think tend to make the figures artificial. To this must be added the fact that it is most difficult to make allowances for home labour. The result is that the net produce tends to be still more artificial and only the fact that half of this is taken prevents the artificiality from being brought home. Settlement reports in the hands of an expert statistician could be made to throw great light on the condition of the people, but the methods of collecting the statistics, and the whims of Settlement

Officers would have to be discounted before definite conclusions could be drawn.

36. The only persons who seem to study Settlement Reports are the Conference, Financial Commissioner, Revenue Secretary for assessment and notification purposes, the Deputy Commissioner and Superintendent of Land Records of the district for the application of the notification, and finally the Revision Settlement Officer. I have only come across one commercial gentleman who realised that much could be got out of these reports. I believe the Insein report was studied by the bar—for a fee—in order to put up a memorial to Government about the increase of rates. I can see Settlement Reports in future having a stormy passage in Council, and being subject to uninstructed criticism.

It may be necessary in future to simplify the statistics so that the blue books may be understood.

37. The two most laborious enquiries probably yielding least results are—

Rental values—

In Upper Burma with share produce is almost valueless.

In Lower Burma it may be a guide to the pitch of rates.

Agricultural Indebtedness.—I would refer the Committee to Grantham's remarks in section 68 (Myaungmya Report).

Thathameda Enquiry.—The results in Upper Burma do not in many cases I understand impress Settlement Officers. I may be wrong, I only did a little when Assistant Settlement Officer.

38. Index numbers would be of use in investigating the cost of living, but judging from the agitation in Europe, and the fact that wages lately have been based on an index figure, it has not given a complete solution of the question. There is always the difficulty that the opposition may assert that the index figure is not correctly compiled.

39. I do not quite follow what is meant here. Special enquiries were held of indebtedness in the Delta by Mr. Clayton in 1906 I think, and the results were I understand satisfactory from the Government point of view.

IV.—Survey.

40. The general opinion is that the regular district staff is unable to keep survey up to date, if there is development of new land going on in the district. The Surveyors' charges are too large in Upper Burma, and Surveyors, after the revenue season is over, are not keen on survey in April and May. Various efforts have been made to get the recognised area, 400 acres of resurvey, out of the men, but it means drafting of the men into the area, keen supervision by the Superintendent of Land Records and considerable organization. The survey is done in many cases, but the working up of the material, *i.e.*, redrawing of maps, renumbering and preparation of area statements, generally give trouble. There is no real recess period for this resurvey work.

The special survey staff is an effort to get over these difficulties, and it has I think worked fairly successfully and paid its way. The hitch here has been mainly due to the party working in scattered

areas and the traverse work being done in the same year as the cadastral. If we could get our traverse work done by the Survey of India and an expert opinion on the cadastral work I think it would lead to improvement. It is at present under discussion with the Survey of India.

41. I prefer the present system.

To make a holding all one soil class would lead to confusion on the map and increase the Surveyors' work greatly.

The question of showing a continuous parcel of land as one holding, it matters not what main kind or soil class, might lead to simplification. The people in their own minds distinguish their holdings by main kinds and speak of them as such, but that may be due to our system.

42. I would personally prefer the map to be a complete record, but if a saving in work will result by putting the minimum on it and reserving the main entries for the register then that system might be followed. As registers consist of pages that can easily be removed and others substituted we might get alterations made that would not always be spotted by an inspecting officer. Crop-marking should be done on the map I think and inked in. What is to prevent a Surveyor on inspection showing in his register failures, fallows, etc., correctly and then altering these for a consideration later by re-writing his register. He cannot fool about with a map that has been inked up.

43. I like full details on a map, unless these are shown the majority of inspecting officers would find it difficult to follow the map on the ground; where land is developing and is not ripe for final survey, holding boundaries need only be shown.

44. The Press is, I understand, unable to cope with the work at present. Colour printing is laborious but can be done. Our main trouble has been due in many cases to the fact that good draughtsmen have not always been available at the district headquarters.

Badly drawn sheets for printing means retrenching, etc. Badly prepared colour trace lines not properly checked or adjusted to new surveys have given a lot of trouble at the Press. Both difficulties can be overcome I think by—

- (1) increasing the facilities at the Press;
- (2) employing a trained map printer;
- (3) holding Superintendents of Land Records responsible personally for all the work they submit to the Press.

V.—Organization.

45. It is somewhat difficult to answer this question. My experience indicates that where the Deputy Commissioner has settlement experience the supervision of the department is generally more efficient than in cases where this experience is wanting. The Superintendent of Land Records finds it more easy to explain his difficulties and get the difficulties under which his staff works understood. There is a distinct tendency for the Deputy Commissioners to allow all inspection work to devolve on the Commissioner of Settlements and Land Records and his staff. It is seldom that one sees an inspection note by the Deputy Commissioner on the office of the Superintendent

of Land Records or the record-room. Suggestions made by the Commissioner of Settlements and Land Records and his inspecting staff are not always carried out. Where the Superintendent of Land Records is energetic, these are observed but if slack they are overlooked and transfers are often offered as excuses for not getting things put right, but on the whole the relationship between the Rangoon head office and district offices has generally been very harmonious.

These views are personal and the Committee might examine an experienced Superintendent of Land Records on his preferences in the way of Deputy Commissioners.

Where there is an Inspector per township a Township Officer has at hand an experienced man to advise him in Land Records work, when an Inspector has to serve two Township Officers there is apt to be difficulties.

The heavier districts are getting Assistant Superintendents of Lands Records and these men are of great relief to Superintendents of Land Records where field inspection is extensive. They are young and energetic. The difficulty is that there is a limit to the energy of a Superintendent of Land Records and there is a decreasing limit after 45 years of age. He tends to become tired of the work and to prefer office to the field. Only exceptional men retain their energy up to the last. We are faced with the problem of a man with very valuable experience in a heavy district, tied to office doing work, where his inclination lies, when he ought to be in the field. If it were possible to draft off men whose energy was failing as *Akunwuns* it would be an advantage. The Deputy Commissioner would have an experienced and capable officer to do routine work and to advise. This would mean training Superintendents of Land Records on broader lines on the revenue side.

46. I think the assembly of Revenue Surveyors at township headquarters is a step in the right direction. The men work better together in a body, the Inspector can supervise better, and the Superintendent of Land Records can inspect and teach his staff better. I have known cases where Surveyors had not seen their Superintendent of Land Records for over a year. The Superintendent of Land Records could in ten days' recess inspection at the Inspector's headquarters (generally a township headquarter) if the staff was assembled there, do more work than in twenty days' recess inspection at present. The mutation of names would not suffer greatly, as soon as the surveyors and people got used to the new system. In the field season mutation could be done quite as well as at present.

47. I think so, especially if we give the Inspector of Land Records and his surveyors the same headquarters.

48. At present both departments help as far as possible, but it must be remembered that the Land Records staff has been sanctioned on the work to be done, settlement means more work for every one and if the Land Records staff is just able to do that work we cannot expect much help from them. If experienced Superintendents of Land Records were in charge two years before settlement with an assistant, and during settlement, he could arrange to have area statements up to date or nearly so. The use of the Land Records maps of the same year as the settlement enquiry is a great help, but there are limits

to assistance. I would like to hear the Committee's views on the subject.

49. We have built up our Land Records staff with considerable trouble, have insisted on higher educational qualifications where possible, and a retrograde step is a confession of failure that I am not prepared to admit.

I am opposed to fixed assessments in Upper Burma where the range of yield varies so considerable and can be so local. I do not think it would appeal to the tax-payer, and he is an important cog in the wheel of assessment.

I think that by giving Inspectors of Land Records and Revenue Surveyors some of the functions of Township Officers you would be tempting these men sorely, and trusting the good name of Government to a host of subordinate officials whose sense of duty is not always as high as one would desire it.

50. (a) The Committee will find this discussed at length in Mr. Arbuthnot's note on Survey Schools.

With the formation of a Survey of India Circle in Burma with a Survey School we may be able to find here a solution of our trouble.

The training of Superintendents I think is on the whole good.

(b) The question depends solely on the time Government is prepared to give to this work. Three months is a short time to learn surveying and supplementary survey work in. I would be inclined to attach these officers for three months to a settlement party in the field.

VI.—Special Areas.

51. In some cases supplementary survey has been allowed to go mad, probably due to the fact that the Survey of India had surveyed the area and the maps were there to be used, in other cases by extensions of surveys by the local staff, and the cost was not considered. It is certainly advisable to take stock now of the position in remote and undeveloped areas.

52. I think we will probably have to go much further if there is to be adequate relief.

53. I take it that if assessment is to be on the area sown then the surveyor will visit the kwin at least once a year; it is not any great improvement on our present system. If on the area occupied, in these remote areas this is a varying quantity, and it may mean a yearly visit or a lump sum assessment fixed for a varying term of years or for the settlement. This form of assessment does not appeal to the Burman cultivator who is used to fluctuating assessment, but it might be successful if the rates were pitched sufficiently low. I do not know with what success it has worked in Meiktila, but I do know that in outlying kwins where a few households are holding the jungle in check, and fighting against game, lump sum assessment may throw the whole area out of cultivation. In these areas it would be better and easier to drop land revenue assessment and go back to *thathameda*.

54. I have very little belief in assessment by *thamadis*. *Thathameda* has become a uniform tax, the well-to-do, being *thamadis*, do not see why they should pay more than others. I have seen *thamadi* co-operators working on division of land in a colonization scheme in

Shwebo, and the prayer of the outsider is "God keep us from *thamadis*" It would be far better for Government to allow the cultivator to contract out on a lump sum after going into the agricultural history of the kwin. I have had no experience of lump sum assessment. The Committee might examine Mr. MacCallum, Meiktila, on these points.

55. I think it is advisable.

56. I have not seen the system working and cannot express an opinion.

57. Cadastral survey should not be ahead of occupation unless for colonization purposes, and then there should be demarcation. It may be necessary in some cases to run traverses so that we may know the area we are dealing with, and break it up into sub-blocks. Cadastral survey before development is a mistake and waste of money, unless it is run on proper lines of demarcation.

58. The survey of grants, leases and fisheries are not always up to date. In grants the grantee does not always occupy the area granted. He has no neighbours at first with conflicting interests and does not worry about his boundaries. The difficulty can easily be got over by insisting on adequate demarcation and a traverse. The same applies to leases. Grantees and lessees should be made to maintain their boundaries. Fishery maps tend to get out of date by alterations in the drainage and natural features of the country. They should not be very difficult to maintain as they are fully shown on the 16-inch map and if this is up to date the fishery could be traced and reduced from the kwin map.

Fisheries and cultivation are always in conflict and maps are always in a state of flux along the supposed two chain limit of a fishery. Cultivators want to bund and cultivate in this area, the lessee wishes to keep whole kwins open as a breeding ground. At the end of the season the lessee wants to let all the water out quickly, the cultivator slowly, and he always wants to retain sufficient for his stock.

Town land maps tend to get out of date for various reasons, chiefly buildings and encroachments; to be of any use, where a town is growing, we require continual resurvey.

Mr. W. J. Smyth, I.C.S.

Deputy Commissioner, Kyauksè.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

(1) Crop measurements are a safe basis for estimating outturns; records of prices are a safe basis for valuing produce; enquiries into out-of-pocket expenditure are a safe basis for reckoning cost of cultivation. Some allowance should be made for the labour of the cultivator and his family, but I am unable to say how much, neither

can I suggest how the cost of plough cattle should be calculated. The net produce as at present calculated appears to me to be a satisfactory basis for assessment. I am not in a position to suggest defects in the present instructions and procedure.

(2) I am unable to give any useful advice under this head.

(3) Rents are not of much use as a basis for assessment, as many landlords let out their lands at a high rent, which they reduce in accordance with the tenant's means of paying in any particular year. But they are, I think, a fairly good guide to assessment.

(4) The existing system is not really fluctuating for the following reasons:—

(a) The loss of crop must exceed one-third (Land Revenue Direction 134, Proviso).

(b) The crop must not be removed from the ground before inspection by the Township Officer (Land Revenue Direction 134, Proviso). Cultivators often cannot wait until the Township Officer finds time to visit the land. This is particularly the case when they want to clear away the failed crop in order to grow a second crop in good time.

(c) Cultivators are deterred from applying for remission owing to the expense and loss of time involved. They have to make a journey to the Township Officer's headquarters, and often a second journey if they find him absent; they have to pay some one to write their applications; the date of the Township Officer's visit to the land is often postponed, and they are kept waiting for him and wasting their time. Mr. Nicholson, who farms a large area of $\frac{1}{2}$ a land in this district, has told me that he once applied for and obtained remission, and that the amount remitted was barely as much as it cost him to obtain it, and that he would never apply again. Yet he is a man of some standing and influence, who would not be likely to be subjected to the same vexatious delays as the ordinary cultivator. Hence applications for remission are not numerous, and are mostly confined to cases in which the rate is high, as for irrigated paddy, and the destruction is almost total.

(d) Township Officers are inclined to discourage people from applying for remission. This is not surprising, as their ordinary work is heavy; remission work is arduous; and a large number of remission cases are a severe additional burden.

(e) The people themselves dislike the trouble of applying; they often do not take the trouble to acquaint themselves with the latest date for putting in their applications and are aggrieved when these are rejected as time barred.

In Lower Burma, with its single crop, the remission system works better, but in Upper Burma with its multiplicity of crops it is unworkable. These remarks do not however apply to Direction 134A, which provides a simple procedure for giving relief in years of abnormal disaster, and has worked satisfactorily. It is the procedure prescribed for ordinary years only which has proved a failure.

I consider that it is both desirable and feasible to substitute fixed assessments, reducing rates proportionally. The retention of Direction 134A will afford relief in years of disaster and obviate the necessity of fixing very low rates.

(5) If fluctuating assessments are maintained, it is desirable to retain the existing variations as they have worked well in practice.

(6) Crop rates should in my opinion be confined to island lands where the quality of the soil varies within a comparatively small area, and is liable to frequent changes owing to inundation.

(7) I do not consider that there is any necessity for these deductions. Insecure areas should not be placed in the same class as secure areas; if the crop cuttings are reliable there should be no need to make allowance for unfertile patches; fallow areas are not assessed.

(8) I consider the proposed procedure for granting temporary rebates to be unduly complicated. Further I do not think that it should be left to people to apply for a rebate, but consider that they should receive it automatically. The old procedure was a rough and ready method which worked well enough, and as far as I know has never given rise to complaint. The proposed method of calculation would give a good deal of trouble, and would be beyond the capacity of the ordinary surveyor.

(9) I consider that three years is a suitable period for the duration of settlements.

(10) I consider that the whole of the improvement due to irrigation or drainage should be assessed in the form of a water-rate. The water-rate should be the balance of the assessment after deducting the land revenue. The land revenue should be based on the out-turn of the land assuming that it received no irrigation. Some lands would be unculturable without irrigation; in such cases the land revenue would be *nil*, and the Public Works Department should receive the whole amount of the assessment in the form of a water-rate.

(11) I consider that the arrangements are satisfactory but I have no experience of their working.

(12) I consider that the information given in the tax-ticket is adequate.

B.—Settlement Department.

(13) I am of opinion that it is not desirable to aim at greater differentiation than at present, and that only strongly marked differences should be taken into account. Incidentally a multiplicity of rates confuses the people, gives extra work to revenue surveyors, and leads to errors in the preparation of the assessment roll and tax-tickets.

(14) Certainly not. Such minuteness should be carefully avoided.

(15) The Settlement Officer considers all objections received during the course of settlement, but I do not think that it is desirable to give general facilities for raising objections. The rates are not known until the Local Government has passed orders on them, and if they were then to be notified provisionally pending objections, the Settlement Officer might not be available to deal with the objections, which, in the event of a general increase in assessments might be extremely numerous.

(16) I have no remarks to make.

- (17) I have no remarks to make.
 (18) I have no remarks to make.
 (19) I have no remarks to make.

C.—Land Records.

- (20) I consider the revised forms to be suitable.
 (21) I consider this to be neither desirable nor possible; the receipt books would I presume be entered up and signed by the headman, and would be full of mistakes. It would not be practicable to send them into the township or district headquarters to be entered; many people would lose their books; the books could not be used as evidence in civil courts to the same extent as tax-tickets are now.

D.—Executive Department.

(22) Verification of the assessment is adequate; the assessment rolls and tax-tickets are sufficiently checked.

(23) Satisfactory and suitably applied.

(24) I am doubtful about the rules relating to the grant of fallow rate on application, as it is some years since I have served in Lower Burma, to which these rules apply. The rules for the grant of remission are not satisfactory and cannot be suitably applied, in Upper Burma at any rate, for the reasons given in my answer to question (4) above.

(25) The procedure prescribed by Upper Burma Land Revenue Rules 158 to 178 is followed. Owners receive notice of the demand, and if land is attached, they also receive notice of the attachment; before land is resumed they receive notice of ejection.

State land is ordinarily resumed (rule 36) and non-State land is sold, but sales of land in this district are extremely rare; resumption is practically confined to inferior State land, and is not often necessary. The Township Officer acts on the report of the headman, and not of the Revenue Surveyor.

(26) No; the headman applies for its recovery, and the officer empowered under Direction 162 writes it off if he finds it to be irrecoverable.

II.—The Register of Holdings as a Legal Document.

(27) The register of holdings cannot be regarded as a record of rights for the following reasons:—

(a) It is not up to date; this is mainly due to mutations not being reported.

(b) It contains many incorrect entries; this is due both to bogus transactions being reported, and to the register being maintained by an unreliable agency, namely the revenue surveyor.

(28) The enquiries made at settlement appear to me to provide an adequate basis for a record of rights, and I think that steps should be taken at resettlement to record them in greater detail but this would give considerable extra work to the revision settlement officer.

(29) I consider that the register of holdings should be brought up to date and revised at re-settlement, and that it should be attested.

(30) Mutations are brought on the register of holding :—

(a) on receipt of a certificate from a civil court ;

(b) on receipt of an intimation from a registration office ;

(c) on receipt of a report from the parties.

The surveyor may not alter names on his own authority (Land Records Manual, 608) and in the case of transfer and occupation of State land he has to take the orders of the Township Officer before altering names (Land Records Manual, 602A.)

(31) I doubt whether this proposal would work satisfactorily as people would not take the trouble to register. Section 15 of the Lower Burma Land and Revenue Act provides for the registration of the status of a land holder, but I believe that little or no use has been made of it.

(32) (a) This provision is not carried out in the majority of cases, the ordinary form of transfer being oral, supported sometimes by the foil of the register of reports of alienations, commonly known as a *pyatbaing*.

(b) The information furnished by registration offices is complete as far as transactions which have been registered are concerned, and is of assistance in keeping the register of holdings up to date.

(33) The civil courts know the agency by which the maps and registers are maintained, and do not accept them as conclusive ; they are regarded as good corroborative evidence. As far as I know uncertified copies of maps are not accepted or offered as evidence. The Land Records Department assists the civil courts in giving effect to the decrees for partition of land. I do not think that anything more is desirable or feasible.

(34) The deficiencies in the present system do not result in serious administrative difficulties, but they often give rise to complaints and enquiries. They do hamper the collection of revenue to a certain extent, but headmen usually know the person who is liable for the revenue and demand it from him, even though his name does not appear in the tax-ticket.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

(35) These statistics provide valuable information regarding agricultural economy.

(36) I do not think so.

(37) I do not think so.

(38) I do not think so.

(39) I do not think that the information could be more suitably obtained by special enquiries.

IV.—Survey.

(40) I think that the regular and special survey staff is adequate and competent.

(41) I see no objection to the whole of any continuous parcel of land held by one man being included in a single holding, irrespective of main kinds and soil classes.

(42) I see no particular objection to this, though for an officer inspecting kwins it would be more convenient to have everything entered on the map.

(43) There would be no objection to this in kwins in which only one crop is grown on each holding, but it would not do for kwins in which different crops are often grown on one and the same holding.

(44) The arrangements appear to me to be satisfactory.

V.—Organization.

(45) As far as the district organization is concerned, I am inclined to think that the present arrangements tend to the most efficient working of the Land Records system. But the actual check by revenue officers (Deputy Commissioners, Subdivisional Officers and Township Officers) is inadequate. This is not due to any particular defects in the rules for supervision and control, but to the fact that these officers are so heavily worked that they are unable to comply with the rules; few revenue officers, for instance, ever inspect surveyor's offices, and the work of kwin inspection is often a frantic rush towards the end of the *kaukkyi* season in order to visit the minimum number of kwins. The remedy is obvious; these officers should be relieved of bench work as far as is practicable, and should be given assistants, heavy charges should be split up. Revenue Officers could then be required, as part of their ordinary routine to check both the recess and field work of surveyors throughout the year. Closer relations would then be established, and it might be possible in course of time, to bring revenue surveyors in direct subordination to Subdivisional and Township Officers. At present in Kyaukse and in Mandalay Districts and probably in several others, Subdivisional and Township Officers are primarily Judges and Magistrates, and only incidentally revenue officers. As for the Deputy Commissioner, he is often over-worked, and there appears to be very little compunction about imposing extra work upon him.

(46) Certainly not; this would free him from the wholesome control of his fellow villagers and the headman. As far as the register of mutations is concerned, alienations could be reported to the headman, but the parties would ordinarily have to go to the revenue surveyor first to obtain the necessary particulars of holding numbers, areas, etc.

(47) Probably adequate, though there is no doubt that Inspectors do not exercise adequate supervision. Better control by revenue officers (see answer to 45 above) may improve matters.

(48) I am unable to make any suggestions. No extra work should be imposed on the Superintendent of Land Records.

(49) I am afraid that the work of revenue surveyors is too technical to be entrusted to village surveyors.

(50) I consider the present arrangements to be satisfactory.

VI.—Special Areas.

(51) It is certainly necessary to modify the ordinary system in such areas.

(52) This would be quite sufficient.

(53) This is quite feasible and in some areas the assessment is made in this manner at present, *e.g.*, in the case of *taungyas*; but the assessment rates would have to be low, and it would be preferable to have the outturns estimated by *thamadis*.

(54) Quite feasible; there would be a certain loss of revenue, but on the other hand the assessment agency would be unpaid.

(55) I do not advocate a reversion to *thathameda* owing to the frequent tendency of *thamadis* to impose a flat rate in order to save themselves trouble; this tendency is, I think, more marked in backward than in advanced localities.

(56) As far as I know *thamadis* are not assisted by surveyors, and I do not think that such assistance is necessary.

(57) A special survey party would presumably be required. There seems to be no reason to extend survey in advance of occupation.

(58) These arrangements appear to be satisfactory.

Mr. C. F. Grant, I.C.S.

Deputy Commissioner, Mandalay.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. (a) I consider that all the items mentioned in Question 1 are a safe basis for the different processes of assessment if the Settlement Officer is equal to his work.

(b) I have always been a strong adherent of the view that the market value of manual labour done by the cultivator and his family should be included in the cost of cultivation.

(c) I consider that a fair system of calculating the cost of plough cattle is to allow each animal a working life of four years.

(d) The net produce as at present calculated is a satisfactory basis for assessment.

2. My opinion is that a theoretical basis of assessment is becoming rapidly one of purely academic interest, and that the basis for all future re-settlement of rates will be the existing rates in that area and in areas of similar value and productivity. Rents, sale prices, prices of produce and wages will be the criteria on which the general question whether an enhancement is possible or not will be settled, and the extent of the change in rates will be determined by comparing the above figures for different areas (not necessarily in the same district) without much regard to general principles or fixed proportions of net produce. All enhancements will have to be justified by reasons which can be understood by the ordinary critics of the administration and by the people themselves.

3. A Settlement Officer should have his rents as his chief check if not his main guide in proposing alterations in assessments, and his

knowledge of his district should enable him to discard them when special circumstances render them unsafe guides.

4. The extent to which the existing assessment fluctuates varies from district to district. The people have grown accustomed to fluctuation in assessments in areas where outturns differ from year to year, and I am opposed to abandoning a method which is sufficiently understood and which could only be discarded at the expense of a good deal of revenue. It must be understood that there is little prospect of a continuance of the progressive enhancements of land revenue that have been general up to the present.

6. The present extent.

8. The rules with regard to temporary rebates are as suitable as rules which cannot be readily simplified can be. I am of opinion that they will not be required much in the future except in the cases of unusual change in fertility of the soil or cases of mistaken original classification.

9. A settlement should be so arranged as to allow for three seasons' crop cutting and the collection of statistics before soil classification, and subject to these two conditions should be as short as possible.

10. I am opposed to the present system by which a profitable irrigation scheme pays for the upkeep of less profitable schemes. In the long run I believe it would be fairer to look at the expenditure on each irrigation project as a loan from the public funds to the particular area served by that project. The first charge on the area should be a sum necessary to repay the community for the loan it had made, *i.e.*, upkeep, interest and sinking fund charges, and a reserve for unforeseen expenditure on works. The next charge on the land should be the previous amount of the land revenue obtained from the area, and this demand should be distributed over the whole area which benefits by the irrigation work without regard to the fact that certain parts of the area may not previously have yielded any revenue. When the Settlement Officer has adjusted these two demands over the whole area he may then proceed to assess any taxable surplus in whatever part of the area it may be found. The Public Works Department should receive nothing beyond the water-rate.

11. The arrangements for protecting a cultivator who improves his lands from undue enhancement of the revenue demand are satisfactory.

12. Yes.

B.—Settlement Department.

13. The tendency in future will be to make rates of revenue more uniform; and sale values, rental values and other concrete facts will possess an increasing influence on re-settlements.

14. I think a statement of the financial effect of proposed rates should be considered for each kwin.

15. Every occupier of land should have an appeal against the Inspector's classification to the Assistant Settlement Officer. Questions of correct area should be referred to the Land Records Office. In my opinion the present procedure allows ample scope for the making of objections.

16. The data for assessments other than crop measurements are of great use as guides in making assessment proposals. Rents were verified at my settlement by recording both the tenant and the land-owner's statements about what the rent really was. A certain amount of verification of transactions was done by recording the figures in the Registration Office. Such figures were of course not available for assistance in soil classification. Share-produce rents must be difficult to utilize, but I have had no practical experience of them.

17. In many areas I believe the existing assessment-tracts, main kinds and assessment classes could be regarded as permanent, but certainly not at present in this district. Re-settlements will not be undertaken except after considerable periods of time, and I do not think it is desirable that classification should be permanent.

18. As indicated above I am in favour of certain proposals made by Mr. Arbuthnot for a revised settlement procedure. These points are—

(a) There should be crop reaping for three years over the entire area.

(b) The Settlement Officer should have studied the whole district before doing his tracting and before beginning soil classification.

(c) Statistics should have been collected before soil classification begins in any particular area.

The great difficulty concerns crop reaping for three years. This is a work which has heretofore occupied the whole staff of a settlement party, but in bringing the new procedure into operation an extra staff will have to be provided for one year.

There are however certain practical difficulties in carrying out the proposed scheme.

(a) The Settlement Officer would not require a field season to make the enquiries mentioned in paragraph (iii) in the appendix.

(b) There is a distinct practical limit to the number of times cultivators can be turned out to go over the kwins. The procedure provides for one check on the ground of the statistics by the Inspector accompanied by cultivators, and next year another visit for soil classification by the Inspector, and a third visit by the Assistant Settlement Officer.

(c) I doubt the possibility of employing a staff purely on statistical work for one year out of the three.

I think a judicious mixture of field and statistical work is absolutely essential to keep Inspectors efficient. I do not believe an Inspector would go over the ground to check his statistics and I do not see why he should do so. If he carried out the rough soil classification indicated in paragraph (v) he or his successor would probably slur over the work of actual classification in the following year.

(d) I am opposed to the project of a separate assessment report for each township. District Officers cannot be expected to master various settlement reports and meet at numerous conferences, and alterations in the personnel of these conferences might lead to very unsatisfactory results. On the other hand some such procedure as is provided for in paragraphs (xiv) to (xviii) will be necessary in future.

19. I consider the dual control exercised by the Financial Commissioner and the Settlement Commissioner necessary.

C.—Land Records.

20. The revised Land Records forms with their connected instructions appear to me very suitable.

21. A separate tax-ticket for each holding is necessary under the present system of holding land in Burma, and a separate receipt-book for each holding would be no great convenience and cause unnecessary difficulties.

D.—Executive Department.

22 to 26. Generally speaking the present working of the verification of the assessment and the rules relating to partial or total failures of crops are satisfactory.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. I am strongly opposed to the idea of constructing index numbers for the cost of living of cultivators and cost of cultivation. The statistics collected by an unskilled staff should be kept in the simplest form possible for reference and use.

IV.—Survey.

41. I consider that a single holding should include the whole of any continuous parcel of land held by one person irrespective of main kinds and soil class. A proviso to this must be added that something approximating the present form of tax-ticket must be retained.

42. The present procedure of recording details concerning soil class and rate of assessment, etc., on the map is convenient, and should not be changed.

43. Each field boundary should be separately plotted.

V.—Organization.

48. I consider that the Settlement Department could make better use of the figures prepared by the Land Records staff, especially with regard to rents and sales.

Mr. H. B. Holme, I.C.S.

Director of Industries.

I am not able to do more than put down roughly on paper the outlines of the system which originally occurred to me some twelve years' ago and which has no doubt occurred to many other people before and since. It still seems to me the best answer to Sections (c), (d) and (e) in the terms of reference.

When any area has been settled three times or perhaps even twice there should be no further revision settlement at all but alteration of

classification could be done as an ordinary matter of revenue administration by the Deputy Commissioner with the advice of his Land Records staff. Generally speaking reductions of classes would take place only on the motion of the owner of the land who would move by petition to the Deputy Commissioner who would then order an enquiry to determine whether the land should be reduced or not and pass orders accordingly. His order will be subject to revision by the Commissioner acting on the advice of an Arbitration Committee. Raising land from one class to another would be done on the motion of the Deputy Commissioner acting on the advice of the Land Revenue staff and he would proceed by notice to the owner to show cause why the land should not be raised to a specified class. If the owner objected the same procedure would be followed as in the case of reductions of class. When land has been raised in class no further raising would be permissible for five years. Whenever a large area of land appears to have changed its character the reclassification of which would be beyond the powers of the ordinary revenue administration, it will be a simple matter to appoint a special officer to carry it out as we now appoint special survey parties. In Lower Burma, as a matter of fact, changes of classification are, I believe, rare. In the case of land revenue assessed on established paddy land the rates to be applied to the land would be fixed for terms of ten years at a time, reduction or increase of rate being based partly on the prices index figure and partly on changes in amenities provided by Government for the community, such as communications. We shall shortly have regular annual cost of living index figures and it should no longer be necessary to make elaborate *ad hoc* enquiries whenever a district comes up for resettlement. I propose a shorter interval for the reconsideration of the rates to be applied for the same reason as in our old settlement procedure, enhancements beyond a certain percentage were disallowed because of the dislocation caused by sudden enhancements to the established standard of comfort. It is obvious that the longer the interval which is allowed to elapse between two settlements of the land revenue, the more established will be the standard of living and the greater will be the shock of any alteration in the amount of revenue payable. In order to reduce this shock the period of crystallization should be reduced. I have always thought that a generation is far too long and gives almost the sanctity of immemorial custom to the amount any one has to pay. If it is only altered once in a life time the shock of enhancement is proportionately greater than if subject to alteration at short intervals. To my mind the annual fixation of rates based entirely on prices and the cost of living index figure is the ideal which in time, I believe, we shall get to. In the meantime so as not to make too violent a change I suggest revision every five or ten years.

As regards (2) in the terms of reference, the better utilization of the information collected, I have just spent some time with the Board of Trade Labour representative now working out the Labour Statistical Bureau for the Bombay Government and when this system is established in Burma, all this information and a good deal of further information will be collated and really used in a practical way.

As regards permanent numbers and registration of land, the ideal is a card title system under which a transfer is effected by the transfer in a sort of ticket office of the ticket representing title to the land from A to B : it need not be a much more serious affair than the changing of a book in a library. The front of the card contains names and addresses of the owner and a general description of the boundaries together with survey numbers of the plots concerned. A copy of the map on a small scale is on the back of the card. Charges on the land are represented by cards of different colours, the original title card, being sur-charged and embossed with the same colour and will show merely an office reference to the charge-holder's index for details of the charge. No land can be transferred by transfer of the card ; when a transfer is to be effected the old card is withdrawn and a new one issued showing the new owner, etc.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

As regards (3) in your questionnaire about rents being used as a basis for or guide towards assessment, I have spent many years combating this and have never found the system satisfactory in any province where it has been used. The fallacy of basing assessments on rents is sufficiently exposed by the necessity which arises not infrequently of having to fix the rents. *Quis custodiet ipsos custodes.* You want your assessments to sit close on the ground and not to be floating away up in the air with a miasma of rents, etc., between your assessment and the actual land.

As regards fluctuating *versus* fixed assessments, my experience has been that fixed assessments have invariably failed. You fix a lower proportion on the understanding that it will be paid in bad years as well as in good years and in this way perhaps promote thrift. It has not promoted thrift and in practice remissions have had to be given. It is not an ordinary part of administration under the fixed assessment system as under the fluctuating assessment, and it is not as a rule so well done and there is sometimes no provision for it in the Revenue Code. The Revenue Officers are not accustomed to it for they have no practice and when it has to be allowed it is generally unsatisfactorily performed. I believe very firmly that the knowledge that remissions are freely given does in fact relieve the mind of the cultivator or land owner of considerable anxiety and induce in him a more equable frame of mind.

As regards (6), I believe in theory in fixing the assessments on the land and not on the crop but it depends to a certain extent what result you wish to bring about. If you wish to induce people to take up intensive cultivation, then in respect of land which is capable of growing finer crops, such as onions or tobacco, you must raise the assessment so that they must grow these finer crops, and on an intensive system, in order to make the cultivation of the land fully profitable.

(7) With a true fluctuating assessment it does not seem to me to be necessary to make any allowance for insecurity or unfertile

patches or for fallow areas. The insecurity is known to the cultivator and he provides accordingly and when the crop fails he obtains a remission. Unfertile patches if large enough to be worth while bothering about should be excluded from the fields and not included in the assessment at all. If they are so small that they cannot be excluded it is certainly not worth bothering about them at all.

(10) As regards Government irrigation and drainage and the irrigation share of the land revenue, I am almost ashamed to add anything to the volumes which have been written on these subjects before. But put shortly my views are :—

(1) *Government irrigation.*—The water should be sold at the lowest possible profitable rate at which it will find a market and in no case should Government attempt to make more than 10 per cent. on its irrigation project.

(2) *Drainage.*—I cannot see why Government should charge a rate for this at all. You don't charge a rate for a road which opens up large tracts of land which are not cultivated. Government gets the land revenue on the drained area and with the fluctuating assessment presumably gets more, spread over a period of years, on drained than on undrained. Why can it not be content with this and not be so commercial?

I have suggested that the water rate should be fixed at the market price of the water. I would say it should be sold at a rate which will bring in not more than 10 per cent. on the capital outlay of the irrigation scheme subject to the maximum price at which the water can be economically applied. In most cases the second limitation would apply so that Government will not get the full 10 per cent. The commercial value of the water to the land is not a difficult matter to work out.

As regards the Irrigation share this is a profitless enquiry which arose originally solely because the Government of India had to find funds to finance Local Government projects. In order to swell the receipts and so make the project attractive all sorts of possible and impossible sources of income had to be roped in. It is only a question of two pockets of Government and when you get a sane way of judging a project, that is by benefit to the community and not by commercial return to a Government Department (at the cost of another Department), the "Irrigation share" will find an inglorious grave.

11. This matter of cultivator's improvements of land will be adequately dealt with under the system of reclassification as an ordinary incidence of revenue administration outlined above. Any notice to enhance classification could be successfully resisted by the cultivator proving that the land has been improved at his own cost.

12. With a ticket system of title registration tax tickets might be very much simplified by a simple reference to the serial number of the title ticket.

D.—Executive Department.

25. I think the worst part about our present revenue recovery is the way in which a large area of land is often put up for auction for a very trifling amount of revenue outstanding and in the Financial

Commissioner's Office I have come across some very bad cases of this kind. Recently I heard of one in which land which had been purchased on the hire-purchase system at Rs. 10 a month for a period of four years, was sold for a revenue outstanding of something under a rupee.

II.—The Register of Holdings as a Legal Document.

27. The Record of Rights as understood in India is to my mind now an anachronism. It is about on a par with Domesday Book and about as useful: that is to say it will be very valuable 900 years hence: for practical purposes to-day there are many simpler systems.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

I would say generally that there should be more continuity between the work of the Settlement Officer and the Land Records Department. Better use could be made of the statistics recorded and index numbers are an absolute necessity.

V.—Organization.

45. My only suggestion about this is that every officer appointed to the Commission or to the Burma Civil Service should actually be a Superintendent of Land Records for about a year at a time. The land revenue system is a very important part of a District Officer's work but the knowledge of the interior working of the system is often very sketchy. This to my mind will be as valuable training as that in settlement and can be made more universal.

49. I do not believe in less highly trained Revenue Surveyors. As far as my experience goes both in the district and particularly on the bench, in cases in which records of the Land Records Department had been offered in evidence, it is my opinion that we have a very satisfactorily accurate system and I believe that the expense of the combined settlement and revenue departments can be cut down in many more satisfactory ways than by substituting a less highly trained staff for the Revenue Surveyor. He is to my mind the most necessary officer in the whole chain.

VI.—Special Areas.

58. I do not consider the existing arrangements are satisfactory in respect of surveys for Grants and Leases. The delay is a very serious matter where industrial capital is concerned. I think it would be very much better to have a system of Private Survey Practitioners who could be employed by any one desiring to survey a grant or lease and be under their orders. Their work would be checked by Government for its own satisfaction but for an applicant to have to wait sometimes six months or a year while a Government surveyor is made available to survey a grant or lease is an intolerable system. There should be no difficulty in accepting a plan made by a private survey practitioner any more than that there is in accepting a private architect's plans, etc.

Mr. J. L. McCallum, I.C.S.

Deputy Commissioner, Meiktila.

The following note was written by me in 1915 when on settlement and I still agree with what I thought then. It contains certain criticisms which might be passed on settlement methods in Burma and suggestions for action to be taken in reply to such criticisms.

In the first place the control of settlement is far from ideal. It is at present a triple control of Settlement Commissioner, Financial Commissioner and Revenue Secretary as the voice of the Local Government. The position of the Settlement Commissioner as a buffer between the Financial Commissioner and the Settlement Officer is unenviable. Practically all his decisions are liable to review at the hands of the Financial Commissioner. He is bound therefore to evolve into a merely advising officer. Again he is unnecessary, even harmful, as a buffer because direct relations between the Settlement Officer and Financial Commissioner would be preferable for the despatch of business. His existence prevents two officers from taking the direct interest in settlement, that is desirable, the Financial Commissioner and the Commissioner of the Division. As a general proposition the creation of intermediate authorities is undesirable unless conditions clearly prove that the creation is indispensable. Such conditions do not I hold exist in the case of the Settlement Commissioner. Take the instance of a settlement conference. The Settlement Commissioner is the person who at the cost of much labour acquires a thorough knowledge of the conditions of a district and the difficulties and their solutions encountered and devised by the Settlement Officer. That labour is wasted because he has no voice in the final decisions, because the Financial Commissioner and the Revenue Secretary have to acquire the same knowledge for themselves. Dual control appears to be indispensable but triple control cumbrous and undesirable.

The situation then seems to point to the abolition of the Settlement Commissioner. I believe this has already been suggested and that such abolition would present no insuperable difficulties. It has been proposed to replace him by the creation of one or more appointments so as to form a Board of Revenue for the province. My suggestion is less cumbrous and more economical. The routine part of the work should I suggest devolve upon an additional Secretary to the Financial Commissioner to be styled the Settlement Secretary. Decision of principles should vest in the Financial Commissioner. The inspection work might be delegated to the Commissioner of the Division, or if the Settlement Secretary to the Financial Commissioner were over twelve years' service and Settlement Officers of greater youth were appointed as appear to be the tendency he might also undertake inspections. Settlement Conferences should be presided over by the Financial Commissioner if possible or if not by the Commissioner with the Settlement Secretary or a member to voice the views of the Financial Commissioner.

In the second place the functions of a Settlement Officer are rather vaguely understood at present. While other departments suffer from over centralization the Settlement Officer is left as a solitary example of independence. He is a law unto himself. Like some spider he is expected to spin equitable rates out of his own bowels. No doubt his duties are clearly enough defined in details by the Settlement Instructions. But he is denied a knowledge of the basic principles applied by the Local Government though these are all important to him. The reasons perhaps partly is that Government has not finally succeeded in defining its basic principles to itself. Thus we read in the last Land Revenue Administration Report that experiments are still being made in discovering the best method of calculating the cost of cultivation—a calculation on which every settlement is based. Again Government applies principles in the criticism of a Settlement report which are not at the command of a Settlement Officer when conducting his settlement.

Revenue should be regarded as a tax, not as a rent. The principle that the State is supreme land owner in Burma was adopted in Sir Ashley Eden's Lower Burma Land and Revenue Act of 1876 but was opposed by the majority of his Revenue Bill Committee. The demands of the State should be regarded openly, as of course they are in reality, as the limits of taxation. Not what the people can bear, but the proportion of the burden they should equitably be called on to contribute should be the criterion. The approach to one-half share of the net produce is only a bogey but it might well be given up even as a bogey.

Government should decide whether they are going to adhere to the determination of taxation as a share of the net produce and if they are, a definition of net produce is a crying need. The alternatives are a share of the gross produce (as in old Burmese times) or a proportion of the saleable value (as in England). The latter is impossible in this country where saleable values are not economical values and the former would be a reversion to conditions which we are done with. The main reason for the retention of the present system is that for two generations of Settlement Officers in Burma net produce has been the guide and the mass of material collected by them is too valuable to be cast aside.

Net produce then must be defined. An essential element in the calculation of net produce is the cost of cultivation. The method of determination of this should be at once logical and applicable to the circumstances of the different districts of the province. Obviously it has not been decided by the present method of recording expenses of individual cultivation in the area and taking their average. To take one cultivator who has spent Rs. 150 on bullocks and another who has bred his, add these two items together and divide by two obviously gives us the cost of cultivation neither for one nor the other.

The present methods in use are three :—

- (a) Out-of-pocket expenses of cultivation—average.
- (b) Total value in money of all expenses of cultivation—average.
- (c) My Tharrawaddy method (a) plus "ascertainable" expenses of (b)—average.

Obviously (c) is at once ruled out, as it arose merely in sympathy

with the decision to take one-quarter of net produce as revenue. It was evolved to comply with the fraction while still keeping the rates within the bounds of decency—

(a) is unequal in its effect, tending to tax the economical thrifty classes more heavily while over assessing the extravagant;

(b) is the only logical method but requires modification in important particulars.

(i) Expenses of supervision must be ruled out. These practically mean cost of living and there are too many pitfalls in calculating this to make it at all exact. Besides, cost of living throughout Burma is practically equivalent to the net produce less the Government revenue.

(ii) The average method must be dispensed with. The importance of statistics lies in their interpretation. Dead averages give no valuable results. In place of average there is nothing to substitute but the Settlement Officer's selection of the proper allowance to be made under each head of the cost of cultivation in the conditions of the tract he is considering. If a Settlement Officer has conducted his settlement properly he will be able to apportion this allowance with nicety, and will be absolved from the necessity of cooking his figures or of putting his own answers into the mouths of the cultivators he examines. His opinion will be supported with figures and reasons of course, and liable to check.

When this method of calculating the cost of cultivation has been in operation in two or three settlements, Government will be able to decide with more accuracy the value of its fraction of one-fourth and be able to modify it accordingly.

The condemnation of dead averages with regard to the cost of cultivation applies of course with equal force to the compilation of all other statistics. Selections from records of typical crop reaping results is more important than taking a dead average.

Without the assistance of a previous settlement conducted on these lines, decision as to the equitableness of the rates arrived at is difficult. Comparison with the rates imposed at previous settlement and with rates existant throughout the province is all important. To secure an adequate revenue in comparison with other districts in the province is the duty of the central settlement authority whether it be a Commissioner of Settlements or a Settlement Secretary to the Financial Commissioner, is super-settlement of the whole province, a sort of Doomsday Book, is essential for this; and nobody as yet has had the time or inclination to make such a comparison. I suggest that an officer be placed on special duty to compile an abstract of settlement reports in Burma by extracting their vital details. Total population, agricultural population, acres cultivated, gross produce of district, prices, value of produce, cost of cultivation, net produce and so on. The existence of such a record would make the preparation of a forecast more of a reality than it is at present. Within certain limits the Settlement Officer could be shown at the beginning of a settlement, instead of after its conclusion, what the total demand in the district should be. This would be a most valuable guide to him in the proposal and discussion of his rates.

Mr. D. G. Robertson, I.C.S.

Deputy Commissioner, Insein:

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. (a) Crop measurements are a safe and the only method that should be adopted for estimating outturns. The present method of doing the annual crop measurements, however, is unsatisfactory. I would suggest that more fields than one be taken up in the kwins marked for crop measurements and that the Superintendent of Land Records of the district should be made to certify that the measurements are correct. Those done by a Settlement Party require far more careful check and a responsible officer should be deputed to do as many measurements himself and check at least 75 per cent. of that done by his staff.

(b) The record of prices is, I fancy, the only method we have of reckoning value of produce and inquiries from agriculturists must be the most reliable source of information as to the cost of cultivation.

As for reckoning the value of the labour of the family, I suggest that allowance be based on the cost of employing a similar amount of hired labour. Family labour is cheaper than hired labour, but many have no families to assist and have to hire labour. These latter should not be penalised for being without dependent families. As for the cost of plough cattle, inquiries as to cost of upkeep and statistics as to average annual casualties would be required to approximate to the truth.

(c) The present method of basing the assessment on net produce is satisfactory and I have no suggestions to add to improve the procedure or instructions.

2. I think the present proportions are fair.

3. Rents paid are usually $\frac{1}{3}$ and $\frac{1}{4}$ of the outturn and from this it is possible to determine the outturn from which the gross and net outturns can be worked out. It is certainly a useful check on assessment by net produce share.

4. I do not think that fixed assessments should be substituted for the present method of assessments, as nearly every Revision Settlement brings with it a higher assessment per acre. For areas which have little opportunities for improvement and where the cost of a Land Records staff is excessive, fixed assessments are advisable but not for areas where improvements are possible under the present method of assessment.

5. Under the present system of assessment, I consider the present variations of the system as referred to in the question should be retained.

6. In every way, I consider that it is necessary to fix assessments on crops like onions, tobacco, betel-vine, etc., and not on the land; the profits from these crops far exceed anything that can be obtained from other crops.

7. These factors must surely be considered by the Settlement Officers when proposing rates.

8. The provisions in the Land Records Manual for the granting of temporary rebates appear to be suitable for both Upper and Lower Burma.

9. In districts where changes are not likely to be frequent, a duration of 30 years might be sufficient, but for other localities it should not be more than 20 years and perhaps might be less.

10. I do not know anything about areas that have been irrigated, but it stands to reason that the assessment on such lands must be higher than non-irrigated areas, as irrigated land can always depend on a water-supply. The Public Works Department should certainly receive a share as they are responsible for the correct working and upkeep of the systems.

11. This seldom happens but when it does the rules protect the cultivators sufficiently. These rules are not generally known to the cultivators.

12. Yes.

B.—Settlement Department.

13. Yes, by introducing a larger series of soil classes to accommodate all soils. I consider this more satisfactory than adapting assessments to tracts and main kinds.

14. The present method is satisfactory. Detail can be carried too far.

15. I do not see any objections to the present method of receiving objections to any soil classification or assessment recommended by the Settlement Officer. Every person has a right to object to any assessment which he might consider unsatisfactory and I do not see what further procedure is necessary.

16. I have no experience of settlement and I cannot offer an opinion. Settlement Officers will no doubt be able to advise on the subject.

17. I do not think that any classification should be permanent. If they are made permanent there will be no need of having any revision settlements. There are no districts in Burma that have reached the stage where permanent soil classification can be adopted. Waste lands are generally extensive. Land may be improved so that land classed as, say, R-3 ten years ago might now produce as good outturns as land classed as R-1. Take also for example the erection of bunds, whereby flooded areas are regularly cultivated; it would not be reasonable to have such areas with the soil classification fixed.

18. I am not in a position to pass any remarks on Mr. R. E. V. Arbuthnot's proposals for the conduct of settlement operations and leave that to Settlement Officers, but I certainly think that it is desirable to make more use of the Land Records registers as part of the operations referred to in clause (v). If what the Land Records staff have been collecting for 25 years is considered inaccurate, surely what a Settlement Clerk collects in, say, two or three years cannot be taken as being accurate. As a matter of fact I think when a

settlement is now being introduced, the Land Records Staff copy only the soil classification and take all other information from their own registers ; this I consider correct.

19. I cannot say.

C.—Land Records.

20. The revised Land Records forms are suitable and the sooner introduced, the better ; they will relieve the present over-worked surveyors considerably. We indented but were not supplied as two other districts were chosen for trial.

21. I do not think it desirable to substitute a receipt book for the annual tax-receipt. The majority would be left to fall to pieces as no care would be taken of them ordinarily.

D.—Executive Department.

22. The present method of submitting the assessment rolls in batches has enabled not only the rolls to be more carefully checked but gives the Revenue Office ample time to check the tax-receipts before despatch to the Township Officers. I consider this adequate. The rolls are as a rule accurately prepared. Mistakes are few.

23. The rules relating to reduction of demand for failures and fallow are satisfactory and for all practical purposes suitably applied.

24. The rules relating to fallow rate and the grant of remission are satisfactory.

25. When an owner fails to pay the revenue demanded his land is sold but he is given ample time to know that this action is being taken. The Township Officer gets his information from the surveyor who reports from his records, whether the land is State or not. The procedure of Township Officers is by no means perfect in this matter.

26. All headmen report default of revenue to the Township Officer and the Township Officer then issues process as laid down in the Land Revenue Manual.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings may be regarded as a record of right. It is an annual record of ownership and is maintained for 70 years.

28. No. I do not think so and I suggest that the Land Records registers should be sufficient basis for providing a record of rights.

29. I do not think that the Land Records registers should be altered as a matter of course, because settlement inquiries indicate discrepancy. In the event of material error being suggested, I think a formal enquiry should be held. It looks otherwise as if the whole Land Records work is suspect and not trustworthy. The object should rather be to go on improving the Land Records work till it is what it is meant to be.

30. All information that comes through the Registration Office is correctly recorded ; but this is not sufficient as many sales and mortgages, more particularly in Upper Burma, have not been registered and

the surveyor cannot be held responsible to discover all the changes that take place in his charge. If a heavy fine was imposed, for all changes such as sales, mortgages and redemptions not reported, I feel sure the register of holdings will be a record which can be depended upon for giving a complete and accurate history of every holding.

31. The record of mutations is unsatisfactory, because unless the consideration is large no reports are made nor do the parties go to a Registration Office. It causes the parties concerned little trouble to report to the *thugyi* or the revenue surveyor and I do not agree therefore that the surveyor should record the cultivator in occupation as owner of the land, and do not think that the present method of writing up the register of holdings should be departed from.

32. (a) The provision of the Transfer of Property Act is fairly well carried out in Lower Burma where lands are so valuable. I found a case at Hmawbi while inspecting kwins where it was not observed. I have no clear recollection of how it was when I was in Upper Burma. My Superintendent of Land Records reports it is often ignored there.

(b) All information of sales, mortgages, etc., that come through the Registration Office are pretty well complete; where they are not they are returned by the Land Records Department to the Registration Office for correction. They greatly assist in keeping the register of holdings up to date. I found Insein Registration Office several months in arrears with these memoranda in 1920.

33. In all instances Land Records registers and maps are accepted as reliable in Civil Courts, till proved otherwise. Uncertified copies of maps are not accepted as evidence in subordinate Courts and properly so. The Land Records Department are often consulted by Civil Courts as to the value of land; and are used to divide land when so directed by the Collector when he is called on to assist the Courts.

34. There is nothing in the present system which I know of that has caused serious administrative difficulties or has in any way hampered the collection of revenue.

35. The statistics recorded by the Settlement and Land Records Departments certainly provide information regarding agricultural economy; and as far as I know are the only records that give this information.

36 to 39. I cannot offer an opinion as to these queries.

IV.—Survey.

40. There is not a district in Burma that I have served in that is not understaffed, and in consequence surveys cannot be done and maps are frequently out of date. A special Survey Party is then sent to do what would not have been necessary had the district been given the staff it required.

41. A single holding should include the whole of any continuous parcel of land held by one man irrespective of soil classes and main kinds. To give separate holding numbers would mean much more labour for the surveyor and a considerable increase in the number of tax-receipts issued. Soil classification is made solely for assessment purposes and it is immaterial to the owner in how many different soil classes his land falls so long as the correct assessment is made.

42. On the map the name of the owner only needs be shown and all other information recorded in the registers. Without the name of the owner kwin inspection would take twice as long as it does now as it would mean reference to the register as every holding is reached; and the result will be that a fewer number of holdings will be checked.

43. Where lands are annually flooded, it is impossible to keep the survey up to date; holding boundaries are all that are necessary to be shown on the maps. I do not see any reason for showing all field boundaries. I suggest they be left out and Register I-A be abolished.

44. Every district should have at least two permanent draughtsmen to dispose of work for the Press. At present the work has to be done by the record-keeper and his assistants and in districts like Insein it is impossible, and in consequence there has been a great delay in preparing maps for the Press, with the extra men and an adequate staff of surveyors the stock of maps in the district should never run short.

V.—Organization.

45. The present relations between the Land Records Service and District Officers are in my opinion satisfactory and make for the most efficient working of the Land Records system.

46. The subordinate staff should not be kept at any headquarters. The present arrangement is quite satisfactory.

47. The proportion of one Inspector to every nine surveyors is inadequate. An Inspector of Land Records should not have more than eight men to supervise in Lower Burma and in Upper Burma in the dry zone districts should not have more than twelve.

48. As I have stated above, the settlement should accept the records of the Land Records Department and the object of Government should be as stated above in paragraph 29.

49. I do not think the present staff of surveyors can be called highly trained. I do not like the idea of a less trained staff at all nor of the present staff being entrusted with other executive duties.

I do not consider it is possible with the present system of assessment and I do not think a fixed assessment is desirable at present.

50. The present routine for the training of the Land Records Officers and staff and members of the Indian Civil Service and Provincial and Subordinate Services appears to me to be quite satisfactory. I suggest a refresher at intervals. I am quite sure I could not even set up a theodolite now.

51. Fixed assessment might be introduced in such areas and the surveyors who would thus be released may be appointed to serve in other districts where they are needed.

52. It will be quite sufficient in such localities to fix assessment on the latest surveys and to omit the collection of all other statistics till revision settlement.

53. If fixed assessments are introduced the question of area matured or area sown need not come up. Besides, if these were to be considered a staff would be necessary to report annually on the condition of the crops or on the area occupied.

54. The kwin is preferable as a unit and the present method of lump sum assessment on kwins is reported satisfactory and should be extended ; and the assessment should be made by *thamadis*. I have no experience of them personally.

55. I do not think this desirable especially as it is proposed that *thathameda* shall be an income for District Boards.

56. I do not think it necessary that surveyors should be requisitioned to help *thamadis* ; and my Superintendent of Land Records reports that in several districts where fixed assessments have been introduced, surveyors have had nothing to do with the work in those areas and the results have been satisfactory.

57. Cadastral Survey is unnecessary before occupation and can conveniently be done by the Land Records staff on report of the *thamadis* or any inspecting officers that survey is necessary. A careful inspection of the area by the Superintendent of Land Records should be made before actual survey begins as often extensions are temporary, particularly in areas of this kind.

As regards grants and leases in towns the present arrangements for survey are satisfactory.

Major S. Bazett, I.A.

Deputy Commissioner, Myitkyina.

VI.—Special Areas.

(51) Kwins which are sparsely cultivated may still be assessed under the existing lump sum system, but care should be taken to estimate the outturn of kwins as low as possible to prevent over-assessment on individuals the soil of whose land is poor or whose crops are damaged.

I think a lump sum assessment fixed for a period of three years or so would save much work ; the rate being fixed by the average of the last five years or less than that average as entire failure of crops are rare in this district.

Kwins which consist of compact blocks of cultivation should be at once cadastrally surveyed and fixed acre rates settled on the whole kwin ; these kwins should have supplementary survey.

When all kwins are occupied the existing lump sum system should be abandoned in them and they should be treated as kwins in settled tracts.

Most kwins in Mogaung Township are ripe for cadastral survey.

(52) In kwins which are sparsely cultivated, no survey should be made. Assessment should be made by the *Kamankye* which still exist in this district. Special care should be taken that the Township Officer and the Subdivisional Officer see to the system being properly worked, so that equitable assessments are made. Such kwins should be surveyed only when cultivation in them consists of compact blocks with a view to having acre rates introduced in them. Such kwins as are roughly surveyed already and assessed under the lump sum system but which are not yet ripe for cadastral survey should be re-surveyed once in every two or three years and not yearly.

Yearly the surveyor should only note extensions or abandoned land unless such are considerable when he should re-survey.

(53) In undeveloped areas I do not think it is feasible to substitute for the present assessment on the matured area an assessment on the area sown or on the area occupied, because in the event of failure of crops our staff is not sufficient to hold investigation and determine assessment.

(54) Though cultivators dislike the assessment by *thamadis* under the lump sum system it is best that the *thamadis* should continue to determine the assessment on individuals until the area of each holding has been ascertained. The Subdivisional Officer, Mogaung, Mr. Carrapiett, tells me that in the Mogaung Subdivision the people get the surveyor to survey their holdings as a check on the *thamadis'* work which shows that they consider the system unsatisfactory. Though the present system of lump sum assessments is not working satisfactorily in the absence of a better method of assessment it should continue until the kwins are cadastrally surveyed. The kwin is a preferable unit as kwins in the district do not extend over more than one headman's jurisdiction.

(55) I do not think a reversion to *thathameda* would be advantageous now in view of the amount of survey work that has already been done and which would be then of no use.

(56) The surveyors work out the total demands due on the cultivation in a kwin, and the *thamadis* distribute the assessment on the individual cultivators; then the surveyors work out the revenue due from each individual and prepare the rolls. Assessments are supposed to be made by the *thamadis* without any help from the surveyors, but as a matter of fact assesses frequently call in the surveyor to survey their holdings as a check on the *thamadis'* work and I think this is a good thing myself and will eventually lead to every holding having been surveyed.

(57) Please see remarks under (51) and (52). I do not think cadastral survey should be undertaken before occupation.

(58) Such surveys as are necessary are made by the District surveyor and are quite satisfactory. Surveys under this head are confined to survey of town land, fisheries and grants of small areas only.

Mr. J. A. Stewart, M.C., I.C.S.

Settlement Officer, No. 3 Party, Kyaukse.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Crop measurements give valuable information and are indispensable.

With all the precautions taken to secure fairly representative results, I have found no reason to think that there is much in the alleged tendency to select plots which are above the average.

With regard to crop measurements, the danger is that part of the crop may be removed by the cultivator before measurement. I have

heard of cultivators in Arakan beating paddy off the stalks so that the outturn might be reduced. We have had a little trouble in Kyaukse from cultivators removing part of the crop tomatoes for home consumption previous to reaping and there is an obvious danger of this in the case of crops which have to be plucked at intervals on several occasions. The owner of the plot is not always to blame; crops like *pegyi* or plantains are subject to petty theft and the latter are subject also to malicious damage. On the whole, however, I consider the results of crop measurement fairly reliable.

They are useful in classification of individual kwins, but still more so when applied to the tract.

Records of prices are not made by a sufficiently responsible agency but with the help of outside information there is no insuperable difficulty in arriving at a safe valuation of produce.

The cost of cultivation enquiry has not been improved by recent orders to exclude an estimate for the cultivators own labour. Settlement Officers should be instructed to include allowances for all the more easily ascertainable items, e.g. if by working himself a cultivator is able to dispense with a hired man in the rains his cost of cultivation should include an allowance for hire and feeding charges for one man. Petty assistance in reaping might be ignored.

The cost of plough cattle should be ascertained as follows: Find the average working life of an ox in the district or tract. Divide the present value of the cultivator's plough cattle by this figure. This is not a perfect method but is, in my opinion, preferable to the complicated inquiries at present undertaken.

Defects in the present instructions are difficult for the Settlement Officer to remedy. His best course is to follow the instructions closely and hope that they will not be altered before the end of his settlement.

If the instructions were content to prescribe principles rather than method, settlement procedure could more rapidly improve. A Settlement Officer would then devise his own methods and test them in practice. At present he devotes a page or two of his Report to suggestions and criticisms of the instructions but his suggested alternatives have not, in most cases, been tested in practice.

An improvement in respect of crop reaping will come with the introduction of travelling threshing machines. One of these placed at the Settlement Officer's disposal would enable him to thresh the outturn of a whole holding. If the reaping could be done by machine as well, the results would be very reliable.

2. One-fourth of the net produce is in my opinion as much as Government has a right to take. This will be found to work out roughly equal to the half rent standard.

If a moderate standard such as this be prescribed uniformity will automatically follow. An impossibly high standard being prescribed Settlement Officers tend to find excuses for varying it.

3. Rent statistics are a useful indication of the security or insecurity of the crop. The Settlement Party spends only a few years in a district and, looked at in this light, rent statistics are a great help.

4. The existing assessment is to a limited extent fluctuating. The existing machinery in Lower Burma and in irrigated tracts in Upper Burma is inadequate, e.g. a cultivator has a holding which

produces a 3-anna crop. He petitions. Township Officer does not appear. He cuts down his crop rather than lose it altogether by waiting till it falls off the stalk.

Fixed assessments are inadvisable if they are to be applied to the whole of Burma indiscriminately. Cf. ten-year leases which were tried in Pegu and resulted in a few speculators offering to pay revenue at the fixed rate.

Again when cultivation is shifting, fixed assessments on holdings are impossible.

Fixed assessments would not be suitable when there is any uncertainty of harvest until the cultivator has learnt the use of a bank, to tide him over bad years.

Even if the rates were kept low we cannot be sure that the cultivators would take advantage of the reduction to save money against lean years. Not only are facilities for saving lacking but the temptation to a man at present much over-assessed to increase his standard of living would be almost irresistible.

If rates are kept reasonably low as suggested above, applications for remission will be infrequent.

If cultivators in a mature tract where crops are certain should wish for a fixed assessment, I should not oppose it. Its educative effect would be considerable. I would not move much in advance of popular opinion in such a matter.

5. I am not prepared to say that all the variations are necessary, but I should doubt if the same system could be applied throughout the Province. Incompetent or inadequate staff makes most of the systems only moderately successful wherever I have seen them applied.

6. Double classification could probably be carried farther than it has been, but there would remain some cases in which crop assessments would have to be resorted to—

(a) When a less profitable crop was grown than that which governed the classification of the land.

(b) When a more profitable crop is grown.

I do not think desire for simplicity need be carried so far as to forego such high crop rates. If the revenue is easy of collection that in itself is a recommendation.

The number of crop rates, however, should be kept down to a minimum—the ideal being a fixed acre rate, let a man grow what he likes. In the case of highly profitable crops like plantains and sugar cane, high assessment would be less felt if the acre rate varied with the price at which the produce was sold from year to year.

Compare rubber.

7. Unfertile patches and fallows vary from holding to holding and the best way to allow for them is in classification. Insecurity should be allowed for in classification and also in fixing the rates.

8. The rebate should be to individual assesses and not on individual holdings. It might be more difficult to ascertain the amount payable by individuals but if rebates are to be given at all it is worth taking trouble to attain the object aimed at.

9. Nineteen years used to be a common period for leases of farms and on general considerations about 20 years is a suitable period for the duration of a Settlement.

10. I have already stated my opinion on this question in official correspondence. I have read subsequent comments but still think the scheme I suggested is best—

(1) A fair return on capital cost and upkeep to be given to the Irrigation Department.

(2) In addition a bonus for successful irrigation.

(3) The revenue to be fixed by the Settlement Officer in the usual way and any balance after paying (1) and (2) to go to Government.

(4) The bonus (2) above to be so adjusted as to secure that the Irrigation Department pay due attention to the irrigation of land which is difficult to command, *e.g.* at the tail end of canals.

11. I can recall three cases of irrigation works constructed by cultivators—two in Myanaung and one in the northern part of Insein Subdivision which came to my notice as Subdivisional Officer. I was not then aware of the provisions for protecting a cultivator against undue enhancement and I do not think the Deputy Commissioner was either. The cultivators certainly were not. In Insein they had completed their bund and applied for a contribution from Government to recoup their expenditure. They should have been given a certificate exempting the land from enhancement.

Ordinarily, however, the improvement in yield is so great that the cultivator recoups his expenditure in very few years. Still he has had to face a capital expenditure which, for him, is very heavy and total remission of revenue for a short term of years, say till he shall have repaid the loan he had to take for the work, would give him more sensible relief.

12. Considering the elaboration of our Land Records system, the information given in the receipt is meagre. Details should be shown by holdings. If this is not done, there being three *Lu Dwas* in a kwin, one receipt is made out for the whole lot of them and the headman cannot separate the amounts. Similarly one receipt may be made out for all land appearing in the name of a co-operative credit society.

B.—Settlement Department.

13. The suggested greater differentiation is feasible. It will of course prolong the period of Settlement operations. I take it that the Commissioner of Settlements and Land Record's note on soil classification is referred to in this question.

Before discussing the desirability of such differentiation, I must state the impression I have gathered from a study of the questionnaire. It may be a mistaken impression but even if not declared, it would "show through." It appears to me, then, that Government is saying to cultivators and to officers who may be presumed to be in sympathy with them: We will give you your choice of two systems—either you can have a flexible system, with remission of revenue in bad years, or you can have fixed assessments. If you won't have fixed assessments you must be prepared for high rates, higher than you have yet paid. For hitherto, Settlement Officers have illogically taken into account the security or insecurity of your land in their soil classification. Henceforth it will pay according to its productivity at

its best and in bad years you must depend on getting partial or complete remission. In the case of fixed assessments, of course, due allowance for liability to failure would be made.

The cultivator knows that in practice remission is hard to get. On the other hand he has not capital enough to survive a series of bad years under a system of fixed assessments. He is therefore bound to choose the flexible system even with its higher rates. Elaborate soil classification then becomes a necessity.

I think it is only necessary if an increase of rates is contemplated but it will not be sufficient to save agriculture if Government is really going to work up to the half net produce standard.

Although I have said that the proposed greater differentiation is feasible, I must add that I think the less elaborate method of soil classification contemplated by the Settlement Instructions is infinitely preferable as being more within the range of human capacity. And rates being kept moderate, nothing more elaborate is required.

Say that in a particular district one-fourth net produce equals one-eighth gross produce of paddy land and compare the effect of four classes with that of six—

	Rs.	A.	P.
44 assumption gives	5	4	0
35 " "	4	6	0
27 " "	3	6	0
20 " "	2	8	0

The intervals between rates are close enough.

	Rs.	A.	P.
45 assumption gives	5	10	0
40 " "	5	0	0
35 " "	4	6	0
30 " "	3	11	0
25 " "	3	8	0
20 " "	2	8	0

The intervals are needlessly close though of course they would widen if Government is to take anything like the equivalent of half net produce.

Differentiation of tracts and main kinds is carried as far as is required at present.

14. Normally kwins are homogeneous throughout an assessment tract. Rates should be considered with reference to kwins or individual cultivators if necessary.

15. So long as the Settlement Officer is comparatively free of office work in the field season he is certain to discover from conversation with cultivators and otherwise any mistakes that have been made in classification by himself or his Assistant Settlement Officers. I do not consider that any further facilities are required.

For further comment see below.

16. I have not been able to bring my reading of Settlement Literature quite up-to-date and am unable to describe recent tendencies in the use of the data for assessment here mentioned. My own inclination is to classify land as I see it, paying great attention to the views of *thamadis* and always trying to find a reason for alleged differences, etc.; and above all, to try and keep standards consistent within the tract. Then land values and rents are introduced as an

independent check on classification and if it has been well done, should confirm it. I am not prepared to assert that the above method of classification is the best for all or any parts of Burma. I think it is a good method and is in accordance with the present Settlement Instructions.

I can see that if, *e.g.* tenancy statistics were completed for the tract before soil classification started, they could be of great assistance in settling assumptions, in giving timely warning of a change of fertility within the tract.

The principal use to which I should put tenancy statistics at present is in determining the pitch of rates. Similar use would be made of the other data given in Settlement Instruction 40.

As regards share produce and partnership tenancies, they are found—

(1) when the crop is insecure.

(2) when the land is *Ayadaw*—three-fourths of the land in Kyaukse District.

I am hardly prepared at present to say what use we shall be able to make of them.

17. Assessment tracts should be adhered to as far as possible.

Main kinds will vary with the introduction of new crops.

Assessment classes should be more permanent than in the past, as the increased strength of Settlement Parties has presumably improved the classification. Below are instances of changes from Settlement to Settlement which I have myself observed :—

1. Rough, recently cleared land classified low 20 years ago is now the best land in the tract.

2. Land flooded 20 years ago and classified III has had sufficient silt to bring it up to I.

3. Erosion of coast has rendered land liable to sea floods and necessitated bunding if land is to be cultivated at all.

4. Improvement or deterioration of Government irrigation is probably confined to a half-baked canal system like Kyaukse.

5. Alteration in course of rapid flowing streams may have changed the face of the country, *e.g.* in north end of Pegu District.

It is desirable that classification be good. The better it is the more permanent it will be. In settled and matured tracts there is no reason why good classification should be modified and in the south end of Pegu District there was very little modification. Indeed the last Settlement classification might well have been allowed to stand.

Permanent classification would be convenient and should be aimed at but I would not go further than that.

18. The revised procedure is an improvement in one particular—it enables the Settlement Officer to have his rent statistics tabulated before he starts soil classification. But to gain this advantage, it is not necessary to introduce such extensive modifications. The same end can be attained if a settlement party is sent to the district in the beginning of the rains, say, in June.

The following are objections to the proposed procedure :—

(1) The number of reports to be written—apparently seven in a district of five townships.

(2) The introduction into Settlement procedure of the right of appeal. I understand that the proposals originated in an attempt to comply with an order or suggestion from India that appeal should be allowed. The Settlement Officer at present exercises the power of revision. To encourage formal appeals will waste his time without benefiting anyone and result in his being unable to keep up with his work—unless, as is probable, the Inspectors and Assistant Settlement Officers, to avoid bother of appeals against their orders deliberately keep the classification low. The Settlement Officer will still exercise his power of revision to stiffen the classification and another appeal will have to be allowed against his orders to some higher authority. Thus we introduce into settlement the worst vice of the Indian law courts. It is hardly necessary to point out that the right of appeal to the Settlement Officer from his subordinates would satisfy nobody.

It would not be desirable to introduce attestation of Land Records Registers as part of the operations referred to in clause (v) unless considerable more time be allowed for Settlement operations.

Even so, the law of transfer is in advance of popular feeling and the Assistant Settlement Officers would find themselves in the same dilemmas with the Surveyor.

19. Nothing should be done to deprive Government of the Financial Commissioner's advice on Settlement matters.

D.—Executive Department.

22. No.

23. } Not suitably applied.

24. }

25. Absentee owners know approximately when the revenue falls due.

My recollection is that resumption was only resorted to when no buyers were forthcoming. I have come across traces of old scandals in connection with sales of land, indicating that a buyer could usually be found and resumption was rarely resorted to.

II.—The Register of Holdings as a Legal Document.

27. The Register in its present state includes names of persons long defunct and on the other hand of persons who have effected an informal purchase or other method of acquisition but who are not legally owners. If it consistently ignored the law of transfers it would be of use as showing persons actually in possession. The surveyor is in a difficult position and vacillates between two tendencies—to abide by the letter of the law and to give effect to the wishes of his "Clients."

28. No. No.

29. No. No.

30. Mutations by succession seem most difficult to get in the Register. Other mutations are more completely recorded.

The record is beyond the capacity of the ordinary Revenue Surveyor, who is bound to get into a muddle.

31. Yes, though there are dangers.

The Torrens system might be introduced but is not likely to be

successful where holdings are small. Another probable reason of failure is that in Burma title is inherent in the persons and not in the land. Thus it is of little use to know that landholders rights accrued over the holding to a certain person 10 years ago. They may very well have been lost since.

35. Most Settlement Officers scoff at their own figure for Cost of Living. I understand that the Land Records Department does not place much reliance on its Food Price.

37. Yes.

38. Yes.

V.—Organization.

45. The Superintendent of Land Records should be recognized as the head of the Scientific Department.

46. There are numerous objections to concentrating subordinates at Headquarters.

Mr. S. G. Grantham, I.C.S.

Ex-Settlement Officer.

(Extract from a demi-official letter to Mr. Arbuthnot on his proposal for a revised settlement procedure.)

2. I am very doubtful about our system of classification being too rigid. It may have been badly used, but if used properly the system is as flexible as it need to be, even if only three soil-classes are used as a rule in any main-kind in one tract—with exceptional treatment for distinctive conditions such as I myself gave to irrigated patches in a generally non-irrigated tract in Paukkaung. But even then I was really disguising a separate main-kind as a soil class for the convenience of holding marking and the construction of assessment-rolls. The Bombay system allows perhaps 500 grades to be recognised in one-village. But (1) all these grades are not used in the one village; there will always be some and perhaps many grades into which no survey-numbers fall; (2) I am not convinced by the Bombay Settlement Manual that the conventional grading of the settlements corresponds so exceedingly closely to the actual grading of producing-capacity that such a shallow grading has any use; and I should not be greatly surprised if these two gradings sometimes bore small relation to each other; (3) a grading of assessment correct to 5 per cent. or even in many cases, 10 per cent. is all that is required. Our Burma system can get much nearer than that. Small errors of classification have no appreciable effect on a holding. An error of four annas per acre in the average rate paid by a holding is imperceptible to the assessee anywhere. The problem is exactly that of a weighted average rate per acre over the holding, the rates of each soil class in Burma being weighted by the corresponding areas. Errors in weighting are of comparatively small importance and the essential difference in the Bombay and Burma systems is largely a difference in the method of determining the weighting of the terms averaged over a holding.

Exhibition without exposition on the ground is eyewash; given exposition on the ground, exhibition is not greatly needed. Exhibition

may perhaps replace exposition when general level of both general and political education has been raised and settlement classification has become less liable to change.

Statistics should only be compiled by tracts which are sufficiently uniform for the resulting "averages," *etc.*, to be valid. For assessment tracts these statistical tracts must be divided if necessary, into areas within which all conditions are so nearly uniform that uniform rates are applicable. Such special kwins or village-tracts as you mention here should be formed into a separate tract. The idea of geographically continuous tracts has been greatly over-emphasised in recent years; a middle way is desirable, and in some parts of the country—as I have discovered in Wakèma Township—kwin grouping is the only possible system. There has been far too much pigeon-holing in the past; the fault is there and not in the assessment system. Settlement requires honest scientific, inductive treatment, not a fitting of kwins into preconceived ideas.

Our present system of intermediate rates is sheer nonsense; it does not do any of the things claimed for it but it does introduce a new source of inequity. I am also very sceptical about the success of the new system in Shwebo although Smart thought it was more satisfactory there than the old system; I admit it could not be less, but I doubt if it would have satisfied me unless the circumstances were peculiarly favourable to it. I can conceive of it working if the old classification is generally sustained, but not if it is so completely changed as it generally ought to be in present-day revisions.

(iii) The Settlement Officer should consider the facility or otherwise not only of the collection, but of the payment of the revenue, the other side of the picture. Add also at the end of the paragraph, "and particularly the history of the standards of living of cultivating owners and tenants."

(vii) (b)—It may interest you to learn that I have now absolutely forbidden classifiers to pay attention to crop-cuttings when classifying. The sale mortgage and rental figures by holdings are available in my party now with areas by new soil-classes on the same day as the inspector completes his classification and therefore before the Assistant Settlement Officer reaches the kwin; I have already reminded you that acre-values to be associated with soil-classes are never available because we do not yet know how to calculate them. Of course correction of the tabulation has to be made afterwards wherever the Assistant Settlement Officer modifies the inspector's classification, and no records are available for the majority of those holdings which are not let nor mortgaged nor have been the subject of a sale within the last three years. But I do not understand what records you are going to have available beyond what we have now. As you have not yet made the detailed classification at this stage it seems to me you cannot have anything useful available earlier than I have it. Besides, I am a little doubtful about the way these records have been used by some persons when classifying and I think it better to classify without them. The areas are calculated in this party not with a view to using the statistics in classifying but so as to enable the Assistant Settlement Officer to exercise a better check upon the statistics.

(viii) This should begin—"At least six days and not more than 20 days". This issuing of previous notice causes great difficulty and delay in practice and the notice should not be unduly long. But note that "cultivators" are often not interested in the settlement. General notices are required in addition and should be published not only in the kwin but all over the district and in the newspapers. (We have no newspapers in Myaungmya but I publish notices as widely as I can.)

(xvii) c.—The individual assessee should not have his right to special treatment decided by holdings in one assessment tract. The enhancement considered should be the enhancement on all his holdings which have come under revision in the one settlement. Limiting to an assessment tract will enable some to get excessive concessions and will be unfair as between different assessees. (Consider the case of a flooded tract in which reduction of assessment has been limited because the rise in neighbouring tracts was too small to let Government forego more revenue. A man with land in both tracts should set off the reduction on one holding against the increase in the other. I do not see why 50 per cent. should not now be reduced to 33 per cent. as the assessments on which the percentage is reckoned are higher than formerly.)

(xviii) Case (c) proviso should extend explicitly to the case of one heir buying out the joint heirs.

3. The main difficulty however lies in your system of double classification which I frankly do not understand. I came to Rangoon thinking to get a word of explanation; but as I failed in that I have to do the best I can without. You say the Inspector will note the various kinds of soil found in the kwin, and mark roughly the limits within which each soil is found. But does not "soil" include both surface soil and sub-soil? Any inspector could distinguish the sandy hill from the clay plain in many parts of the province: the bounding line is as definite and clear as the line on a tennis-court; but the division of soil-classes (apart from water supply) is not always so clear, one kind of soil or sub-soil may shade off in to another and this indeed is the more usual phenomenon in Lower Burma. And then there are the differences due to water-supply which in one half of the province are more important than differences in the soils. How is the inspector to discover these and what is the good of a classification which does not take account of them; I can think of no satisfactory system of doing this rough classification which does not lead practically to doing all the classification work twice. I am firmly convinced that nobody is competent to classify an ordinary Lower Burma paddy kwin by mere inspection without full consultation of the cultivators of the kwin generally and of the cultivator of each holding, as it is classified, in particular. Classification by *thamadis* and an inspector is hopeless. The Bombay settlement system is on the surface the most scientific in India; but it is admitted to encounter difficulties and some think it fails in paddy lands. The Burma system in intelligent hands can be made more scientific than that. The most scientific system really is that which takes fullest account of all the conditions. The conditions of paddy cultivation are complex and largely unknown; but by examining the cultivator

on his land in the presence of local assessors you can obtain descriptions of the land in which all the complexities have been correctly integrated for you; taking these integrations as your data instead of the bewilderingly numerous elementary conditions, the problem of correct classification is capable of solution. The most scientific system of the classification of paddy land is then, one which makes the best record of genuine local opinion of the net producing capacity of each holding. Unless the inspector goes as far as this he cannot produce a "rough classification" of any use; if he goes so far why not finish off the classification work forthwith?

I have had no real opportunity to discuss this with Furnivall, but we did have a few minutes to chat about it. He thought he could give a rough line in Shwelaung kwin of this district (which he had just come from inspecting) from which the final classification line would vary only by small changes in both directions without seriously affecting the total area of each soil-class. I admit that something could be done in that kwin, but (1) it has exactly the same soil and sub-soil all over; (2) the water question there is of far greater importance than the soil; (3) it is a kwin of peculiarly simple contours—a plain saucer with an embankment along the edge. I am sure the same could not be done in many kwins of this district, and it could not be done in Prome or Tharrawaddy without duplicating considerably more than half the work of final detailed classification.

I object also to employing inspectors to classify on two different plans; they are sure to classify roughly when they are wanted to give the final detailed classification; men of their degree of intelligence and training cannot be trusted to work correctly on either of two plans at will; the outcome will be rough classification all the time and that with more roughness than class.

4. Now see sub-paragraph (2) of paragraph 6 of your Note—"and frame his scheme of assessment-tracts." I understand from 6 (vii) that you mean only that he will form a general notion of the distinguishing features of each tract and not that he will in any sense have determined tract-boundaries. I do not see how any more can be asked of him than that.

5. I have prepared a schedule (see last page of this letter), to show which operations are to be going on at any one time, giving details for the 4th, 5th and 6th and 7th years of a period in which work is done in compartments A, B, C; P, Q, R; X, Y, Z; assumed for simplicity to be each one-third of a district.

You will notice that in the first year in a district there is a heavy addition to the work of the Settlement Officer above that done in other years, namely, item II. But even in the succeeding years, the Settlement Officer will be required to supervise at one and the same time work in two separate areas as well as to visit a third to hear appeals. If we take, for example, the sixth year we find him supervising the rough classification and the collection of statistics in R and the final classification in Q. Unless areas are made smaller than now either of these tasks will be enough for him; remember that the work in Q will include tracting and possibly that difficult form of tracting—, kwin-grouping, and that there will be twice as much time lost by the whole staff of Inspectors and Assistant Settlement Officers and

Settlement Officer travelling as there is now, because the whole area will be covered twice by them. The attention of the Settlement Officer will be divided. Besides, the two areas may be at a considerable distance in the year in which operations begin in a new district (e.g., P and C in the 4th year in the schedule). Meanwhile appeals are to be heard in a third area C, and are of such a nature that they can only be heard on the ground to which they relate. It cannot be done unless the compartments A, B, P, Y, etc., are all something less than one-half the area annually dealt with now, and it may be difficult even then. (Suppose, for instance, C is in Prome and P in Myaungmya District in the 4th year.)

6. Suppose, however, that you modify the plan by omitting the rough classification. Then, as shown in the right-hand side of the schedule you have the staff concentrated in one locality in each open season (apart from crop-reaping) and the Settlement Officer's supervision is confined to that area although he still has to hear appeals in another. I think you cannot fail to agree with me about the great advantage it would be to have the Settlement Officer's attention confined so much more closely to the one unit of area during the one season. It is one thing to pay short visits to other areas for purposes of comparison or to study particular conditions where they are more clearly exhibited; it is quite another to have responsibilities in two different areas.

7. Now let us look at the crop-reaping. Under your proposals crop-reaping will go on for three years [paragraph 6 (i)] beginning on the Settlement Officer's arrival in the district. See then the schedule; in the fourth year crop-reaping takes place in P, Q and R, and again in the fifth year when the report on P is submitted. What use will you make of the crop-reapings carried out in P in the fifth year? You surely do not want the fact that 40 baskets per acre was measured in a given field to influence the classification of that field. The outturns of fields in a 30-basket class will range from 15 to 60. You are bound to classify 4,997 other fields of the kwin by mutual comparison or estimated outturns; why not the three reaped fields? If you adopt the method of classification which fixes outturns beforehand and assigns each field to a class according to its estimated outturn (or divides each holding according to reported or assumed holding outturns) the only use of the figures of the crop-reapings is to suggest to the credulous a general justification of the work done. It is certainly illegitimate to allow these figures to influence the assumptions for outturns, and even the general justification would not be generated in my mind by any tabulation of them. Suppose you tabulated the figures immediately they are obtained. Each soil-class should yield a singular point in the curve of frequencies for each soil-tract; but you must remember that tracts have not yet been delimited, so it will be a difficult matter to sort out the figures for a sum of soil-tracts in such a way as to render these singularities apparent. Patient study might reveal them; but it might take months to do it. If you found the singular points you would know what were the corresponding representative outturns in each soil class of each tract in fields which found favour with your selectors.

The figures for the reapings of the fourth year would be more easily tabulated as you would have more time for the work, but the

result would be the same. And what are you going to do with the figures for the reapings in P of the sixth year, the report on P having already been submitted?

Now consider the seventh year when the move is made to a new settlement area X, Y, Z, and crop-reaping is beginning there and classification has still to be carried out in P. It will be awkward enough in an ordinary Lower Burma party to shift the party back to R after the paddy has been reaped, especially if the districts are far apart. But think of X, Y, Z being Prome with its groundnuts, tobacco, beans, betel and custard-apples harvests besides all the miscellaneous *kaing* crops. And then go further and think of X, Y, Z being Myingyan with some sort of crop-reaping going on all the time. In Upper Burma how can the Settlement Officer supervise that crop-reaping as well as the two classifications in X and R? In Lower Burma how can he find time to complete his general tour of X, Y and Z; the latter part of the harvest time must be occupied in organising classification work in R or X? I am afraid I do not think it practicable.

Neither do I think the First Revision in my schedule any better in this respect. It has the advantage of confining the work to crop-reaping and classification in one area, and would be satisfactory for R. But it would require the report on P or X to be written with only one year's reaping results available. If three years reapings were required the work of the fifth season in item I must read Q, R, N, I and for the sixth season it must read R, X, Y, I, and so on. An alternative is to use only two years reapings, with the advantage of concentrating the reaping staff in two-thirds of the area. (I am in favour of this for several reasons and had arrived at this view long before the present proposals were made. I regard one season's reapings as too narrow a basis and three as extravagant, their advantages not out-weighting their cost.) Then your form of the schedule will work if either you make an exception of the second year (when there is relief from item II) by doing reaping in P, Q and R, or if you reap P, R in the first year, P, Q in the second and Q, R in the third year, or if you anticipate by reaping P in the third year (and similarly X in the sixth). The First Revision can only work with the last device with its difficulty due to the distance of P from Q; the difficulty is still real although less than the similar difficulty about classifying in P and C in the same season.

8. I need not deal at all fully with the difficulty about item II, which rests on the same fact that the Settlement Officer is not usually an omnipresent and omnipotent being. Unless this work is confined to one part of the area, *e.g.* P, in the fourth year, it is impossible for any adequate study to be made. If however the classification work is confined to P (as in the First Revision in the schedule) the study should obviously go on through the classifying season; the "preliminary report" could then give place, so far as P is concerned, to a fairly complete report. It could indeed be quite complete except in so far as the study of Q in the following year threw more light upon conditions in P. But this brings us close to the proposal I have made before in which a settlement party should move *continuously* across a Division submitting a report each year and doing each year the work required for that purpose and also forestalling as seems desirable the

work of subsequent years. By moving continuously the changes of conditions can be watched and understood as well during the one year as under the present conditions. The Settlement Officer should of course have the power to go outside the limits he is actually settling *e.g.*, to see how conditions develop which he finds nascent or rudimentary in his area.

9. The schedule also draws attention to the fact that appeals from A which was classified in the first and second years come up only in the fourth year. Commonly therefore the officer who heard appeals would not be the Settlement Officer who made the proposals unless some special arrangements were made to that end. There may also be difficulties about the long time elapsing between the framing of proposals and their final promulgation, especially if the Local Government took as long to frame its Resolution on the basis of the settlement as it is doing over those on the Prome and Myingyan settlements (in which since the rates have been promulgated it can only be the justification of the rates which presents difficulty). Notice too what difficulties may arise, if some years elapse between the classification and the preliminary sanction, in the formulation and support of appeals.

10. *Appeals*.—There must of course be some limit to the appeals permitted. But your paragraph (xvii) makes no allowance for any individual whose assessment was already excessive under the proceeding settlement and has not been sufficiently reduced. He has had some right of appeal against the internal classification of his kwin, but he may have nothing to urge on that point; the difficulty may be in the tracting. Paragraph (xvii) (b) gives a right to restricted amelioration if a whole kwin or village-tract is threatened, but it gives no remedy for a minority of cultivators in a kwin who suffer from erroneous tracting or classification. Paragraph (xvii) (c) similarly gives no sufficient remedy to any individual harshly treated by the tracting; he gets a temporary relief where permanent relief is required. Moreover if he transfers the land the excess of revenue demand will be capitalised as a reduction in the sale price and he will therefore bear the whole burden without mitigation. The only protection you offer depends upon understanding a map of the kwin which, as a matter of fact, will convey about as much information as would a Greek testament. Moreover, the map is not to be published; it is to be open to the inspection of any cultivator who desires to inspect it. But of course the only place in which to consider the map is the field in question, and the only way to judge is by comparison with the classification assigned to other people's fields. Nobody could lodge an effective appeal, except in the case of the grossest of bad classification, under the circumstances. Moreover, one wants to have the map available a few days to think about it. I fear the whole tenor of your paragraph (ix) is wrong. You first of all have an Inspector completing his classification and then explaining the system to the "villagers"; that explanation should be given to assesseses is perhaps a trifle and not different from your intention in writing "villagers"; but it is no trifle that the explanation ought to be given before and not after the classification is effected. You offer no suggestion as to how the Inspector is to effect the classification. As the system will only be

explained afterwards he is apparently to classify without the co-operation of the assessees. The *thamadi* system of the Settlement Instructions is alright if the *thamadis* are assessors of the weight to be assigned to considerations adduced by those who know the field under discussion; but it is nonsense to suggest that three old villagers (of not sufficient standing or character to resist the demand that they should accompany the Inspector in the hot sun to perform a task not yet explained to the village) will be able to give a complete account of the agricultural qualities of every piece of land in the *kwin*. It is equally nonsense to pretend that your settlement inspector is an expert in classification; the very conditions of his work with its constant change of location forbid that entirely. Again you do not say what is meant by the Assistant Settlement Officer's "check" of the classification. All this refers to the internal classification within the *kwin*. But what about the tracting? Surely classification includes tracting. Surely it is more important to keep the land down in the first class four-rupee tract than to haggle about two or three fields being in first or second class; it may even be more important than a revision of the classification of the whole holding.

The crux of the whole question is what is meant by "classifying soils." The system of the Settlement Instructions which you seem to adopt is the system under which it is possible to suggest that the menu of the settlement officer's dinner is an important factor influencing the classification of the *kwin* examined next day. This is the system which keeps every inspector's honesty an object of suspicion and has made inspectors put many a piece of land into too high a class so that they should incur as little as possible of that suspicion—every senior inspector advises his juniors to follow this plan which of course is simple dishonesty to any one who understands its effect. I know there are people who accept philosophically the erroneous classification and assessment of other people's land, and talk airily of assessments being right on the average and of the value of broad views; but what they call a sense of proportion differs remarkably little at times from intellectual slovenliness. They are wrong in every way; they are wrong intellectually and because they do injustice; they are wrong even politically because each assessee judges the Government according to its re-action upon himself. We have got to do better than this. We cannot any longer see with indifference unjust burdens imposed upon even a minority of assessees. We must get a system which will get every individual assessee treated fairly. No system will do that automatically and invariably; but we must make a system which gets so near to that ideal that the exceptional cases can be dealt with individually. This is the double test for any system of settlement; it must do justice automatically in the great majority of cases and it must admit of individual treatment in the remainder. (It is not difficult to show that this formula will cover even the restriction of enhancements; but this can also be viewed, if you prefer, as a modifying principle.) But the basis of justice is knowledge of the conditions and you will only get that as a basis of your classification by enlisting the co-operation of the cultivator and assessee at the time of classifying, and by reducing the weight of the views of your jack-in-office inspector to the minimum. I am not wedded to the scheme I proposed last year;

or, if I am, I am prepared to desert it and resist all claims for maintenance. But I am unable to approve of any substitute which does not give the assessee full information of the whole matter in a form which he understands, and does not also do everything possible to avoid the need for any appeal on his part. Appeals about internal classification of kwins must be decided by some sort of local tribunal which may however be as informal as you please provided it is well-informed of local conditions, and when once so decided there should be no further appeal. So far I can agree with your restriction of appeal in paragraph (xvii) (c); but that paragraph, it seems to me, must be fought tooth and nail if it is not amended either to give an appeal against tracting or to ensure that the tracting is based upon local consent. Paragraph (xvii) (b) is no compensation for this lack because you cannot expect ordinary Settlement Officers to be convinced by the villagers that the proposals to which they have already secured Government's assent are so mistaken throughout a tract of kwins as to require a reduction of possibly more than 12½ per cent. not only for a limited time but throughout the settlement.

11. The real reform required is a reform of the technique of the Department. This involves a better training of officers and an education of the staff. What private enquirer in England would dream of taking untrained assistants and letting them loose upon a tract in which he wished to make enquiries? But here you not only do that, but make their records a basis of regulations by which you impose heavy taxes of 25 to 50 per cent. of the net income of the assessee. It involves a revision of the forms. It also involves some clearer thinking as to what is meant by "classification." So long as people think it means assigning each field to a place in a predetermined scale of assumed outturns there will be suspicion of false statements by assessees. But as soon as you adopt the view that classification is comparison, and let the comparison extend throughout the settlement area, every assessee is a check upon every other. There is then no need for elaborate plans; the most scientific procedure is the method which builds up the tracts by adding kwin to kwin so far as conditions are found uniform at the time of making detailed internal classification and collecting statistics. But all the expert local knowledge which can be got is required, and so you have to call in the aid of the cultivators and assessees. I do not ask that the whole of the scheme I proposed should be considered now; I worked it out in part in order to show that it did afford a basis capable of development. But an explanation of a system of the classification made by an inspector bears no relation to this; nor even (for the next twenty years at least) would publication of the kwin map; it would not even resemble this in the internal relations of the kwin and does nothing for its relations to other kwins. Exposition of the map is required and it can only be given in an inspection of the ground by all or a majority of the interested persons; and in order to make it possible to deal with the objections these must be reduced to a minimum by previous consultation of each of those persons individually. Thus democratisation of the process and improvement of the technique of classification go hand in hand.

Furnivall says that in Myingyan publication of the map was of use because holdings were classified as units and each *ya* had a name—so

that everybody could know what land was being discussed. But he admits the matter would be different in the more complex grading of rice-lands. My present practice is the best I can devise for exposition under the conditions of speed that Government has imposed and with a staff steeped in the old methods. I would object to mere publication more than to the hole-and-corner procedure of the present Settlement Instructions, because it is not only not a step in the right direction but a definite blocking of the path, inasmuch as it would create a false semblance which would impress all who had not carefully studied the matter. The subsequent explanation of the system by the inspector and the permission to see the map if one so desires do not even reach the level of publication, and have the added disadvantage of giving importance to the inspector whose proper function should be to record the local views impartially.

Concurrently with the improvements relating to classification we want improvements in the statistics. First of all we want direct statements recorded and not deductions from those. Then we want to remember that humanity is infinitely various and won't fit little pigeon holes like those in some of our forms—look for instance at the farcical idea of our Cost of Living form and of the instructions for our Indebtedness form. Then we want, as I have already noted, to teach our recorders to enquire—and for this we must have clerks as capable as our present inspectors and inspectors as capable as our present Assistant Settlement Officers, and this means more expense and an end to all the nonsense of appointing foot-ballers and peons to be clerks. We also want more relief from routine classification and tabulation work for the Settlement Officer to enable him to interpret statistics and to consider what statistics should be collected to throw light on particular problems—and we want Settlement Officers not only willing but able to do this, which again involves special training.

If these reforms in technique are granted there will still be required as a subsequent step a contrivance by which appeals may be lodged against tracting and a contrivance for submitting the statistical work to criticism. These can come in their turn; I only ask for a step at a time.

13. Summing up; I find the proposals give no sufficiently effective voice to those interested in the settlement to satisfy the inevitable demands of the Legislative Assembly; some of the technical principles behind them are far from invulnerable; they impose a heavy strain upon the Settlement Officer who ought rather to be relieved; they introduce complications with little or no compensation; some of them appear indeed to be incapable, except after considerable modification, of practical application; they tend to divert attention from the essential needs outlined in the paragraph preceding this; they grant a semblance of protection to the assessee in a right to appeal which will be of no real value to him but will be an obstacle to any movement to grant genuine concessions. There are also other difficulties, which I have not mentioned, in connection with the decision of the Local Government on the first proposals. On the other hand if the defects of technique are attended to a different development of procedure will be suitable. I am afraid I must, without any disrespect, give my vote against the whole of the proposals.

Schedule.

1st District.			2nd District.		
A	B	C	P	Q	R

NOTE.—(1) Roman figures are used for operations performed in the field.
 (2) Operations performed by the Settlement Officer personally are distinguished by a circle round their numbers, as II.

Mr. Arbuthnot's Procedure.	First Revision.
I. Crop-reaping II. General tour to learn economic conditions, frame scheme of Assessment-tracts, Main-kinds and Soil-classes. III. Settlement statistics (collection). IV. Rough classification. V. Detailed classification and formation of assessment-tracts. 6. Corrected area statements. 7. Classified area statements. 8. Tabulation of III by assessment-tracts. 9. Township Report. 10. Holding Demands. XI Appeals.	I } II } As in scheme but add "scheme of statistics" to II. III } IV Complete classification. V Formation of assessment-tracts. 6 } 7 } 8 } As in scheme. 9 } 10 } XI }

1st season ...	A, B, C, I, etc.	
2nd season ...	A, B, C, I, etc.	
3rd season ..	A, B, C, I, etc.	
4th season ...	P, Q, R, I & II and preliminary report on P, Q, R. P, III, IV, 6 * A 10 & XI, C, V, 7, 8, 9.	P, Q, R, I & II and preliminary report on P, Q, R. P, III, IV, V, 6, 7, A 10 & XI 8, 9.
5th season ...	P, Q, R, I B 10, XI, Q, III, IV, 6 P, V, 7, 8, 9.	Q, III, IV, V, 6, 7, B 10 & XI 8, 9.
6th season ...	P, Q, R, I C 10, XI, R, III, IV, 6 Q, V, 7, 8, 9	P, Q, R, I R, III, IV, V, 6, 7, C 10 & XI 8, 9.
7th season ...	X, Y, Z, I & II and preliminary report on X, Y, Z. X, III, IV, 6 ... P 10, XI ... R, V, 7, 8, 9.	X, Y, Z, I P 10 & XI X II III, IV, V 6, 7, 8, 9.

* Paragraph (vi) of the note perhaps requires P 7 and P 8 to be done at this time; but as these steps cannot be performed until the new soil-class of each field is known they have been postponed to the next year in the schedule.

Mr. J. C. Mackenzie, I.C.S.

Collector of Rangoon.

I have time only to air a little suggestion of my own. It is only a suggestion because I have not worked out any scheme. The suggestion is the result of two conclusions that were forced on me as a result of six years of Settlement work in Upper Burma, *vis.*:—

(i) that the time allowed for the settlement of a District is too short for it to be possible to ascertain outturns,

(ii) that the duration of settlements is much too long.

As regards the first point: I have no experience of Settlement work in Lower Burma and have no knowledge as to how far reliable information as to outturns in Lower Burma can be ascertained from crop-reapings in one or two years. But I am convinced that in Upper Burma, owing to the scantiness and capricious nature of the rainfall, it is not possible to ascertain outturns, at least as regards paddy and some other crops, from less than seven years crop-reapings.

The second conclusion arose from the fact that while I was on Settlement duty there, the whole agricultural economy in Upper Burma was in a state of transition.

The introduction of groundnut, the extension of cotton-cultivation and the destruction of millet by the *pinbyu* pest had completely upset the values on which the current settlements were based.

Take the extreme case—the sandy lands in the southern half of Myingyan and in Magwe. Prior to the introduction of groundnut the principal crop grown was *lu* for local consumption. When groundnut cultivation was properly established the net produce from such land must have been several hundreds per cent. greater than the former net produce. With the existing long-period settlement, Government not only lost, during the currency of that settlement, the share in the increased outturn from the land, which could justly have been claimed but it was also practically impossible, at re-settlement, to raise the rates of land revenue to anything like the rates theoretically due. For there are limits imposed to the increase above existing rates that may be imposed.

In the case of groundnut, Government was the sufferer. In the case of millet-land the cultivators were the sufferers. Luckily the failure of millet, which would otherwise have been a first rate disaster, was, except in a few small areas, obscured by the boom in groundnut and cotton.

Fluctuations in the general level of prices have in recent years been a further factor in upsetting suddenly the data on which settlements had been based. Prices had been rising ever since I came to Burma. Then came the war and inflation of the currency and a wild rise in prices, masked as regards exports by limitation of exports both by shortage of shipping and governmental control. It appears to me to be unlikely that prices will ever reach, in our time, a level at which they will remain stable over a long period.

The effect of rising prices has never, until quite recently, been felt by Government, as Provincial Revenues have always been expanding. Moreover, Government has never had occasion to exact its full pound of flesh. The actual rates of land revenue are always below the rates theoretically due. In my experience on settlement I only once came

across an instance of land left uncultivated because of a high rate of land revenue. In that case there was a blatant mistake in classification.

But, in my opinion, as the Burmese get more voice in the management of Burma, rates of land revenue will have to go up. The tax is a legitimate tax for a National Government to impose, and if the rates go up, a more flexible instrument than a long-term settlement will be necessary to meet changing conditions, whether of cultivation or of prices.

The present system of hurried settlement operations in a single district and then a long-term settlement is, to my mind, bad. I should like to see the process of Settlement made much more continuous and rates revisable at much shorter intervals. I have not thought out the details of the working. But instead of having a Settlement Officer working intensively in a single District I should make the work much more extensive and have a Settlement Officer working continuously over four or five districts. Possibly the present Settlement Party would be merged in the Land Records staff. At present statistics recorded by the Land Records Department are usually discarded by a Settlement Officer as worthless. The reason for their worthlessness appears to me to be that none of the officers concerned in the recording have any idea as to what purpose the statistics recorded may be useful for. It appears to me that, if the junior Superintendents of Land Records got a little training as Assistant Settlement Officers and subsequently had a hand in the work of settlement, the Land Records statistics would be of very great use. But I am not going into further details. I content myself with suggesting that there would be points in having the work of collecting statistics going on continuously and in having short-term settlements.

Mr. B. W. Perkins, I.C.S.
Deputy Commissioner, Hanthawaddy.

Item G of the Committee's terms of reference.

It is hard to defend the present system of commission. In this district, and I noticed the same at Amherst, the large and difficult villages avoid the rich paddy plains and so one gets anomalies like one case I met of a village-tract with six houses drawing large commission, another one close by with 300 houses drawing next to nothing.

Headmen have to combine to give security, the security group might therefore easily be made into the collecting group, the commission being divided among the several headmen equally or in any other suitable way. I have actually worked out such a scheme in one part of this district, it could not be considered being "against the policy of Government." In a few years time headmen will notice the present gross inequalities, at present they put them down to luck.

I have dealt with this matter in an official reply to the Committee.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Sheaves of notes and opinions on crop measurements were written by me at Shwebo. Briefly, crop measurements are of no use at all in Upper Burma unless spread over a larger area than is possible with an ordinary settlement staff or if enquired into and classified with meticulous care, and also unless spread over a long period of years.

I have never seen it laid down exactly what one is driving at in assumptions; the assumption one wishes to make is the average of the total production from all cultivated fields in a soil tract taken over a large number of years. To talk of a normal year or normal crops as is so often done is so much camouflage.

For two years in Shwebo in an extensive tract of country the 3rd class land produces more than the 1st class.

It will be very interesting to see how empirical classifiers from Bombay would deal with our classification in Upper Burma.

B.—Settlement Department.

My ideas on this question are set out in the instructions given for classification in Shwebo. In classifying, the opinion of the local cultivators was followed invariably unless the classifying Inspector disagreed. All such disagreement had to be reported to the Assistant Settlement Officer and the cultivators were also informed. The Assistant Settlement Officer then decided.

The only difficulty introduced in this method was the preservation of the standard, this was done by the Assistant Settlement Officer with the assistance of a cultivator with a wide knowledge of the tract.

15. Objections have been raised to this procedure, it is said that villagers do not understand classification, it is putting too much power in the hands of the *thamadi*, etc. My opinion, for what it is worth, is that the underlying idea that a Myoök or a Settlement Officer has a natural gift for classifying, enabling him to dogmatise against the opinion of the local people, is radically wrong. I could classify the kwins in Upper Burma with the 3rd class as 1st and the 1st as 3rd and could produce arguments to support my case. And as to *thamadis* being dishonest I have had a *thamadi* raise the classifications of his own land; this was not an isolated case.

The *thamadi* system is understood and appreciated by the people and should be retained and extended to improve classification.

18. My opinion on Mr. Arbutnot's proposal in January 1919 has already been given as Settlement Officer, Shwebo. That opinion was given when I had little experience and little time given me to formulate ideas. I am, however, still of the opinion indicated then that the proposals are unnecessarily complicated. The main object aimed at is to get a settlement which will be more in accord with the opinion of the cultivators, I believe this can be obtained by a more methodical consultation of cultivators by the Settlement Officer and his Assistants, the way that I would do it would be through tract *Thamadis*. For each tract a man chosen by the cultivators would accompany the Section Officer and would be the ordinary means by

which the general opinion of the cultivators as a body would reach the Section Officer. At the conclusion of the settlement the tract *thamadis* would meet and would discuss the relative pitch of the rates as between various tracts, they would also advise as to the absolute rates.

I believe some scheme like this, it is an extension of existing methods, would be more understood and so more popular than the more complicated scheme proposed by Mr. Arbuthnot. The great difficulty in Mr. Arbuthnot's proposal is that it destroys the section system of working. Also, I do not fathom how the statistics of a township are to be tabulated until classification has been made. Also, statistics have always to be read with a knowledge of the particular conditions of the tract in the year in which they were collected, this will not be possible if the Assistant Settlement Officers were at the other end of the district classifying during the statistical year.

At the same time the suggestion that the Settlement Officer should spend a year in the district before classifying is a very sound one. At the present moment the Settlement Officer has at the outside two months' experience of the district before classification starts, during that two months he is very busy organizing his staff and supervising crop-reaping. It is, therefore, exceedingly difficult to work out the scheme of classification. I am quite sure that I could have made a better classification in Shwebo if I had seen the country in a preceding agricultural season.

II.—The Register of Holdings as a Legal Document.

30 and 31. The Financial Commissioner has ruled in his Revision No. 5 of 1918, Ebrahim Patel *versus* Government, that the report of succession of inheritance is not obligatory. The result is that such reports are not made. I am having enquiries made in a township office where conditions are particularly bad and will send a further note on the subject.

In this district considerable attention is paid to mutations. A scale of fines had been drawn up to inflict when mutations are not reported. Constant application of penalties has had some effect in making land-holders report.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. In my opinion statistics recorded by the Settlement Officer and Land Records Department are of very little use in providing information regarding agricultural economy. One set of statistics is collected by tracts, and the other by Inspector's charges; they therefore bear no relation one to another. It would be quite easy for Land Records statistics to be collected by assessment tract and all the assessment tract totals kept up in a continuous statement. It would then be exceedingly simple for the Deputy Commissioner to watch variations. The statistics so collected would also be of some use to the Settlement Officer

IV.—Survey.

44. I have no experience of colour printing of soil classes.

Colour printing was, I believe, introduced because, in copying from year to year, the revenue surveyor was apt to continue errors. In the Shwebo District the revenue surveyor was supplied with a copy of the settlement map, there were very few errors in painting up classification.

Colour painting is expensive, it is needed to guard against careless errors. This could be obtained by printing the soil class boundary in a thicker line, leaving it to the revenue surveyor to paint up. It would be a very careless man who would make mistakes, the mistakes would not be recurring.

V.—Organization.

45. This question leaves out the most important officer of the lot, the *Akunwun*. The *Akunwun* very rarely has any intimate knowledge of Land Records work yet he is in charge of the Deputy Commissioner's land revenue proceedings and enquiries. It is essential that the *Akunwun* should have a knowledge of Land Records work and his land revenue proceedings department should be in much closer touch than at present with the Land Records Department. I would even go so far as to take away land revenue proceedings from the *Akunwun* and hand them over to the Superintendent of Land Records as the Deputy Commissioner's Assistant.

VI.—Special Areas.

58. There is what is known as a special lease area in this district, special rules have from time to time been laid down to ensure that if any waste land in this district should not be occupied so as to give a permanent title adverse to Government. The Land Records system of the days when the special lease area was started, was so inelastic that the whole purpose of the Government was defeated. Hundreds of cases were opened to deal, in many of them, with finicking encroachments, encroachments which often could not be shown on the ground. I suspect that real important encroachments escaped notice by the connivance of the surveyor, connivance difficult to prove in any individual case. Special Land Records rules were formulated to deal with the record in these areas, unfortunately these rules appear only to have made matters worse. I am having enquiries held in one or two selected kwins. These enquiries have been made most complicated by the fact that the revenue surveyor of 1910-11 did not carry out the orders to show squatter and leased land in a special way, if he did do so he made mistakes next year in copying the map. I do not know why the obvious step was not taken, namely, to colour print on the maps all land held under land-holder's tenure.

Mr. H. F. Sitzler, I.C.S.
Deputy Commissioner, Pakòkku.

I.—The Revenue System in its Fiscal Aspect.

C.—Land Records.

21. I do not think that it is either desirable or possible to substitute a receipt book to be kept by the cultivators for the annual tax-tickets. The ordinary cultivator does not know how to keep books at all and it is not likely that such a receipt book will last very long. I think too that there is considerable danger of fraud being committed if the cultivators are allowed to keep their receipt books. At present they are constantly in the habit of presenting tax-tickets to support their claims to land in dispute and I am inclined to think that if they have such books in their possession they will be likely to forge receipts for the purpose mentioned above. I have just had a case of a man producing a *thathameda* tax-ticket for the year 1914-15, pretending that it was a tax-ticket for the year 1920-21. Presumably with the receipt book it will be necessary for the *thugyi* to keep a stamp and date each receipt when he collects the money. I do not think that headmen can be trusted not to yield to the importunities of villagers who desire to date their receipts wrongly. There is also another objection, namely, that in many cases the revenue is paid by the tenant or mortgagee although the land stands in the name of the owner. The receipt books will presumably have to be left with the owners and the result will be that the tenants or mortgagees will have to worry the owners for a receipt or go without one.

D.—Executive Department.

22. I do not think that the check of assessment rolls and tax-tickets in a district is ordinarily adequate as the time allowed for the preparation of the rolls and check is inadequate. In every district there are between 1,500—2,000 kwins which means 1,500 to 2,000 sets of kwin maps, Register I, Register I-A and Register II to be looked into, checked where possible and then signed by the Superintendent of Land Records. The work of checking is particularly difficult in Upper Burma where there is a variety of crops, rates and soil classes. Another trouble is that the financial year is made to end on the 31st of March instead of 30th of June. If more time were given to the preparation of the rolls and one were allowed to get in the revenue at the end of the agricultural year instead of the financial year things would be made much easier. Mr. Cooper, the previous Superintendent of Land Records, admitted to me that it was impossible for him to check more than a small percentage of the rolls and owing to the general increase of work it is not likely that there will be any improvement in the future although Mr. Nicholas is very careful and more particularly when checking the rolls in the field. Last year he and Maung Maung Gyi discovered a large number of errors, but last year there was perhaps a little more time for checking. This year owing to census and the amount

of other work that the Land Records Department has been called upon to do the check must inevitably have been hurried and less careful. The ordinary errors that affect the people most are the entries as regards the ownership of holdings and so on. The tax-tickets frequently go out in the name of persons who do not pay the revenue and consequently there is a good deal of delay. Although in this district it is laid down that the *kaukkyi* revenue should be credited in full by the 30th of April the Financial Commissioner expects that as much as possible should be credited by the 31st March and consequently it follows that the rolls cannot be thoroughly checked.

23. I must admit that the attempt to make use of Upper Burma Land Revenue Direction 135A has not been very successful in this district. Last year when there was a shortage the Superintendent of Land Records was asked to give a list of the kwins in which the procedure prescribed by the Direction should be followed. Subsequently the Township Officer and the Subdivisional Officer went over these kwins and recommended partial remission. The inspections by the Subdivisional Officer and Township Officers were however much too late and in the meantime the rolls were prepared and tax-tickets issued so that eventually when remission was ordered refunds had to be given. Even then the Land Records Department found difficulty in stating the amount of revenue due on each holding and refunds were only given after a great deal of delay. The difficulty apparently lay in discovering how much of a holding had really been cultivated and whether other holdings in the kwins affected had been cultivated or not. If the question had then been simply one of giving certain remission on land in each kwin without the cultivation of the occupied area of course it would have been very easy.

24. The whole difficulty with regard to the granting of remission is that assessments are frequently made when it is not known yet whether the crops will mature or not and subsequently when the cultivators apply for remission the Township Officers and Subdivisional Officers frequently are not able to visit the holdings until the crops had been reaped. In theory the rules are good, but, in practice, owing to the excess of other work the Township Officers and the Executive Officers generally have to do, the cultivators rarely get a remission as they should. I remember when I was in Lower Burma on settlement in Hanthawaddy that when I had to consider the question of various lands liable to flood the villagers said that it was rare for them to get remissions as the Township Officer had other work to do and even when he visited kwins he visited them when the crops had been removed and subsequently he was not able to see what had happened. The same complaint is made by the cultivators in Upper Burma. So far as the remission of land revenue is concerned I think all townships are far too large. It is for instance impossible for an officer in charge of a township with an area of 800 square miles or thereabouts to inquire into the remission cases.

25. There are few absentee owners in this district and arrears of revenue are usually recovered after notice. Redemption or sale of land for arrears of revenue is very uncommon.

26. It is not the practice in this district for headmen to apply for a remission of land revenue which they are unable to recover.

II.—The Register of Holdings as a Legal Document.

28. In my opinion the enquiries made at the time of settlement though useful in determining whether a land is State or non-State land do not decide the rights of an individual with sufficient precision. The Settlement Officer who works on general principles and does not examine the details in each and every case may decide that all lands in a village should be classed as State land ; but he does not actually discover how the village grew up and whether it was originally founded on State land or gradually grew up by the acquisition of *bobabaing*. Thus at Kunywa and Shwechaung in this district the Settlement Officer decided that certain land was State as being in a village ; subsequently when dispute arose over the land in question and certain persons claimed land within the village as *bobabaing* and sold it to the Bombay Burma Trading Corporation it was found impossible to come to a proper decision on the point raised simply because the Settlement Officer had not dealt with the lands in detail. Similarly in cases in which settlement has shown a certain person as revenue-paying State tenant the mere fact that he has been shown as such in the map does not prevent dispute arising between him and others who maintain that the land has been theirs even before the time of settlement. Thus in the case of a certain *thugyi* here whose land has been classed State there are continual disputes between him and other cultivators, the latter maintaining that although the *thugyi* was shown as the owner at the time of settlement they had really bought their lands from him and had tilled them themselves. I think therefore that steps should be taken at re-settlement to record all details in greater detail.

29. I certainly think that the register of holdings should be brought up to date at the time of settlement and then attested by a responsible officer. As it is, an entry from the register of holdings cannot be taken as a proof of any particular form of possession.

30. The trouble with regard to mutations is partially that the cultivators are too lazy to report and partially that the revenue surveyors are too lazy to take reports down. Unfortunately too there can be no doubt that some revenue surveyors are dishonest and try to make money out of the reporting of transfers. In Hanthawaddy when I was on settlement I found a large number of persons had not reported and in a good many cases the villagers said that they did not report the alienations, because the revenue surveyor refused to record them without being paid a fee. In this district there have been similar allegations although, as usual, such charges are incapable of proof. It would perhaps be a good thing if revenue surveyors were given a fee for the recording of transfers and they were provided with registers in which to enter a report made and fee taken. In kwins in which it would be possible to have permanent holding numbers such a register should be divided according to the number of holdings and a report affecting any particular holding should be noted on the appropriate page. At present the Register VII is difficult to keep up and moreover extracts from it are not looked upon as evidence of any value. With a permanent register showing all holdings in a kwin I think the recording of mutations could be much improved.

31. If the present system of reporting changes is maintained I think that the surveyor should record only the name of the cultivator in occupation. As explained before, there is considerable trouble in collecting revenue because of the fact that the maps and registers show the names of persons who do not pay the revenue and that subsequently the name that appears on the tax-ticket is the name of the man who is dead or absent, the error being caused by the omission of the cultivators to report the changes. According to the present rules the revenue surveyor is not allowed to change the name of the owner until he has received the report; the result is that although he may know that partition of property has been effected on the decease of a former owner he has to leave the former owner's name on the maps simply because the heirs have not reported. As regards the question of supplementing the register of holdings No. 1 by a system of compulsory registration conferring a clear title as on the Torrens' system, I do not think that any such system is likely to be successful at least so far as this district is concerned. The distances are too big and the people are too indifferent.

32. (a) So far as I know the provisions of the Registration Law are becoming better and better known and transfers of property exceeding Rs. 100 in value are now registered if the transferer or transferee lives anywhere within easy reach of the registration office. The Registrar of Co-operative Societies when travelling in Myaing Township learned that some of the villagers were still under the impression that they could make a valid transfer by simply writing a report to the revenue surveyor and taking a foil from Register VII. At Myaing there is no registration office and so far the value of land had not increased to such an extent as to make such an office possible.

32. (b) As far as I know, the information furnished by the registration office to the Land Records Department is complete and the changes in the register of holdings are usually in accordance with the information supplied.

33. Generally speaking the register and maps kept in the Land Records Department are accepted as reliable in Civil Courts and it is comparatively a rare thing for parties to dispute them. They are however accepted generally only as evidencing the fact that a certain person was in possession of a certain land on a certain date and not as showing that he had a certain title. As regards the uncertified copies these are only accepted by Government for the purpose of reference. The only case in which the Land Records Department has to assist is the case of partition under section 54, Civil Procedure Code.

34. Beyond the difficulty caused in collecting revenue from persons whose names are not mentioned in the tax-tickets the deficiency in the present system does not result in any serious administrative difficulties.

IV.—Survey.

41. Mr. Nicholas the Superintendent of Land Records, writes—

“Would it be preferable to treat as a separate holding each parcel of land classified so that no holding should include two rates or should one single holding include the whole of any continuous parcel of land held by one man irrespective of main kinds and soil classes?”

I am inclined to the latter course as being simpler and a saver of time, labour and survey. The adoption of the former course would mean almost doubling the number of holdings in a kwin, if not more, which is objectionable on the ground of increase in the labour of the staff which the object of the present Revenue Committee is at least, in part, to reduce and simplify. Such minute differentiation serves no useful purposes."

I agree with his views.

42. Mr. Nicholas writes—

"Should the details now recorded annually by the Land Records Department concerning soil classes, etc., be recorded solely in the register or in a field book without any corresponding entry in the map?

I do not think entries only in a register or field book will suffice, because otherwise kwin inspections will become, if not more difficult, more tedious and tiresome and also take up more time than at present because, to check the crop-marking of the field plots in each holding one passes through on kwin inspection, a long stop will have to be made in every holding to verify from the field book or register all the details which are at present shown on the map. The suggestion contained in the question above, if carried in practice, will hamper kwin inspections a great deal."

I agree with his view. I am certainly of opinion that it is better to show the details in a map than in a register or field book. Checking with the field book is more difficult than checking with the map.

43. Mr. Nicholas writes—

"Should each field boundary be separately plotted, etc., in the case of (i) embanked lands, (ii) unembanked lands.

In my opinion (i) no interior details should be plotted in embanked lands (*e.g.*, paddy lands) except to show the division between the different soil classes in a holding.

(ii) No interior details at all should be plotted for unembanked lands *e.g.*, *ya*, garden, etc."

I am not quite inclined to agree with Mr. Nicholas on this point. In Upper Burma land may be embanked for one year and not for the next year and further as the rainfall is scanty it frequently happens that one portion of a holding matures and that the other does not and although it would perhaps be possible simply to estimate the non-matured portion as roths, 8ths, 3rds and so on, I think it is easier simply to pick out the fields affected.

V.—Organization.

45. It is difficult to know whether the present relations between the Land Records Service and the Executive Department can be improved or not. At present it is the practice very frequently for the Commissioner of Settlements and Land Records to write direct to the Deputy Commissioner and it is not always clear whether the Deputy Commissioner should correspond with him direct or through the Commissioner. If all correspondence has to go through the Commissioner it is bound to have a certain amount of delay. On the other hand it is only right that the Commissioner should know what correspondence is passing. As regards the relations between the Deputy Commissioner, Subdivisional Officer, Township Officer and

the Superintendent of Land Records and his subordinate staff Mr. Nicholas is inclined to the view that the co-operation between the Executive Branch and the Land Records Branch of the administration is not as cordial as it should be. He complains that under the present system when the Land Records Department has to make any report on which action should be taken the report has to be made first to the Deputy Commissioner, who may then send it to the Subdivisional Officer and the Subdivisional Officer to the Township Officer and when after finishing his other work, the Township Officer has time for an enquiry the matter has become a matter of no great importance, whatever may be the nature of the complaint the evidence obtainable is usually so unsatisfactory as to make a suitable punishment on the offending party impossible. He thinks therefore that the Land Records Department should have powers as they had before. I do not quite see how any improvement can be effected except perhaps by raising the general status of the Land Records Officers and getting them to be recognised as more important factors in the administration than they are at present. A Burman as you know only takes notice of a man who has got power to punish or a man who is drawing a large salary and is looked upon as in a position of equality with the other administrative officers. There are however objections to giving Land Records Officers any executive powers. The chief trouble, I think, is that though the Land Records Officers are technically under the Deputy Commissioner, Subdivisional Officer and Township Officer, in practice they are not owing to the difficulty of communicating with them and finding out what work they are doing; thus a Subdivisional Officer is not usually acquainted with the programme of work that is being done or has to be done by an inspector or a surveyor and when he wants to inspect a kwin it takes him some time to find out whether the Inspector or the surveyor can be present or not. An improvement can, I think, be effected by having a sort of Land Records Township Officer at each township headquarters, *i.e.*, an inspector of a superior type who would be responsible for the work of all inspectors in the township and who would be in direct communication with the Subdivisional Officer and Township Officer. This inspector should be given a clerk to assist him. An alternative would be to have the Deputy Myoôk, where one exists, placed in charge of the Land Records work for the township. If such an officer is placed at township headquarters, the Superintendent will be relieved of a good deal of unnecessary work such as reading of diaries and progress reports. The Headquarters Inspector or the Deputy Myoôk will read the diaries of the inspectors and revenue surveyors and only forward those of interest after giving the substance of the others in a diary of his own. As it is the Subdivisional Officers and Township Officers do not take enough interest in Land Records work, they merely content themselves with kwin inspections which they look upon as a necessary evil. If each Township Officer and Subdivisional Officer were made more directly responsible for the work of the surveyors in his subdivision or township, I think things would improve. In a great many cases these officers do not know or understand the difficulties of the surveyors. If they were made personally responsible for the work, they would certainly give the surveyors more assistance.

46. As pointed out by Mr. Nicholas if inspectors and surveyors were made to live at headquarters of districts and townships the records of mutations would not be prejudiced provided the cultivators were required to make their reports once in every six months when the surveyors were out for kwin inspections. I think however myself that the policy of concentrating at headquarters would be a mistake if cultivators have to go in long distances only to find that the officer whom they wish to see is too busy to deal with the cases at once; they get discouraged. In a district like this where the distances are so great and communications are so bad the revenue surveyors must live in their charges as otherwise the work cannot be done at all. Moreover I do not think that even if the Superintendent gets more direct control over the surveyors and inspectors by having them near him he would do anything more than control the office work and the field work would probably suffer.

47. My experience is that in this district the proportion of inspectors to revenue surveyors is inadequate as frequently when one wants a particular surveyor one finds that he has gone to see the inspector who is living some miles away; subsequently the work is delayed. I think the proportion should be one inspector to six surveyors. I cannot help thinking that even in other districts the proportion should approximate to this as I remember having found extremely bad work in Lower Burma within a few miles of the railways. Generally speaking the work of nearly all inspectors in Pakôkku is either bad or only averagely good and the explanation usually is that they have much travelling to do and it is impossible for them to be as careful as they would like to be. Even when an Inspector's charge contains kwins without much cultivation his work is not light on that account as he has still this travelling to do and though he may not have to stay very long in one kwin he will have to spend hours in travelling to another.

49. I certainly do not think that the land records work should be entrusted to village surveyors. In the first place it would only mean the duplication or triplication of the number of persons whose work would have to be checked and in the second place would in all probability lead to very serious abuses.

VI.—Special Areas.

51 to 58. I cannot express my opinion on these as the system of lump assessment has not yet been tried in this district. Generally speaking however I am in favour of having cadastral survey even where there is only a *thathameda* assessment as such a survey is useful for determining the rates and also it is easier when the area of fields is known to determine how much remission should be given in times of shortage.

Mr. H. O. Reynolds, I.C.S

Ex-Settlement Officer.

1. *Proposals for a Revised Settlement Procedure.*—This scheme, or one very similar to it, was circulated about 1918, and I remember submitting a note on it to Mr. Arbuthnot when he was Commissioner of Settlements and Land Records.

2. The arrangement by which Settlement Officers will have a year in which to examine the district before commencing soil classification is an essential alteration and a great improvement on the existing procedure. A Settlement Officer should at the end of this first year be in a position to include in a preliminary report most of the information required in paragraph (iv) of the proposals, though it will naturally not be as thorough as it would be at the end of the operations. Report Statement 1 could not be included unless the existing classification of waste, religious land, etc., is adhered to.

3. The proposals appear to be open to the following objections: (My criticisms must be regarded as referring to Upper Burma Settlements with their numerous crops maturing at different seasons and the consequent overlapping of full seasons and recesses.)

(a) The operations will require longer. It is only by working at great pressure that an average Upper Burma district can be completed in three years. The deferring of soil classification till the second year, with the constant interruptions in order to compile interim reports and statistics and to draw up the demand statements by holdings for each township as soon as sanction to the proposed rates is received will add at least a year on to the duration of the settlement. It will probably add rather more, because it is unlikely that the assessment proposals for the last townships can be ready till the end of the operations. It will be astonishing if these proposals are dealt with by the Conference, Financial Commissioner and Local Government in less than three months, the demand statements by holdings will then have to be prepared, and time will have to be given for appeals. All this may require the retention of the Settlement Officer and some of the staff for another six months; thus adding 18 months in all to a three-years settlement. On the other hand I am strongly of opinion that an extra preliminary year is in any case necessary, and believe that it is generally recognized that the present tendency is to rush operations far too much, so that the delay involved in Mr. Arbuthnot's proposals is not all disadvantageous.

(b) There will be a dissipation of energy. The Settlement Officer will be continually breaking off the general supervision which he ought to exercise to prepare interim reports and statements, and to deal with appeals against his assessments. So with the staff; trustworthy inspectors and clerks who ought to be soil classifying or crop reaping will have to be withdrawn to check Report Statements throughout the operations.

(c) The actual results will not be so reliable. The proposals for the first township to be dealt with will be submitted during the second year. They will be based on two years' crop reaping, which is inadequate for Upper Burma. The proposals submitted for the first township dealt with will cramp the work on the remainder although more experience will be available for dealing with the latter. It may easily happen that rates proposed for the first township on a certain basis will be utterly unworkable on a similar basis for the remaining townships, with a resultant lack of homogeneity which could have been avoided had all the townships been dealt with together.

(d) The proposals for dealing with the district piecemeal will secure no particular object. If experience is of any use as a guide,

then three months will be the minimum which can be allowed for proposals to be received back after being dealt with by the Conference, the Financial Commissioner and the Local Government. That is to say, the general proposals to be submitted under paragraph (iv) will not be received till well on into the second main open season, and approval to the rates proposed for the first third of the district to be dealt with will not be received till well on into the third year. By the time sanction to any proposals is received it will be too late to alter anything. It is surely better to leave it to the Settlement Commissioner to exercise a general control over the operations and to allow the Settlement Officer to submit proposals for the whole district in a lump. The Settlement Commissioner should be able to ensure that the general basis of these proposals is correct.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. I am strongly of opinion that the only logical way to use a cost of cultivation is to calculate the cost of working an acre of the crop dealt with on the assumption that all the labour is hired. It is a hopeless task to make allowances for the value of home labour. But it can always be ascertained how many men (or women) are required to sow, weed and reap any particular plot. In Upper Burma at least practically every cultivator, be he owner or tenant, uses his own cattle and I have no improvement to suggest on the present method of calculating the cost of plough cattle per acre.

9. The settlement of an average sized Upper Burma district requires four years. It has usually been found necessary to extend operations to this minimum.

B.—Settlement Department.

13. The final differentiation adopted in existing settlements is minute enough. In many cases the difference between the rates on soil classes is almost too small. On dry soils at least there is a great deal to be said for the Myingyan system of working from the particular to the general, that is to say, having a very minute differentiation of soils to start with, and amalgamating later when all the data are known. This can be left to the Settlement Officer and the Settlement Commissioner.

17. Only to a limited extent. Cultivation of waste, local irrigation and alteration of drainage, and introduction of new staples will always be liable to vitiate existing classification. There were however instances even in Magwe where the existing classification was hardly altered, particularly in Tracts V and VI where there were no new staples.

V.—Organization.

48. I believe that in Tharrawaddy all selections for crop reaping were made by the Settlement Officer or Assistant Settlement Officer.

in the office. This is the soundest system. If an adequate number of plots are selected on the map and orders issued for the reaping of these plots whatever is on them for the duration of the settlement, the insuperable risk of unfair selection will be obviated and the Land Records staff could be used much more extensively for crop-reaping. I should have no hesitation in so using them myself.

Mr. A. G. Mosely, I.C.S.
Divisional Judge, Bassein Division.

I have consulted the Bassein Bar Association and the District Judge and we agree on the following answers.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings is based on original settlements, mutations reported and the revenue surveyors' own enquiries into extensions of cultivation. The surveyor may on inspection (paragraph 436) only enter unreported changes in the remarks column (paragraphs 405, 608, Land Records Manual of 1916). Tenancies are usually correct, except perhaps on the point of rent. Mortgages with and without possession are usually correctly distinguished. Disputes as to boundaries cannot be settled on inspection (paragraphs 441 and 442) and occupiers and tenants are shown as the owners of extensions (paragraphs 446 and 447). Here the register does not purport to be a record of rights but merely embodies the *ryot* policy of Government.

Mutations by purchase (under Rs. 100), mortgage and redemption are usually recorded, so are mutations by the succession of a single heir. Partitions among co-heirs are often not recorded. Mortgages and sales are often not communicated by the Registration Department or only after great delay. Areas are often incorrect in new cultivation and flooded or riverine kwins. The register is not sufficiently exact at present to be regarded as a record of rights. At the same time entries in it or in the register of mutations on which it is partly based are usually found to be correct and those entries go very far to prove the facts established by them in a Court of Law.

30. See 27. Mutations by succession or of sale and mortgage under Rs. 100 should be compulsory in rural as well as urban and village areas (paragraph 860). Reports should be signed on all three foils by both parties and attested by witnesses, and literate and illiterate alike should make their thumb impressions.

32. (a) In force in most cases in Bassein District, where the provision of the Transfer of Property Act has been in force since 1905.

(b) Often wanting, often belated.

33. Maps must be presumed to be accurate (section 83, Evidence Act). Entries in settlement registers are relevant (section 35, Evidence Act), as are statements of fact in maps (section 36, Evidence Act). The former are usually presumed to be accurate, as made by a responsible officer after enquiry. The same applies in a less degree

to the latter. Maps and registers of town lands are more inaccurate than those of rural areas.

Uncertified copies of maps may not be and in practice are not accepted in evidence in subordinate Courts. Partition of immoveable property in dispute is already done in Burma through the Collector (*i.e.*, the Land Records Office), sections 54, 68 and Schedule 3, Civil Procedure Code.

Add that we agreed that the register of Town Land holdings would be improved if the owner of the land and of the buildings on it were always shown (and assessed) separately, as at Mandalay.

Mr. O. M. Rees, I.C.S.

Settlement Officer, No. 2 Party, Mergui.

General Note on Settlement Procedure.

1. I have got over my initial surprise at a revenue system in which the unit of assessment is about a third of an acre, and in which assessment values are determined by "soil-classification"—a process by which in two or three days one to two thousand fields are divided according to grades of fertility by persons of clerical attainments who have never seen them before.

2. But familiarity with the procedure has not given me any confidence in it, and I do not see that the present system is capable of developing into an equitable one. For comparing field with field the classifying officer has really no guide but local opinion (*thamadis*). This may or may not be independent and honest, and even if fearlessly and honestly given may or may not be correct. *Thamadis* like settlement officials are liable to be influenced by the appearance of the stubble of the current year's crop and like them find it easier to perceive local differences between one field and another than to carry the same standards from one end of the kwin to the other. In any case the settlement officer has little to go upon in comparing one kwin with another, and less still in comparing different tracts. As regards different districts, settled by different officers at different times, there is very little equity of incidence. There can be no doubt that many Upper Burma districts are or until recently were far more heavily assessed than many districts in Lower Burma.

If the Settlement Officer finds it so difficult to classify equitably in three classes, where he can rely on some help from the *thamadis*, any attempt to classify more minutely must result in failure. But the rough classification in three classes even if perfectly done may give the most inequitable results. Say the standards for R-1 and R-2 are respectively 40 and 30 baskets. *A* has 20 acres, 15 acres of (R-1) 42 basket land and 5 acres of (R-2) 32 basket land. Total outturn $630 + 160 = 790$.

B has 20 acres, 15 acres of (R-1) 38 basket land and 5 acres of (R-2) 28 basket land. Total outturn 710 baskets. Both pay the same revenue. The classification is perfect, but *A*'s outturn is 40 baskets above the fixed assumption and *B*'s is 40 baskets below it.

Now suppose not perfection, but a cumulation of not uncommon mistakes.

C has 20 acres of 34 basket land, which is classified on a 40 basket assumption. The Revenue Surveyor assesses him on 21 acres instead of 20.

D has 20 acres of 36 basket land which is classified on a 30 basket assumption and the Revenue Surveyor assesses him on 19 acres. The inequity is apparent.

3. So much for soil-classification and the field as units of assessment.

As regards fixing of rates, this is done by a series of calculations on unreliable data.

The gross outturn of each class is arrived at by the outturn of a minute percentage of fields in each class reaped over a period of one to three harvests according to the length of settlement operations. In a considerable number of cases the classification would probably have been different but for the result of the crop reaping experiment, so that the evidence is vitiated at the outset. However the gross acre outturn is converted into money at an assumed price, which, as prices advance, perpetually puts each newly resettled district at a disadvantage with its neighbours.

From this gross value is deducted a sum supposed to represent out-of-pocket expenses of cultivation, founded on the statements of a small number of cultivators, and neglecting at least one important item, interest on working capital borrowed.

Of this a uniform fraction is supposed to be taken as revenue, but the fraction is not in practice uniform as between Upper and Lower Burma, and as between one district and one assessment tract and another.

The calculation of rates is therefore founded on artificial statistics and the amount taken is not even uniformly calculated.

The calculated assessment is further modified, particularly in the case of the lower classes where the 'net value' is often a small or minus quantity. The lower classes which in theory (*see* paragraph 4) should pay a smaller proportion of net value usually pay a higher. However the rates proposed are finally reviewed by superior authority and notified.

There is, I think, at least one instance (Minbu Settlement by Mr. Gibson, L.P. rates in Tract X) where the rates contained in the notification are not those approved in the review on the report.

The application of the rates in the preparation of the assessment roll is not always correct. So where a man should be assessed on 4 acres at 4 Rs. (16) he may be assessed by a combination of mistakes on 5 acres at 5 Rs. (25).

4. The theory of land revenue in Burma is that the taxation is in the nature of rent.

An economic rent leaves the tenant just enough to live on, and takes the remainder. It takes the difference between the outturn on the land which can just be cultivated profitably and the outturn on all more productive land.

It is clearly not intended to take as land revenue the full economic rent. But there is surely no reason why the amount remitted should be enormously greater on the more productive lands.

Take cost of cultivation Rs. 10 an acre and minimum profit Rs. 100, Paddy at Re. 1 a basket,

Acres.	Acres	Gross	Net	Economic
	outturn.	value.	value.	rent.
A—80	40	800	600	500
B—20	20	400	200	100

If Government decides to take only Rs. 50 of *B*'s economic rent of Rs. 100, it should take Rs. 450 of *A*'s economic rent of Rs. 500, leaving them both the same, Rs. 50, as baksheesh. What it actually takes, supposing the same proportion of net value ($\frac{1}{4}$) to be taken in each case, is Rs. 50 from *B* and Rs. 150 from *A*. The figures differ so enormously that obviously a compromise is indicated, and the one which suggests itself is to take the same proportion of economic rent. If *B*'s tax remained at Rs. 50, *A*'s would then be Rs. 250.

5. I now come to my proposal. Make the holding (all contiguous land belonging to the same person) the unit of assessment. Fix its rental value at Settlement, the value so fixed to be ordinarily unalterable till next settlement. Take throughout the province the same legislative fraction of rental value. This fraction could be changed by law at any time.

6. In fully developed areas where tenancies are common, the Settlement Officer would have far more material for fixing a rental value than he has for fixing net outturn. In a large number of holdings he would be able to ascertain actual economic rents. Fractional tenancies would be just as useful as fixed rents. For those holdings which had not been rented, he would often be able to arrive at a rental value by comparison of their sale or mortgage acre value with that of holdings actually rented. In the last resort he would be no worse off than he is now and could compare estimated acre outturns, with the assistance of the old soil-classification and crop reaping, where necessary. Local enquiry as to outturns would also be more directly valuable than at present as the information is available only by holdings. Even in fixing the rental value of holdings actually rented, he would consider also sale, mortgage and outturn statistics.

7. There are however districts and parts of districts where actual full rents are rare. Here Government is economically more in the position of a monopolist than of a landlord. There are however few places where land has no sale value. Rent is merely the interest on money invested in land, so that if the nominal interest on a safe investment can be determined, rental value can be deduced from capital value. The number of holdings for which an actual sale value could be determined would of course be small, but the problem would be no more difficult than in Land Acquisition Proceedings.

8. In still more backward areas where land has no sale or rental value it is clear that taxation should be light, especially as these are usually the localities that see least return in the way of Public Works, etc., for taxation. It would be possible to determine economic rents even in such places by the method of the example in paragraph 4, which (unless the expiring settlement calculation were used) would involve some such calculation of gross and net value as at present, but for such areas it would probably be more equitable to take the present

assessment as the rental value, thus reducing the taxation by the complementary fraction of the legislative fraction of rent.

9. *Extensions.*—Extensions would be treated as new holdings and would be liable to settlement by the district revenue officers. Low acre rental values to apply to extensions would be notified at settlement to apply until the Revenue Officers fixed a rental value. They would be founded on the lowest rental values of adjoining land.

10. *Divisions, Erosion and Abandonment.*—The rental value would be divided in proportion to the areas, subject to arrangement by the parties in the case of divisions, or re-distribution by the revenue officer in all cases.

11. For impermanent land, such as shifting *kasing*, crop acre rates as at present would have to be imposed.

12. *Fallow and Remissions.*—The taxes would be fixed assessment. Ordinary fallow would be taken into account in fixing rental value. Remissions on account of destruction and crop failure would be given much as at present.

13. Not only does this proposed method more nearly approach the theoretically proper distribution, and give a uniform standard throughout the province, but there is far more material for arriving at a correct figure for rental value of holdings than for net value of outturn of fields. The latter must be entirely a matter of calculation from the roughest and most meagre data collected during a short period; for the former much of the information can be compiled every year from one settlement to the next in the form in which it is required, without any intermediate calculation. It is just as easy to compare a holding which has not been rented with one which has, as to compare a field the outturn of which has not been ascertained with one experimentally reaped. In both cases fraud may be practised or mistakes made, but under the proposed method a correct valuation automatically ensures equity, while under the present system inequity may result from correct classification.

14. The chief objection to this method is that whenever an actual rent was not used to fix the rental value it would be difficult to prescribe definite rules to fix it. This would mean (since the Settlement Officer cannot visit every holding) that taxes would in practice be assessed by inspectors and Assistant Settlement Officers. Of course, this is the case at present, but the proposed method might be too elastic.

15. Another alternative involving less radical change in the present system, and designed to make full use of previous settlements and give a certain amount of permanency to soil-classification is discussed in my reply to question 18. Yet another alternative, provided soil-classification is to be retained, would be to make all land in the same main kind in the assessment tract pay the same rate unless it has an *ascertained* outturn or ascertained economic rent of above or below certain standards. This is the only way to introduce any certainty into classification.

The only other alternative worthy of consideration is to collect the tax at the mill or by an export tax on produce, as is done for rubber. Theoretically this would be very slightly more severe on poor land than a uniform proportion of net produce, but would be less

so than the larger proportion of net produce, now almost universally taken in practice on poorer land.

It is unlikely however that such a tax would be favourably considered so I will not discuss it.

I.—Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. For less than 3 years crop measurements are practically useless, owing to character of the season. I struck exceptionally good years both at Minbu and at Mergui. Even 3 years is not long enough for a safe normal.

Crop measurements are liable to bias in selection, they practically neglect abnormal fields such as those suffering damage from insects, etc., though such damage may be common, and they are liable to fraud (*vide* Akyab report). I have myself had cases of cultivators concealing sheaves, owing to disinclination for the labour of threshing. Often the classification is stretched to include a selection with a suitable outturn.

Conclusion.—Crop measurements are not a safe basis.

Records of prices.—My experience at Minbu and Mergui has been that local records by surveyors are untrustworthy and meagre.

Gazette prices at district Headquarters are safe, and kwin prices can be related to them at settlement. For prices of produce not quoted in the Gazette there is practically no material for valuing produce. I would omit from the instructions any obligatory way of arriving at price assumptions.

I enclose copy of a form which I am using in Mergui to ascertain kwin prices.

Cost of Cultivation.—This is often called a conventional figure in Settlement Conferences. In my opinion the figure arrived at is usually nearer to what it represents to be, the out-of-pocket expenditure, than any other settlement figure. But interest on borrowed working capital should be included. The most unsatisfactory item is cost of feeding labourers. This is a mere estimate, usually on the part of the examiner, and is, I think generally below the actual.

Home Labour.—I think that it is unjust to allow the cost of operations in tracts where hiring is common, and not allow in others where home labour is used. I would therefore allow the value of home labour, for operations which have a market value.

Plough cattle.—The present instructions are suitable for backward areas. For more advanced areas Mr. Grautham's system (Myaungmya Settlement Report) is suitable. It would also be possible in advanced areas to assume that all plough cattle were hired at the rates current in the tract, which I think would be preferable.

Net produce as a basis for assessments.—I find it both theoretically and practically an unsatisfactory basis, see my general note. My objections are—

- (a) Artificiality, unreliability and insufficiency of the statistics.
- (b) Lack of uniformity in assessment fraction.

This is dependent on (a). At present the Settlement Officer mitigates the results of (a) by using a fraction which gives a rate that he knows will be suitable. The whole calculation is little more than a fudge. To insist on a uniform fraction would expose the cultivator to the evil effects of (a).

(c) The disproportionate demand on lower class land, and on poorer districts. There are three sources of error—wrong classification, wrong assumption of outturn, wrong assumption of expenses, of which the first is far the most serious.

2. If the net produce is maintained the Settlement Officer must be able to depart from the prescribed standards.

4. The fluctuation depends partly on the Revenue Surveyors, industry as well as the area actually worked. Therefore it is desirable to substitute fixed assessments.

In certain charges in Mergui where there is much fallowing I have had many complaints of wrong assessment, and the people said they would prefer a fixed assessment.

6. It requires a stretch of language to make crop rates legal under section 24 of the Lower Burma Land and Revenue Act. In the case of classifiable land, it seems desirable not to have crop rates but to allow the farmer the benefit of any profitable crops which his enterprise may cause him to grow.

Crop rates on classified land are also undesirable owing to the fact that too much depends on the accuracy of the Revenue Surveyors' work. Crop rates are a legitimate substitute for soil-class rates on land which cannot be classified owing to changes in the soil, e.g., tobacco can only be grown on the better *kaing* land, and an extra crop rate on it is equivalent to an annual re-classification of the land. Again, *dhani* land tends gradually to silt up and become rice land, so a crop rate is justified.

9. Settlement operations give extra work and trouble to the villagers, and introduction of the new rates necessitates modifications in the household budget. I would not subject people to this more often than once in twenty years.

10. I wrote a long note on this subject in connection with Mr. Smyth's draft.

I still find myself unable to see any distinction between water rate and wet land revenue, and I would take the whole irrigation credit as water rate.

This however is a somewhat academical question and the real problem is to decide what extra taxation above the normal proportion of net profit or other basis shall be imposed in order to prevent the landlords of the irrigated land from absorbing the benefit of work for which the whole community has paid.

The policy laid down is not to take the full market value of the water, leaving the cultivator no better off than he was before, but to take the greater part of the full market value.

So far as in practice land revenue elsewhere is as much as the land can afford to pay, excess taxation on irrigated land is *a priori* impossible, and rates calculated in the ordinary way are as much as can be imposed, the only problem being the apportionment of credit to the Public Works Department. The only way in which this appears to

be possible is to credit the Public Works Department initially with the excess over the total pre-irrigation receipts, subsequent increases being divided proportionately. This was the principle I followed in Minbu. If rents be used as a basis of assessment, the proportion of rent not taken as taxation represents what is left to the owner above a minimum livelihood for the cultivator of the land. It should be possible to ascertain for the whole area approximately how much the rental value has increased as a result of irrigation. A higher fraction of this increase should be taken.

Supposing the normal fraction to be half and the higher fraction three-fourths, the calculation would be somewhat as follows:—

Pre-irrigation rental value	...	...	100,000
Post-irrigation rental value	...	...	900,000
			800,000
Difference	...	...	800,000
			800,000
Land Revenue on 100,000 at $\frac{1}{4}$	...	...	50,000
Land Revenue on 800,000 at $\frac{3}{4}$	...	...	600,000
			650,000
		= Irrigation credit	150,000
		Total	650,000

This would be assessed by taking $\frac{900,000}{2}$ or 450,000 in the ordinary way, and distributing the remaining 200,000 at an acre water rate over the irrigated land. At subsequent settlements the 100,000 would be presumed to have increased or decreased in the same proportion as rental values in similar unirrigated districts. Where unculturable land had been reclaimed there would be no pre-irrigation rental value, and the whole would be assessed at the higher fraction. In practice the fractions would probably be about 40 per cent. and 50 per cent. respectively.

B.—Settlement Department.

13. Desirable but quite impossible.

14. I think results should be considered with reference to the kwin. In my tract I in Minbu with a tract increase of 13 per cent. four kwins had increases of 67, 60, 52 and 45 per cent. respectively—enormous increases when rates are from Rs. 4-8 to Rs. 8-12.

17. It is desirable that classification should be permanent so far as possible. The only way to do this is for the Revision Settlement Officer to adopt as nearly as possible the tracts and soil classes of his predecessor and to revise only where the old classification is inequitable.

18. At present Office Form A and Office Form B take up the greater part of the recess season. In the first recess season therefore I think there would not be enough work to keep the party employed. Probably the Settlement Officer would be unable to tour much in the rains. The points which the Settlement Officer is required to study are or should be available in the required form in

the Land Records registers. I think therefore that neither the Settlement Officer nor his staff would find enough to do in the first year. At Mergui I took out most of the statistics required with the help of one clerk in about two months. Also and more important I foresee long periods of inaction during the procedure in paragraphs XVI to XX.

Particularly during the last cold weather the Settlement Officer's staff would have little to do, and the settlement would be completed apparently about June, the wrong time to start a new district.

These however are matters of detail. To come to the main idea of the proposed revised procedure, which is that the duties of the Settlement Officer should be as follows:—

- (a) to propose rates,
- (b) to supervise the application of the sanctioned rates.

This seems to me a distinct improvement.

Supposing that revenue is to be collected at soil-class rates on fields as at present, in my opinion the most equitable procedure would be as follows:—

1. A preliminary report proposing tract and district $\frac{\text{in}}{\text{de}}$ creases drawn up by the Settlement Officer at the end of the first year, based mainly on the changes in rents, prices, etc., since last Settlement, the change desirable in the assessment fraction, and the incidence in similar districts. This report to be considered by a conference.

2. Orders by Government on this laying down within limits the enhancement or otherwise to be effected over the whole district. The Settlement Officer to adhere to the district incidence but to be able to vary the proposed tract incidences within small limits.

The Settlement Officer for instance might propose five tracts as follows, giving a district enhancement of 10 per cent. on which the Government might order an enhancement of 9 to 11 per cent.

Assessment Tract.	Present demand.	Proposed demand.	Increase per cent.
1	100,000	121,000	18
2	200,000	220,000	10
3	150,000	157,500	5
4	50,000	50,000	0
5	10,000	12,500	25
District Total ...	510,000	561,000	10

3. Distribution by the Settlement Officer of the tract $\frac{\text{in}}{\text{de}}$ crease among the kwins on the basis of:—

- (a) present incidence,
- (b) rental values,
- (c) variations in price and cost of cultivation,

(d) net produce, calculated according to last settlement classification reviewed kwin by kwin, e.g. present incidences in tract I might be—

Kwin.		Acrc incidence. Rs.	Kwin.		Acrc incidence. Rs.
120	...	4'10	125	...	3'90
123	...	4'05	122	...	3'85
127	...	4'00	124	...	3'80
121	...	3'95	126	...	3'75

and it might be decided that kwin 120 is over-assessed and should be bracketed with kwin 127, and that kwin 122 should be bracketed with 121.

See paragraph 13.

4. In the subsequent years, distribution of the new kwin incidence by soil-classes, e.g. the demand in kwin 120 is to be raised from Rs. 1,500 to Rs. 1,644. The classifying officer goes to the kwin, informs the owners and cultivators of the old and new demand and invites their assistance in dividing the land into classes capable of bearing the same acre rate throughout. He may use the old classification as a basis if it is generally approved, subdividing one of the old classes to get the increase, or merely revising the boundaries, in which case the increase will come mainly by raising the rates. He gives to each soil-block a class in the tract or district scale, which might be, e.g.—

R-1	...	45 baskets.	R-5	...	25 baskets.
R-2	...	40 do.	R-6	...	20 do.
R-3	...	35 do.	R-7	...	15 do.
R-4	...	30 do.			

He also makes enquiries as to the suitable proportions and differences between rates on the various classes in that kwin. Subsequently, in office, tract standard rates for each soil-class so as to give the tract increase are worked out according to the suitable proportions between class and class, much after the present method. The rates or some of the rates are modified for each kwin so as to give the kwin incidence independently decided on. *This eliminates, so far as possible, failure to maintain the same classification standard from kwin to kwin*, and takes into account kwin variations in present incidence, price, etc. e.g.—
kwin 122 has been divided into—

R-2	...	220 acres
R-4	...	120 "
R-6	...	46 "

for which the rates deduced for the whole tract (giving the required tract increase) are—

	Rs.	A.
R-2	...	5 0
R-4	...	3 8
R-6	...	2 0

But these rates give an incidence of only Rs. 4'18 in this kwin, and the incidence laid down for it is Rs. 4'40.

The rates in this kwin would therefore be increased by 4 annas giving a kwin incidence of Rs. 4.42. Arithmetically the kwin rates would be arrived at by a simple sum in proportion—the proportion of the tract rates.

This seems to me preferable to making a third visit to the kwin as in Mr. Arbuthnot's method, not only on practical grounds, but also because by fixing the incidence before classification it does away with inducements to misrepresentation, and, further, eliminates the effect of errors in classification as between kwin and kwin.

In kwins in which the incidence was raised more than say 33 per cent. intermediate rates would be notified. In other kwins intermediate holding rates would be allowed as in the new Land Records Manual.

If review by holdings were still considered necessary, holding area statements could be worked out in office and appeal to the Settlement Officer allowed for anyone whose total demand in the holding had been raised by more than say 25 per cent. or double the kwin increase whichever is greater. Personally, however, I think that inspection of the classification on the ground by the Assistant Settlement Officers and Settlement Officer, when the owners have an opportunity of objecting, is sufficient. Classification within the kwin would be largely done on the valuation of *thamadis*, and serious error is more improbable in interior kwin classification, done by the same man at one time, than in classification as between kwin and kwin, done often by different men or at different times. Appeal to the Settlement Officer during the classification season should lie from decisions of Assistant Settlement Officers.

If however holding appeals are decided on, it should be possible by dealing in the last year with the area nearest headquarters (also preferable on other grounds) to dispose of the few appeals either in May or October of the last year.

5. The advantages of this system are:—

(1) Government controls from the outset the financial results of the settlement, and can in doing so consider the comparative incidence in different districts.

Where Government alters one or two of the proposed rates as at present, it alters the whole proportion of incidence which the Settlement Officer after examining the problem has considered equitable, and it is probable that the Settlement Officer could have made a more equitable distribution of the altered demand. I know that the only one of my proposed Minbu rates which I suspect of being too severe is the one which looks lightest according to the figures.

(2) It does away with inducement to fraud and understatement on the part of the cultivators, the demand being fixed before classification. At present if the cultivators can succeed in getting a few acres of best land classified as R-2, they benefit at the expense of Government and of neighbouring villagers.

All statistics thus acquire a greatly enhanced value. Incidentally the Settlement official is relieved of the invidious position of a spy using the information he acquires to the detriment of his confident, and the better relation thus established should be of great benefit to his work

and enable him to get a real insight into the conditions and requirements of the district.

(3) Many of the unreal statistics on which time is wasted at present could be dispensed with.

(4) It automatically examines the incidence not only district by district and tract by tract, but also kwin by kwin and to some extent holding by holding.

(5) It takes full account of the present demand, thus avoiding unnecessary upheaval by large enhancements in one kwin and reductions in another, such as take place at present when classification is done before the demand is decided on, and when rates are worked out by the tract instead of by the kwin.

6. In fine it recognises the difference between an original settlement and a resettlement, and instead of throwing overboard the old settlement and beginning blindly *de novo*, it utilises the old settlement assessment, examining and correcting its comparative incidence, and distributing the increase or decrease proportionately. It would result in comparative permanence of classification. In some kwins the old classification would be found to distribute the demand equitably and little or no change of classification would be required.

In others an increase of demand might be most fairly obtained by dividing one of the old classes into two and taking most of the increase from the better subdivision.

In others again the old classification might require complete revision. But alteration would not be done as a matter of course.

Similarly the equity of the proportion between rates on different soil-classes would be examined kwin by kwin, and where, *e.g.* the R-1 rate was double the R-2 rate, this proportion, if suitable, could be retained.

7. The approximate rates for each soil-block are thus determined with the actual land before the classifying officer's eyes and with full cognizance of all the local factors of assessability and not worked out from statistics which introduce irrelevant factors from other kwins.

8. Although the preliminary work will be done by Inspectors and Assistant Settlement Officers it will probably be impossible for the Settlement Officer to visit every kwin for the purpose of deciding how many classes are to be formed and how the kwin incidence is to be divided among the various classes. Nevertheless the Settlement Officer's control like that of the Government is very much closer. The Assistant Settlement Officer cannot affect the assessment in any kwin unvisited by the Settlement Officer as by too severe or too lenient classification he can at present. The Settlement Officer would lay down general principles of classification, and the kwin rates, as explained in paragraph 4 would be founded on tract standard rates. The chief objection to the scheme is that the district demand is fixed at the outset and not after the experience of local conditions gained during Settlement. The objection loses much of its force when it is remembered that the Settlement Officer's proposals are frequently altered by higher authority.

The principle factor in deciding the district incidence should be comparison with similar districts. This the Commissioner and Local Government are in a better position to effect than the Settlement

Officer. The economic condition of the district, prices, land values, tenancies, ease or difficulty of collecting land revenue, can be discovered from district records. One year would be enough to ascertain changes in cost of cultivation. The district officers can assist in estimating whether outturns have increased or gone down. There would also be one year's crop cuttings. As a matter of fact some settlements are at present completed in one year. Lastly in his Final Report the Settlement Officer while adhering to the gross incidence laid down, can give reasons for considering it too severe or too lenient and suggest where the increase or decrease recommended should be effected—*e.g.* all rates, or all R-1 rates in all tracts or in certain tracts to be increased by four annas. Similarly there will be little difficulty in revising the tract or kwin incidences initially fixed in the light of further experience without seriously affecting the change of incidence in the district or tract respectively.

10. To work the scheme some such twofold procedure—preliminary and final—as in Mr. Arbuthnot's scheme would be required.

11. During the first two or three weeks the relevant figures as to assumed outturns and values, area assessed, land values, processes and new price assumptions would be compiled from district records.

Crop-reaping could be carried out over the whole district both generally and also in selections chosen to test places where the old classification was suspected. Personally I doubt the value of crop-reaping statistics. On his knowledge acquired by harvest time the Settlement Officer having decided in which part of the district to begin detailed operations, would lay down his tract boundaries in that area. These could be modified later if required.

By the end of the open season he would have fixed his tract boundaries for the whole district. (The tracts would not be "assessment tracts," but convenient geographical divisions of the district according to economic, agricultural and administrative conditions. The old Settlement and the Land Records figures as to rents, prices, etc., would suggest suitable divisions, to be tested while touring.

12. The work of the staff after crop-reaping would consist of—

A—In the whole district.

(1) The operations in *B* in a few selected kwins in all tracts

(2) General tract with tract comparisons by the Settlement Officer and Assistant Settlement Officers as to severity of present incidence, and of last Settlement net value component assumptions.

These operations are for the purpose of supplementing and correcting the information abstracted from the District records and enabling the Settlement Officer to propose tract and district $\frac{1n}{de}$ creases.

B—In the area selected for the first stage of detailed operations (which would probably be the greater part of the district, none of the party being engaged this season in the second and longer stage).

(1) Taking kwin censuses of prices on approximately the same date at fortnightly intervals (to ascertain kwin differences). The whole area need not be covered by each census, so long as they overlapped.

(2) Collecting full cost of cultivation statistics.

(3) Each Assistant Settlement Officer and Inspector would be supplied with the relevant figures for the tract, given kwin by kwin

in a statement giving the black figures in the annexed form. For the information required in column 5, the old classification would be examined and any area of over say 5 acres believed to be wrongly classified as compared with other kwins would be marked on the map.

For the information in column 6 they would note for each class in terms of baskets an estimate of any superiority or inferiority as compared with the same class elsewhere.

For the purpose of column 7 they would note any correction of column 4 which they believed necessary. This would be founded on enquiry as to how different kwins compared with one another.

For the purposes of column 15 they would collect figures for any constant difference from the cost of cultivation in other kwins, e.g. cheap grazing, abnormal bunding expenses, etc.

(4) Any other prescribed statistics, e.g. for rents, cost of living, etc., could be collected. Rental figures have already been abstracted from Land Records registers. Or these statistics could equally well be collected during the second stage in the subsequent years. Admitted outturn statistics should be left till the second stage.

13. In the recess the Settlement Officer would on the information collected prepare statements in somewhat of the form annexed for each tract and frame his proposals for tract and district ⁱⁿcrease on the basis of a suitable fraction of rental values and of old and revised net values, modified by his local knowledge and the opinion of local Officers, and by incidences in other districts. The process would be one of simultaneously working up from the kwin figures and down from the district figures. He would also prepare Report Statement 1, 2, 3, 4, or 11, 5, 6, 7, 24 or similar statements (not necessarily tract by tract in all cases).

His preliminary report should be finished by August and considered by the committee. Orders of Government might be received by the end of October.

Kwin No.	R-1 40, Rn. 5.		R-8 20, Rn. 1.	Average acre out-turn assumption.	Excess over tract average.	Estimated area corrections.			Estimated assumption corrections.			Estimated excess.	Calculated excess.	Assumed excess.	
	R-1 40, Rn. 5.	R-8 20, Rn. 5.				R-1	R-2	R-3	R-1	R-2	R-3			Assumed excess.	Assumed value.
(1)	(2)	(3)	(3)	(4)	(4)	(5)			(6)			(7)	(8)	(9)	
180	488	100	100	35.5	1.8	-50	+50	...	...	...	...	1.0	0.8	1.1	35
183	300	50	84	35.2	1.3	...	...	...	...	...	...	2.0	1.2	1.8	37.7
127	200	200	...	85	1.1	...	...	...	...	...	...	1.0	...	1.1	...
121	200	200	7	34.7	.8	...	...	...	...	...	...	1.0	...	.8	...
125	...	...	...	34.5	.6	...	...	...	...	...	...	.5	...	.6	...
122	200	150	36	34.2	.8	...	...	...	...	...	...	.5	...	.3	...
164	...	...	...	33.9	...	...	...	...	...	...	...	...	...	...	...
126	...	...	...	38.9	-1.4	...	...	...	...	...	...	-1.5	...	-1.4	...
128	100	100	100	30.0	-3.9	...	...	...	...	...	...	-3.5	...	-3.9	...
Tract I Old.	...	...	...	33.9	...	...	...	...	...	...	...	...	...	...	...
New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79

Column 2 gives area under each present assumption and rate.
 Column 3 gives gross outturn + area.
 Column 4 is used for comparison with columns 7 and 8. As the old assumptions may be wrong it is better for comparison to use differences.
 Column 5 gives estimate of area over or under classified. In kwin 120-50 acres of R-1 should be R-2.
 Column 6. In some kwins a soil-block although classification is correct is better than the average basket for the tract, e.g., in kwin 129 R-1 is superior (by about 1 according to estimate) to ordinary R-1.
 Column 7 gives an independent estimate of excess or deficit over kwin average.
 Column 8 gives the excess or deficit calculated from the estimate in columns 5 and 6.
 Columns 9 and 10 give the Settlement Officer's deductions from columns 4-8 and the consequent correction of column 2.

Acres excess value Rs. (100), (10)	Acres net value C.C. Rs. 6, (11)	Rental value, (12)	New price, (13)	New value, (14)	New C.C., (15)	New net value, (16)	Incidence, (17)	Per cent. N.V., (18)	Per cent. R.V., (19)	Present incidence and Tract Increase 46, (20)	18-9 N.V., (21)	86 per cent. R.V., (22)	Proposed incidence, (23)	Remarks, (24)
85.5	29.5	12	100	42	...	30	4.10	13.9	34	4.56	45	4.36	4.45	Equal to kwin. 127.
85.2	29.2	12.9	100	42.8	...	30.8	4.05	13.9	81	4.51	4.56	4.64	4.55	Best kwin.
85	29.0	12.0	100	42	...	30.0	4.00	13.8	83	4.46	4.45	4.30	4.45	
34.7	28.7	12.0	100	41.5	...	31.6	3.95	13.8	33	4.41	4.39	4.30	4.40	
34.5	28.5	11.5	100	41.4	...	31.4	3.90	13.8	34	4.36	4.36	4.14	4.35	
34.2	28.2	12.5	100	41.7	...	31.7	3.85	13.7	31	4.31	4.40	4.50	4.40	Equal to kwin. 121.
33.9	27.9	..	100	40.7	...	30.7	3.80	13.7	...	4.26	4.27	...	4.25	
33.5	27.5	...	100	40.3	...	30.3	3.75	13.7	...	4.21	4.20	...	4.20	
30	24.0	...	100	36	-1.0	27.0	3.00	12.5	...	3.46	3.75	...	3.75	
33.9	27.9	11.8	...	...	...	...	...	...	...	3.80	18.6	32	..	
...	...	...	100	40.7	10.0	30.7	4.28	13.9	36	...	...	...	(4.27)	

Column 18 gives the new Settlement price. The price in kwin 122 is found to be Rs. 8 more than in other kwins.

Column 15 gives the tract C.C. modified by special kwin circumstances. In kwin 128 there is a good grazing ground and cattle expenses are about Rs. 1 less than elsewhere.

Column 20 The tract demand has been raised from Rs. 3.80 to Rs. 4.20. Rs. 0.16 is therefore added to column 17 for each kwin.

Column 21. The new tract incidence is 13.9 per cent. of the new net value. 12.9 per cent. is therefore taken of the net value of each kwin. Similarly in column 22.

Column 23. Filled by Settlement Officer after considering columns 20-22.

He would then have the detailed kwin figures as to outturn corrections, price and cost of cultivation variations, etc., calculated and set out for the tracts in which the first stage had been completed. The entries italicised in the statement would thus be filled in. From the information in columns 20—22 of annexed statement and his general information he would be able to distribute the proposed tract ⁱⁿ _{de} crease equitably over the different kwins, any doubtful cases could be made the subject of further enquiry at the beginning of next open season. The preliminary entering up of area statements and any necessary map copying would be completed.

14. Of course the objection will be that there are not enough data at the outset of the settlement to fix incidences, which should be the last stage after the fullest experience of the tract. But which is more likely to give the fairest results? By the present method it is almost impossible to tell (until it is too late) how one kwin has been treated relatively to another. I have tested this and found that a kwin which I knew to be worse and tried to classify as worse than another actually gave a higher average acre assumption.

Even theoretically, the object of classification being to distribute demand fairly, classification should come last. What a lot of time is wasted now in classifying a holding into three classes when the resultant demand is equal to area \times rate on middle class. To classify before knowing the money effect of the classification is bound to lead to injustice. My suggested scheme does at least try to take account of kwin to kwin variations in the various factors—gross outturn, expenses, price, rents—and does not apply an average which may be inapplicable to the particular kwin.

It also has the advantages of taking into account the present incidence and making use of the old assumptions,

15. *Second Stage—Classification.*—This concerns the villagers themselves. The settlement staff would mainly explain what was required, see that everyone had a hearing, adjudicate in disputes, see that the interests of everyone, including absentees, were considered, and record results. The process would no longer be one of trying to bully the people into calling every field first class.

The Assistant Settlement Officer or Settlement Officer would (for statistical purposes and use at next settlement) give every soil-block a class—*e.g.* from R-1 (45) to R-7 (15). If a comprehensive soil-block (*e.g.* from 40 to 30) were formed by the *thamadis*, he would classify it by the average of the whole block (*e.g.* R-3—35). Simultaneously the first stage of next year's area would be completed.

16. In recess, rates on the soil-blocks kwin by kwin to give the required incidence would be worked out, and area statements, by holdings if necessary for purposes of appeal, would be worked out. The latter would be communicated to the assessesees. Any necessary preparations for next year's work would also be made.

17. During the first open season, if none of the party is engaged in stage 2, stage 1 should be completed over a large area. In the last year if none of the party is engaged in stage 1, a larger area of stage 2 will be completed. There will thus be a carry over in intermediate years, adjusted in the last year.

- It is possible that the first recess would be a slack time, and the last recess a busy time, as there would be no area statements to fill in during the first recess, and an extra large number during the last. For this reason it might be advisable in one or more tracts of the area begun on to take up the second stage towards the end of the first open season. All that would be necessary would be compilations of tract prices, and cost of cultivation figures, which could be done in a few days, and the only disadvantage, a very slight one, would be that there would be only one year's crop-reaping.

C.—Land Records.

20. I have submitted criticisms on the proposed forms suggesting cutting out Register 11.

II.—The Register of Holdings as a Legal Document.

27—30. The Register of Holdings is very unsatisfactory as a Record of Rights. I am strongly of opinion that a real and authoritative Domesday Book should be maintained, if necessary divorced entirely from assessment registers, but I have no complete scheme to suggest for effecting this.

One obvious improvement is to record the first year of occupation and assessment as a check on the acquisition of land-holders' right, and to expunge promptly all holdings on which such rights have not been acquired if they are left uncultivated except for ordinary fallow.

29. No. It is a dilemma. If the Record of Rights fulfils its functions it should automatically be correct and up to date. If it does not, revision every twenty years would be little use. The Settlement Officer would either find himself up against all sorts of questions which could only be decided by a court of justice, or he would make a perfunctory review of the register through the agency of his clerks.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. My experience is that it is impossible to obtain reliable statistics as to cost of living.

V.—Organization

49. The Revenue Surveyors in my experience are not highly enough trained for the work. *A priori* village surveyors would fail. I should not like to be a Revenue officer inspecting the accounts or registers of a village surveyor.

Mr. Williamson, I.C.S.

Settlement Officer, No. 5 Party, Shwebo.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1.(a) I have been through one crop-reaping season in Lower Burma (Akyab) and one in Upper Burma (Shwebo). In both cases

rice is the chief crop. It is possible that there is a tendency to select fields rather above the average of the soil class in which they lie. But this objection has occasionally been exaggerated (paragraph 112, Sagaing Report). Yields in adjoining plots in the same soil class vary greatly (paragraph 112, Tharrawaddy Report) and at the time the selector puts down his selection in November it is often impossible for him to pick the best field, should he desire to do so. Though he cannot tell at that date how the crop will thresh out it is usually possible for him to forecast whether the crop will be successful or not, and as has been pointed out in the Tharrawaddy Report the "invariable tendency is to select the average successful field." If the same field is selected in successive years however, as has been the practice in the two settlements with which I have been connected, this source of error should be eliminated. It is possible for cultivators when experiments are continuous to keep down outturns by deliberately bad cultivation. In practice however I do not find that this is done. In the present Shwebo Settlement, selections were made in office as in the Tharrawaddy and Sagaing Settlements. I am unable to say definitely that I approve of the system. I doubt whether we have a sufficient number of selections to give the law of averages full scope. In a district like Shwebo however where outturns vary from year to year within very wide limits it is, in my opinion, important to reap the same plots over as long a period as possible. I have therefore retained the plots reaped during the first two years.

In Lower Burma I consider that three years' continuous reapings of plots selected by Inspectors and selected Clerks under adequate supervision should supply a safe basis for estimating outturns. In the case of *mogaung* paddy land in Upper Burma I doubt whether three years' reapings are sufficient to enable one to arrive at a safe estimate of average outturn. The variation from year to year is much more pronounced than in Lower Burma and in three successive years it is possible to run into a streak of either good or bad seasons. Thus during the three years in which we have been reaping in Shwebo District we have had according to the classification of the cultivators one fair season, one bad season and one disastrous season. As the settlement has still two years to run the probability is that in five years we will get figures that are approximately average. It is unusual for a settlement to last five years however. The Settlement Instructions solve the difficulty by laying down (paragraph 25) that figures for years in which failures are serious or absolute may be discarded when determining the normal gross produce, on the ground that no assessment is imposed on non-matured crops. But mere relief from assessment is not sufficient to make good the losses of bad years. Paragraph 29, Settlement Instructions, suggests that relief may be given most conveniently by a reduction in the share of the net produce demanded. It does not suggest however how the reduction is to be measured. In my opinion all reapings except those rejected for tampering or non-compliance with instructions are relevant and should be included. In Upper Burma the difficulty is especially pronounced in a one crop district like Shwebo. It is possible that in districts where several crops are grown in the same

soil class, and a season that is bad for one crop is seasonally good for another, an average may safely be struck on three years' reapings. In unirrigated single crop areas however I do not think reliable deductions can be made from reapings unless we have experiments for at least four or five years.

(b) Records of prices are of two kinds (a) those recorded at the headquarters of a district and published in the *Burma Gazette* and (b) those recorded by revenue surveyors in their charges.

I have not yet examined the former closely. The latter I think have improved considerably since instructions were issued to record particulars of actual sales. If inspecting officers were asked to check these figures occasionally they would become more uniformly reliable. Where there is a central market for the disposal of produce the Land Records figures can be compared with those of the central market and unexplained discrepancies discounted. Where there is no central market however this check cannot be applied. Figures collected by the Settlement Department are open to two objections. In the first place there is a motive for under-stating prices that is not so obvious in the case of the statements made to the revenue surveyor when no enhancement of rates is in view. In the second place it is my experience that when there is no central market for the disposal of produce sales are in small parcels and the sellers honestly find difficulty in remembering prices after the lapse of a year.

(c) Enquiries into out-of-pocket expenditure on cultivation do not provide a safe basis for reckoning cost of cultivation. They fail to take into account the labour of the cultivator and his family and make allowance for plough cattle bred by the cultivator only to the extent of the value of the dead animal replaced. The Settlement Officer is accordingly compelled to alter his assessment fraction from tract to tract in order to avoid harsh assessments on tracts where the bulk of the cultivation is done by home labour. For operations such as plucking seedlings, transplanting and reaping it would be comparatively easy in this district to assign a value to home labour. It is less easy however to value work done on ploughing and in the threshing floor. Rates of hire for ploughing depend on the capacity of the person hired. There is no means of determining that, nor can we be sure that his time has been fully devoted to the cultivation of the area under enquiry. I cannot make any suggestion for the solution of this difficulty. As regards the cost of plough cattle I consider that the same allowance should be made for home-bred cattle as for cattle that are purchased, provided, that allowance is not made for animals that are merely being trained to the yoke. I think one could rely on getting a satisfactory estimate of the value of home-bred cattle in the year in which they were substituted for dead cattle, certainly a better estimate than one can get of the "value of plough cattle which died" Settlement Instructions, paragraph 215 (s) which one has now to ascertain. Besides these there is another difficulty that arises in insecure tracts in correlating expenditure and areas. Instruction 215 (g) requires that the area on which the cost of cultivation is to be calculated should be the area actually cultivated, excluding fields on which the crop is an entire failure (abandoned unreaped). It therefore follows that where failures are numerous the cost of cultivation

per acre under this system of calculation will be high in a bad year and low in a good year, whereas in fact the reverse will usually be the case. This difficulty could be overcome by holding the inquiry in successive years and averaging out. The present organisation of settlement work does not permit of this, though I fear that in one or two tracts in this district I will have to adopt this course. Impressed by these difficulties in arriving at an accurate estimate of the cost of cultivation and by the fundamental difficulty of obtaining from the less intelligent cultivators accurate information regarding the items of expenditure which one reasonably might expect them to remember, I incline to the heresy of an assessment based on the gross produce value. I have never seen the objections to the gross produce standard set forth fully. The two that suggest themselves are (1) that it does not distinguish between crops requiring very different degrees of labour and expense in their cultivation, (2) that it presses more heavily on poor land than on good land. I would not suggest that the same fraction of the gross produce value be taken for different crops. But it seems to me that for rice land—by far the most important category in the Province—the adoption of the gross value standard might well be considered. In order to avoid over-assessment of the poorer lands the fraction of the gross produce taken would have to be on a sliding scale varying with the gross outturn. Assessment on this basis would tend to throw a heavier burden than at present on tracts in which out-of-pocket expenditure of hired labour employed in the cultivation of the land is high. This usually means that cultivators are working larger holdings and enjoying bigger net incomes than in tracts where cost of cultivation is low. It would therefore mean that the man with the small income would benefit at the expense of the man with the larger income.

2. The standard proportion of the net produce to be taken in Burma has been fixed at one-half—provisionally one-fourth for Lower Burma. In recent settlements in Lower Burma the one-fourth net produce standard has been closely approached on several occasions. In insecure districts in Upper Burma however the usual proportion of the net produce taken has varied from one-seventh to one-tenth. It is impossible and undesirable to lay down any exact fraction of the net produce for either Lower or Upper Burma. Conditions vary so greatly from district to district and from tract to tract in the same district that it would be inequitable to base the assessment on the same fraction throughout. Insecurity, population, size of holdings, previous fiscal history, must all receive weight in determining the assessment. A comparison of the incidence of the proposed rates with that in adjoining or similar districts is useful if the person making it has sufficient acquaintance with the areas compared to satisfy himself that conditions are uniform. Without this personal knowledge the comparison loses its value.

3. Rental values are a valuable guide towards assessment when true competitive rents are numerous and can be ascertained. In a district like Shwabo, however, rents are almost valueless. Tenancies are either partnership or share produce tenancies, usually for short periods. Owing to annual changes in the plots rented it is impossible to ascertain the amount of produce paid as rent for any year but the

current year, and one year's figures are of very little use when outturns vary greatly from year to year.

4. In the precarious tracts in Upper Burma the assessment is on matured area only and is highly elastic. A reference to Statement 2 of the Settlement Reports of such districts (*e.g.*, Sagaing) will show the extent to what the district demand varies from year to year. The limits of the variation are of course much wider in the case of individual villages, as an unfavourable season in one part of the district may be accompanied by comparatively favourable conditions in another. The objections to the present system are that it is unduly expensive having regard to the revenue collected, that crop-marking is sometimes done badly and that the system puts too much power into the hands of the Revenue Surveyors. These are undoubtedly weighty objections, but they are outweighed by the discontent that the introduction of any system of fixed assessment is bound to cause in bad years. It is true you reduce rates proportionally, but in good years the cultivator is not grateful for the reduction. In bad years he feels the pinch and will resent being called upon to pay the full demand. It is conceivable that the fixed assessment system might have worked had the cultivator never known the system of fluctuating assessments. That it will give satisfaction at this stage I do not believe. I have broached the question with many cultivators in connection with proposals for lump sum assessments. These of course introduce further complications, but on the main issue that in good and bad years the demand should be the same, hostility to the proposal was uncompromising and almost universal. It would be interesting to know how the lump sum system is working in districts in which it has been applied to precarious tracts.

5. The present variations of the fluctuating assessment system are generally satisfactory I think. The only Upper Burma district of which I have experience is however the Shwedo District. In the canal irrigated part of the district exemption from assessment is allowed only when the crop fails completely and is abandoned unreaped. Failures are by no means so few as one might expect in an irrigated area and cultivators occasionally reap crops that do not even pay the revenue. In a tract where revenue rates are very high it would be unwise to permit surveyors to mark as failures fields on which less than a fourth of a normal crop had matured. The difficulty can be solved best I think by an improvement in the standard of remission work. In Lower Burma complete failures should I think be exempt from assessment as in Upper Burma. I remember seeing a proposal to this effect when I was in Lower Burma a year ago.

6. There are two objections to crop rates. In the first place they may discourage the cultivator from making the best use of his land. In the second place they introduce further complications into the assessment. In the case of crops such as betel vine and onions however which require intensive cultivation and ordinarily yield high profits, it is, I think, fair to impose a higher rate than the soil rate imposed when the land is worked extensively. In the case of irrigated land the assessment, in some cases, must vary with the crop

grown, regard being had to the amount of water used and to the season at which it is required.

7. Allowance must be made for insecurity in calculating the assessment. In the Revision Settlement of Sagaing District (see paragraph 115) the average crop failed area in each tract was extracted from the Land Records registers and this was distributed among the various soil classes according to their presumed liability to failure. The distribution was admitted to be arbitrary, but the real objection to the method is that some allowance had apparently already been made for crop failures as plots were reaped continuously irrespective of the success or failure of the crop grown on them. The obvious method of dealing with the difficulty is that suggested in paragraph 24 of the review by the Conference ; selected plots should be reaped annually and the result accepted whatever it may be, even if it is a complete failure. But even this method is not without its dangers, as, unless plots in each soil class are numerous it is possible that outturns may not reflect accurately the liability to failure of the tract as a whole and of the classes within the tract. It should be possible to deal with unfertile patches by soil classification, while fallow areas in unnotified kwins are on application assessed at special rates, provided the land is fallowed in the interest of good husbandry or owing to misfortune.

8. The provisions for granting temporary rebates are a great improvement on the old method of intermediate rates, though there is some danger that the burden may prove too heavy for the Revenue Surveyor. The system is better suited to Lower Burma than to the precarious tracts of Upper Burma where land yielding less than $\frac{1}{4}$ of a normal crop is exempted from assessment. In that case it is possible that if the holding consists of more than one soil class the portion of the holding on which the enhancement had taken place may be unassessed (fallow or failed) and the rebate may be allowed on the portion of the holding on which no rebate is really due. I see no escape from this difficulty. It is not sufficiently important however to outweigh the advantage of the new system.

9. In the case of areas that are fully cultivated 20 years is not too long a period for a settlement. When areas are developing rapidly or irrigation facilities are improving or deteriorating it may be advisable to resettle them at more frequent intervals. In the case of the older and more fully developed districts however resettlement should not be lightly undertaken, because the district happens to be on the settlement programme. After careful preliminary enquiry by a Settlement Officer the desirability of extending the period of the settlement for a further term of, say, 10 years should be kept in view. Settlement is an expensive business and it does not promise to become any cheaper.

10. Two principles have been stated for the assessment of land irrigated by a Government work. On the one hand it has been held that the State should supply the water to the cultivator at cost price. On the other it has been held that the State as supplying the water and therefore a partner in the cultivation is entitled to charge the full commercial value of the water. This view, however, is usually modified by the proviso that the rates should be so fixed as to allow a

reasonable margin of profit from the use of the water. The latter is probably the correct view, but it is difficult to apply seeing that the supply of water is a monopoly. Nor is it ordinarily open to individual cultivators to refuse to take irrigation water in years of good rainfall. The upper cultivator has the right to drain off his surplus water into the field below and if a matured crop is grown in these fields the owner is assessed to water-rate under the rules. Unless his fields are the high lying fields that do not receive drainage from other land the only method by which the cultivator can escape assessment to water-rate is by fallowing his land. In this I refer to rice irrigated tracts. The sole method therefore of discovering the commercial value of the water would seem to be to advance rates until land begins to go out of cultivation. As this procedure will not recommend itself to many, some other method must be found. The only feasible method is to discover what is the value of the net produce of the land when irrigated, and with statistics of incidence of the present rates, rents and land values, cost of living and indebtedness, as guides to determine what is a suitable fraction of the net produce to take as the wet assessment, keeping in view that while the state as a partner in the production of the crop is entitled to a higher share of the nett produce than elsewhere, the main object of the undertaking is to raise the general standard of living throughout the tract.

Two methods of calculating water-rate have been suggested. One would base the water-rate on the difference between the nett produce of the land when irrigated and when unirrigated. This method in theory is satisfactory, but it is difficult to apply as it requires information of the conditions prior to irrigation that are not always available. The second method would base the water-rate on the yield of poor soil with a certain and timely supply of water, and the land revenue on the difference between the yields of good soil and bad soil both receiving a timely supply of water. In this view the difference in the yield is held to be due to the land and not to the water which is considered to be the same in both cases. In point of fact the water is not necessarily the same even though adequate in both cases. In one case it may be cool and silt laden, in the other hot and devoid of silt. This however it is possible to regard not as a difference in the quality of the water but as a difference in the situation of the land with respect to the water-supply. The system in my opinion exaggerates the importance of soil differences, whereas in the Shwebo Canal area at all events facility for receiving water is the most important consideration.

Further, as between primary tracts or as between different canal systems it will give results that are inequitable. It is possible—and it does happen—that in one tract all soil that receives a full and timely supply is good soil. In another tract there may be a wide range of soils all receiving a full supply. In the former case the worst soil (the only soil) will be in the first class. You will get a high water-rate and no land revenue. In the other case the worst soil with regular supply may be fairly low in the scheme of classification. You will, therefore, get a fairly low water-rate and a comparatively high land revenue. There does not appear to be any very obvious reason why a tract where soils are uniformly good should yield less land revenue than a

tract where there is a wide range of soils. Personally, I do not think that with the data we possess there is any accurate method of calculating water-rate. If, for the purposes of accounts, it is considered desirable to estimate the share of the revenue that should be credited to Irrigation, it should I think be recognised from the outset that only an approximate estimate can be framed and that the book credit to be made to the Canal is of little consequence either to the State or to the assessees.

The simplest plan is to make a lump sum estimate of what the land revenue of the irrigated tract would be now, had irrigation not been introduced, to credit this to land revenue and the balance of the collections on the irrigated area to irrigation. In order to do this it will be necessary to select an unirrigated tract in which conditions approximated to those within the Canal area prior to irrigation. Ascertain the incidence per acre of the new rates on the occupied area in this tract in a normal year and apply it to the occupied area of the irrigated tract with a correction for the accelerated increase in the latter that can be determined by an examination of Report Statement 1. If it is considered suitable a credit at, say, half the normal scale may be given to land revenue in respect of the extension of occupied area in excess of the proportion reached in the tract selected for comparison.

11. I have not met cases of the Deputy Commissioner exercising his powers under Chapter IX, Part B, Land Records Manual, but I consider that the protection afforded by Chapter XXIII, Settlement Instructions, is adequate. I have usually found however that relatively to the area benefited the amount expended is so small that by the time the new rates come into force no exemption is due. During the present settlement I have received only two applications for exemption. In one of these cases a certificate will issue. In the other the expenditure had already been recouped.

B.—Settlement Department.

13. It is possible that assessments could be adopted more closely to local circumstances by a greater differentiation of tracts of main kinds than is usual at present. If we differentiate however we must be able to support our differentiation by the statistics and the danger is that by narrowing the field of the statistics abnormal figures may carry undue weight. As regards differentiation of main kinds it is usual to separate irrigated paddy land from *mogaung* paddy land. This differentiation is perfectly justifiable if the irrigation is of such a nature as to render the crop comparatively secure. When the irrigation is far from reliable however and when the so-called *mogaung* paddy land depends for its water-supply partly on the run-off from adjoining land it should be possible to classify all the land in one series thus simplifying the work of assessment without any unfairness in distributing the demand.

I have little experience of dry land classification, but I should prefer if possible to tract for differences in geological formation rather than to form separate main kinds for them. In the formation

of numerous main kinds there is the danger that Settlement and Land Records work already sufficiently expensive will be still further complicated without any very substantial gain in accuracy. When there is a wide margin between the highest and lowest rate it is desirable if possible to increase the number of classes beyond the three classes into which local opinion can generally divide its land. The difficulty is that this is generally beyond the capacity of our classifiers and *thamadis* who are liable to be confused by a long series of classes. Once the classification has been done by the Inspector and *thamadis* it should be possible however for the Assistant Settlement Officer to cut out the best of the first class land and the worst of the third class land. This will give five classes, but it is only a partial solution of the difficulty as it is usually in the middle class that the greatest variations are found.

14 Office Form J shows the result of the proposed rates with reference to village tracts and kwins. But we have no means of proving by statistics whether the new rates for the particular kwins or villages are justified or not. In the circumstances consideration of the suitability of the rates with respect to individual villages seems hardly possible. The provision for temporary rebates to prevent sudden enhancement should give adequate protection I think. When the absolute increase as opposed to the percentage increase in any village-tract is so large as to be likely to cause cultivators to reduce their standard of living it would be prudent to limit the enhancements to periodical increments of 25 per cent. Such cases would however be rare.

15. It is most important that any one who objects to the classification of his land should be heard, for it is on a sound classification that the success of the settlement will depend. The time to hear objections is when the Assistant Settlement Officer checks the classification of the kwin. It is the usual practice to call all interested in the land to the Section Officer's camp for the purpose of checking the statistics in F.F. 2, 3 and 4. As each man is examined he should be informed how his land has been classified in the preliminary classification by the Inspector and informed that it is open to him to accompany the Assistant Settlement Officer to the kwin when he checks it and to state the ground for his objection on the land. Further it must be insisted, that the Inspector should make the *thamadis* understand where his classification does not agree with theirs and his reason for not accepting their classification. This does not cover the case where classification is raised by the Assistant Settlement Officer at his inspection. The *thamadis* must be informed of this also and it is open to them or the owner of the land to appeal to the Settlement Officer when he is checking kwins in the neighbourhood.

As far as my experience goes, objections to areas are unusual. The cultivator does not know whether the area entered in his tax-ticket is right or wrong. Though in Lower Burma when the assessment is in the occupied area he is quick to notice any alteration in the area. In the Akyab District where Land Records work was poor, errors in areas were fairly common, but the cultivators were not aware of the errors until they were pointed out. In Shwebo District errors

are uncommon as they should be. I do not think that any good purpose will be served by calling for objections to areas. If the assessment is by acre rates and the soil classification is accepted it is difficult to see how objections by individuals can be entertained. It is a case for altering the rates on the tract as a whole. As a Settlement Officer I should like to have my proposals intelligently discussed by representatives of all the tracts in the district before finally submitting them. There are two difficulties however. In the first place there is no machinery for securing representative spokesmen for the various tracts. This difficulty might be avoided by nominating one or two of the more intelligent *thamadis* met with in each tract. The second difficulty is much more serious. The tract representatives would be acquainted with conditions and the standard of classification adopted in their own tract, but they would have only a superficial knowledge of conditions in distant tracts and would know nothing of the most important factor—the standard of classification followed. In spite of these drawbacks however it is possible that useful criticism might be forthcoming. The scheme is I think worth trying.

16. Rents and land values provide a useful test of the assessable capacity of the tract. When rents and land values are advancing there is usually a case for enhancement of assessment that should be reflected in the net produce calculation. The other matters referred to in paragraph 40 give assistance in deciding where it is necessary to alter the assessment fraction as between tract and tract. As far as I am aware no independent check of the data has so far been attempted. Examinees are however required to produce documents when such exist.

Statistics of rents, sales and mortgages are ordinarily very helpful in soil classification and they should be in the hands of the soil classifier when he classifies the kwin. In Shwebo District however they are of very little use. Sales are uncommon. Mortgages are almost all usufructuary mortgages which require careful scrutiny before they can be utilised as a test of comparative value. They may approach the full value of the land or they may represent a small loan which the owner of the land hopes to repay at an early date. Rents are all share produce rents. In some places the fraction varies with the quality of the land or more usually with distance from the village. Elsewhere usually where there is pressure on the land the fraction is the same for all land, good, bad and indifferent. The time and money spent on the collection and compilation of these share produce rent statistics is, in my opinion, out of all proportion to their value as an aid to assessment. As I have already pointed out we can calculate the rental value for one year only and in a district where cultivation is precarious, one year's figures are useless. The average acre rent according to assumed outturns (Report Statement 10, column 7) provides no independent check on the assessment proposals.

17. In districts which have long been fully occupied there should be little need for altering primary tracts at revision settlement, and unless it is clear that the original tracting is fundamentally wrong it should be interfered with as little as possible. Price tracts cannot be expected to be so permanent in a province where much remains to be

done in improving communications. If primary tracts are allowed to stand the necessity for changes in the soil classification will be reduced. A permanent classification is desirable if it fits the facts, but if the facts change it is inequitable to maintain the old classification. In the case of paddy land in Upper Burma the fertility and security of land does alter. Land formerly liable to flooding rises in level, while other land formerly secure is rendered precarious by a river raising its bed. There is little land that depends entirely on direct rain fall. Lines of drainage both outside and within the cultivated area alter and the extension of the cultivation of dry crops in the neighbourhood reduces the supply of water available for the paddy land below. Whether this is true of the paddy plains in Lower Burma I am unable to say. It was certainly true in Akyab District, but there, one was everywhere faced by the problem of flooding by salt water.

18. The revised procedure suggested has many advantages. It enables the Settlement Officer to start work with a sound knowledge of the district. In this respect it resembles the Meiktila Settlement. In the second place by fixing authoritatively at an early stage the amount of an enhancement to be taken it enables the Settlement Officer to make a fair distribution of the demand. The present arrangement whereby the balance of the rates as between tract and tract is frequently upset after the submission of the report is unsatisfactory.

As regards the details of the scheme I do not think they are workable, and they will certainly make settlement even more expensive than it is now. It will mean an increase in the number of Assistant Settlement Officers employed. The forward sections engaged in collection of statistics will require supervision and there is a limit to the number of kwins that the other Assistant Settlement Officer engaged on soil classification can check in a season. The time of the Settlement Officer will be largely occupied with the writing of annual reports and the hearing of appeals, whereas he should be supervising the work of his subordinates in the field and acquainting himself with the soil classification and with the meaning of the statistics that are being collected by the staff.

The best plan to adopt is I think something on the lines of what was done in Mergui last year. The Settlement Officer should be given a few clerks to tabulate Land Records statistics—Report Statements 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and 14 and should be given a preliminary year in the district to prepare a reliable forecast. When orders have been passed on his recommendations he will proceed on the ordinary lines. I do not think much is to be gained by the procedure for raising objections to the rates. By the vast majority of those affected the incidence of the new assessment rates will be understood only after they have actually been applied. Although I hold that competent criticism of the rates cannot be expected from the assesseses, I would not imply that the Settlement Officer is infallible. He is a fortunate Settlement Officer who cannot recollect mistakes made. Instead of calling for objections before the rates are applied, however, arrangements should be made to place the *ex*-Settlement Officer in charge of the Revenue Administration of the district he has settled for two or three years after the new rates come into force. If in the

light of the experience gained in applying the rates any further re-adjustment seems necessary recommendations that will be of some value can be submitted. I am not in favour of making an examination of titles at Revision Settlement. The proceedings would often be *ex-parte*, and usually it would be found that the matter in dispute is one for settlement in a Civil Court.

D.—Executive Department.

24. In the Canal areas in Shwebo District there is I think some dissatisfaction with the working of the remission rules. It is the proviso to Direction 134, Land Revenue Manual, requiring that the crop must not be removed from the ground before inspection by the Township Officer that causes the difficulty. In this district this is also held to apply to inspection by the Canal Officer. The result is that by the time the Township Officer and the Canal Officer have made their inspections the crop has become still further damaged by being allowed to become overripe. Admittedly a satisfactory estimate cannot be framed unless the crop is on the ground, but if the remission system is to satisfy assessee's either special measures must be taken to expedite inspection or the proviso regarding the removal of crops must be relaxed. At present it is the practice to draft in as special Remission Officers, inexperienced Myoòks who can have only very hazv ideas about outturns. I am unable to suggest any better solution as Settlement and Land Records Inspectors who are qualified to perform these duties are fully occupied in their own departments at that season. Double inspections by Revenue and Irrigation Officers should be unnecessary and ought to be abandoned if it delays prompt action in remission proceedings. It is of the utmost importance that the remission be noted before the tax-ticket leaves the *Akunwun's* office in the first instance, otherwise there is much unnecessary trouble and delay over refunds.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. The statistics as now recorded at Settlement are most useful to those who have had a settlement training, who understand the meaning of the figures and where to look for the information they require. That they are of much use to others I very much doubt.

37. I have noted elsewhere my opinion that statistics of share produce rents in precarious tracts might well be omitted at Settlement. I doubt whether the results justify the vast amount of labour expended on the *thathameda* enquiry, but I have had no previous experience of *thathameda* assessment. One of the difficulties is that prices vary greatly from year to year and as statistics cannot be recorded over the whole district in one year there is no just proportion between tracts for which enquiries are held in different years. This same consideration however vitiates most of our statistics especially at the present time.

V.—Organization.

48. In this party we use the Land Records maps of the current year and accept the holding marking and crop-marking, except for the cost of cultivation enquiry for which crop marking and holding boundaries and areas are specially checked. This system was introduced at the Pysinmana Settlement I think. It causes some difficulty in the opening weeks of the field season when both settlement clerks and revenue surveyors wish to use the maps, but it saves much labour in copying maps. Revenue Surveyors should I think assist in the revision of area statements. My predecessor considered that the area statements were sufficiently accurate to be accepted without check. I do not think so and am checking them, but I was unable to obtain the assistance of the revenue surveyors during the recess as they were fully employed preparing for Census work. They were supplied with an errata statement showing corrections made by the Settlement Party in its copy of the area statement. This is not so satisfactory however as having the corrections made in both copies of the area statement at the same time and for this the presence of the revenue surveyor is necessary.

VI.—Special Areas.

51. When the salary of the revenue surveyor amounts to something like 25 per cent. of the average land revenue demand as it does in certain parts of this district it is obvious that the ordinary system is unsuitable. An assessment on cropped area will not simplify matters where the root of the trouble is the scattered nature of the cultivation. Similarly an assessment on the occupied area would not help much if it meant an annual visit. The solution lies either in lump sum assessment or in a reversion to *thathameda*. The latter has the advantage that it follows the person and not the land, so that where the cultivation contracts or expands owing to the movements of individuals those left behind do not suffer. On the other hand difficulties will arise when cultivators reside in regularly assessed tracts and work land in special areas. I have no experience of either system in operation, but I feel sure that a departure from the present system will cause considerable dissatisfaction unless it is accompanied by a substantial reduction in the average revenue now collected. Those who object most strongly are those who will be called upon to perform the duties of the *thamadis*. Quite naturally they are unwilling to incur the odium of their fellow villagers. Assessment of the present tax on non-agricultural income tends to be uniform throughout the village and there is some danger that the same procedure would be followed in distributing the commuted land revenue, but detailed information regarding the working of the system in the tracts to which it has been applied is required before it is extended further. If the system is applied, however, I can see no reason why the State should appropriate any part of the saving effected by transferring the work of distributing the demand from its employees to the assesseees themselves. When the saving is large and the consequent reduction in the demand in an average year substantial, dissatisfaction with the system in its early years would probably be allayed.

Mr. F. W. Martin.

Officiating Inspector-General of Registration, Burma.

II.—The Register of Holdings as a Legal Document.

The Register of Holdings is expected to show as far as possible the true legal owner of the land and not any man who puts forward a *prima facie* claim to be the owner. With this end in view, section 608 of the Land Records Manual lays down that names on the Register of Holdings should not be altered unless a report is received from the parties. Also under Direction 18 of the Burma Registration of Deeds Manual (1914) the Registration Department is bound to report all transfers effected by registered deeds in its offices. In the same way are Civil Courts obliged to report changes of ownership in respect of surveyed lands effected by judicial orders to Sub-Registrars and Superintendents of Land Records in Form Civil 96 under Rules 21, 22 and 23 of Order XX of the Civil Procedure Code.

But several causes have contributed to keep the Register of Holdings an unreliable guide to determine the legal owner of any piece of surveyed land at present. In the first place reports were received from time to time by the Financial Commissioner from the Commissioners of Divisions that the Civil Courts often failed to carry out the instructions contained in Rule 21 of Order XX with regard to sending certificates of decrees to Sub-Registrars and Revenue Surveyors. On the other hand it may be noted that Direction 18 of the Registration Manual is more strictly followed. The Sub-Registrars send regularly memoranda of changes of title of immoveable property consequent on transfers by sale, mortgage, redemption or foreclosure to Revenue Surveyors in whose jurisdiction the land is situate, and in the few cases in which they were delayed, the Inspector-General of Registration in the course of his tours of inspection last year, drew the attention of Registering Officers to this important particular and ordered their immediate submission to the Revenue authorities. In this connection I would bring to notice that considerable delay is experienced by the Registering Officers in transmitting the memoranda to, and receiving the acknowledgments from, the Revenue Surveyors. I would suggest that the Committee might devise better arrangements for—

- (a) the delivery of memoranda to Revenue Surveyors;
- (b) the speedier acknowledgment of receipt of these memoranda by Revenue Surveyors.

I would further observe that registration of immoveable property in Burma is effected subject to various limitations. Section 17 (2) (vii) of the Registration Act, 1908, exempts from registration grants of immoveable property by Government. In the same way in the case of immoveable property of the value of below Rs. 100 it is left to the option of the purchaser whether to purchase it on a registered deed or not, under section 17 (1) of the Act. Further Direction 35 of the Registration Manual forbids the Registering Officer to institute enquiries into the title to property which a document presented to

him for registration purports to transfer. The explanation attached thereto reads as follows:—

“ A Sub-Registrar who refused to register a document because he had ascertained that the land transferred stood in the Land Records Registers in the names of persons who were not parties to the document, acted wrongly in doing so.”

Moreover, only sections 54, 59, 107, 117, 118 and 123 of the Transfer of Property Act are enforced throughout Burma at present; but it has been notified by the Local Government that the Act would be extended in its entirety throughout the province of Burma with the exception of a few hill tracts from the beginning of next year.

Lastly I would add that registered deeds are not used as frequently as they ought to be, and it would not be too much to say that the number of registered deeds concerning alienations of land ought to be at least 50 per cent. greater than it is.

At present A sells his land to B for Rs. 1,000 without a registered deed. They trust each other and do not want to spend money or time on registration. The chances of B having to prove his claim against A are very small and therefore he takes the risk light-heartedly. A report to the Revenue Surveyor will ensure that his name is duly entered in the Land Records Registers and all is plain sailing. Registered documents are therefore only used where the parties do not trust one another.

The small number of documents registered, I would attribute to the existing illogical methods of the Land Records System. To illustrate: the Revenue Surveyor is not allowed under paragraph 608 of the Land Records Manual to alter any names in the Register of Holdings without a report from the parties. On the other hand he may alter a name on a mere report where a registered deed is required by law.

Secondly, the law requires that certain classes of transfer must be made by registered deed. Therefore they are not valid without registration. But this is not only troublesome, it costs money and cannot be effected without a somewhat searching enquiry into the circumstances attending the transfer. There is however at present an easy alternative. An obliging Revenue Surveyor is allowed to alter the name in the Revenue Records without a more careful enquiry than he may deem necessary. This is simple and even if the Revenue Surveyor may not be obliging for nothing, yet the saving in fees and in trouble makes it well worth while to go to the Surveyor rather than to the Registration Office, provided that the transfer is unlikely to be disputed in Court. Given two alternatives, one legal but complicated and the other permitted (if not exactly legal) but easy, there is no possible doubt that the latter method will frequently be employed in cases where the former should be.

To remedy these defects, I would suggest it should be laid down that where the law requires a registered document it is illegal to change the name on a mere report or record alienation without a registered document. If the proposal is accepted this will do away incidentally, with the present system by which alienations have to be reported direct to the Revenue Surveyor and indirectly through the Registration Office. Since there is no legal necessity for this, I am

of opinion that where a transfer has to be made by registered document, report to the Revenue Surveyor should be totally prohibited to avoid double reporting and also the risk of contradictory reports.

Under the circumstances detailed above, I would strongly urge upon the Committee to decide to bring up to date the Register of Holdings at resettlement, and have the register so revised attested, in view particularly of the extension of the Transfer of Property Act *in toto* throughout Burma from 1st January 1922.

As regards the introduction of the Torrens' System into Burma, I give below an extract of the letter addressed to the Financial Commissioner by Mr. Clayton, Registrar of Co-operative Societies, regarding Resolution No. 5 passed by the Third Provincial Agricultural and Co-operative Conference held at Mandalay in August 1915 and also the views of Mr. H. Thompson, the then Financial Commissioner, on the point.

Mr. Clayton wrote :—

"The advantages of the Torrens' System of Registration of titles in land have been brought to the notice of the Financial Commissioner on several occasions and the fact that without outside suggestion the Provincial Agricultural and Co-operative Conference should have passed a resolution in favour of such a system being adopted in Burma appears to me to be worthy of note and consideration with reference to the proposed Land Bill which is understood to be at present under preparation."

Mr. H. Thompson replied as follows:—

"The Torrens' System of registration of titles in land has been held hitherto to be unsuited to conditions in India, but it may be found advisable to re-examine the question afresh when the land laws of the province are next under revision. The introduction of such a system would, however, involve material changes in the existing law and would create numerous and serious difficulties which would need to be carefully examined before the change of system could be advocated."

Lastly as regards the question whether uncertified copies of maps are accepted in evidence in Subordinate Civil Courts, I would invite your attention to Direction 49 on pages 125 and 126 of the Burma Registration of Deeds Manual and answer the query in the negative.

Maung Tha Ban, K.S.M., B.C.S.

Deputy Commissioner, Sandoway.

I.—The Revenue System in its Fiscal Aspect.

A—The Basis and Standard of Assessment.

1. If large fields of average fertility of each class whose areas are accurately known are intelligently chosen and due allowances are made for dryage, etc., there seems no reason why crop measurements should not form a safe basis for estimating outturns.

Records of prices in normal years in the locality *minus* cost of carriage to a market, landing place or anchorage, should form a safe basis for valuing produce.

Out-of-pocket expenditure on cultivation, *plus* fair interest on it, *plus* allowance for the labour, if any, of the cultivator and his family, *plus* an allowance for the cattle owned by the cultivator and used in ploughing, threshing and carting, *plus* depreciation of implements used in ploughing and conveying the implements and produce, should give a fairly reliable basis for reckoning cost of cultivation. Allowances based on what are prevailing should be made for the labour of the cultivator and his family and for his plough cattle.

3. In my opinion rent should not be used as a guide towards assessment. Tenants of greedy landlords generally are compelled to work at exorbitant rents, because their circumstances would not permit of their picking and choosing or giving up of tenancies.

4. and 5. As circumstances vary with localities I think the present system and present variations are preferable to fixed assessments.

B.—Settlement Department.

13. There is no doubt that greater differentiation of the kind suggested would tend to render assessments more fair than at present, but it can be carried to a limited extent only for obvious reasons.

11. The provisions in Chapter IX, Part B, for protecting a cultivator from undue enhancement of the revenue on account of improvement he has carried out appear fairly satisfactory.

12. The information given in the tax-ticket is not adequate. Owner and his residence and tenant, if any, and his residence should be given. Areas on which revenue has been remitted or fallow rate allowed should also be shown in the ticket.

C.—Land Records.

21. I doubt whether the suggested substitution of a receipt book, to be kept by the cultivator, for the tax receipt is at all feasible. The objections to the substitution appear many and some of them almost unsurmountable. Who is to make the entries in the receipt book and how are the books to be collected and returned? What is there to prevent fraudulent exactions being made? How are losses of receipt books to be prevented?

D.—Executive Department.

22. (i) Verification of assessment may be considered fairly adequate only as regards the rates of assessment.

(ii) No.

23. No. The present procedure is too elaborate and labour absorbing to be satisfactory. A greater amount of trust should be placed on lower officials such as the revenue surveyors by giving them a greater amount of discretion in the matter of reducing demands for partial and total failures. If the revenue surveyor's work is supervised by the Inspector and the Superintendent and he is required to submit a list of holdings in respect of which he has made up his mind to reduce the demand there should not be much scope for dishonest practices.

24. I think a little more liberal treatment of fallows is advisable, be the owner of the land of the landlord class or not. To attempt to divert land from the landlord class by repressive legislation is to attempt an extremely difficult task. Its only resultant is depreciation in the value of holdings. As a rule persons become landlords against their will.

25. The actual procedure depends much on the Township Officer. A conscientious officer tries his best to inform the absentee owner of the demand and the pending action before he sells or resumes any holding, but he is not always much encouraged in this by his superiors who as a rule suffer from a taint of what I may call landlordphobia. A Township Officer generally sells a piece of land whenever there is a buyer or resumes it when there is no bid, though sale of land in respect of which land-holders' rights have not accrued appears not contemplated in the existing rules. He, as a rule, is impatient of rules and technicalities. This is due to his want of time. He is, by the majority of his immediate superiors, expected to go in for quantity rather than quality.

26. No. Headmen as a rule do not apply for remission if the assessee, as well as the land, are traceable. They however apply to the Township Officer for process. The Township Officer first tries to collect the tax personally, if convenient, if not he issues process.

II.—The Register of Holdings as a Legal Document.

27. Only to a limited extent. For rights as against Government it is relied upon. It is fairly reliable as regards possession but not as regards ownership.

30. By verbal reports of both parties to the transfer, by memos. from registration office and certificate of sales from the Revenue and Civil Courts. The only way of improving record of mutations is by strict enforcement of section 22A of the Lower Burma Land and Revenue Act.

31. In the case of succession the revenue surveyor should be required to make enquiries and record them. He should be empowered to send for parties to make these enquiries. In the case of redemption section 22A could be applied.

To record only the cultivator in occupation would, I think, be a retrograde step. Every effort should be made to make the register of holdings a reliable and permanent record of rights. It would indeed be desirable to supplement the permanent record of rights with such a system as the Torrens in Australia. This, owing to the security secured to buyers, would raise the value of all agricultural and other land.

32 (a) Owing to a limited extent in this district, *i.e.*, about 10 per cent.

(b) Appears fairly complete.

33. Only when the opposite party does not dispute their correctness or when they have remained unchanged for a long time. The practice of accepting uncertified copies in evidence is gradually dying and is now not so common as before. In effecting partitions of land under decrees the Land Records staff is generally made use of. I see

no objection to this practice as it is generally under the supervision of the Township Officer.

34. Not to any great extent.

V.—Organization.

45. Present arrangement appears fairly satisfactory.

46. As mutations are generally effected in the field season, the bunching of revenue surveyors at township headquarters would not materially prejudice this work.

47. More would no doubt be better, but 1 to 9 is not too inadequate.

49. I doubt whether a less highly trained staff of village surveyors would prove satisfactory, unless the fixed assessment for a term of years is adopted in place of the present system.

50. (a) A training on the lines laid down in paragraph 78 of the draft Land Records Manual appears sufficient for apprentices and raw Inspectors. A training for about six months in the open season in the case of I.C.S., B.C.S. and S.C.S. officers would be better. The three months' training now given is, in my opinion, inadequate to give a thorough insight into the internal working of the Land Records Department.

Maung Shwe Tha, K.S.M., B.C.S.

Officiating Deputy Commissioner, Sagaing.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

4. The present assessment in Upper Burma is never a stable factor and chiefly depends on the activity or otherwise of the revenue surveyor. It is cumbersome and is entirely left to the discretion of the revenue surveyors whose work is not always subjected to sufficient supervision. It would therefore be desirable to adopt the system of fixed assessment in the case of main crops though it would be impossible to adopt the same system in the case of *Kaing Kyun* crops. Of course if the system of fixed assessment be enforced, a very fair average of the last one or two decades will have to be taken after due consideration has been paid to the uncertain and uneven distribution of rainfall in the district and the rates fixed on them. In the case of crop failures and fallows, remission should be based on the system now in force.

5. If the present fluctuating assessment system be maintained, it is desirable to retain the present system exempting from assessment, when the outturn is less than one-quarter of the average.

6. The assessment on special crops grown on impermanent land, e.g. chillies, onions, tobacco, etc., should be based on the crops rather than on the land.

11. Yes the present system seems to be quite satisfactory.

12. The information given in the tax-ticket is not inadequate but I think one more column shewing the total area of the holding should

be provided in order to enable the tax-payer to know how much of his holding has been assessed to Land Revenue.

C.—Land Records.

20. After consulting with the views of my Superintendent of Land Records, I consider that the revised Land Records forms with their connected instructions are entirely suitable and afford much relief to the revenue surveyor. As regards the direct report of alienations in Register I, I am of the opinion that the revenue surveyor should supply the parties with a receipt for the direct report so that the parties concerned may have some record in their hands to refer to.

21. It seems not feasible to substitute a receipt book, to be kept with the cultivator, in place of an annual tax-ticket, in view of the fact that the standard of education and mode of living of the cultivators do not permit the proper upkeep and the custody of their receipt books. On the other hand the practice will be open to much fraud, both on the part of the cultivators and headmen as to the entries in the book.

D.—Executive Department.

22. The assessment rolls and tax-tickets are not sufficiently checked at present.

23. The present rules are liable to fraud and often cause considerable inconvenience to the cultivators

24. The answer to the above holds good in this.

25. Absentee owners of the land mostly do not get adequate notice before their land is resumed or sold, but in Upper Burma no difficulty is experienced in the recovery of taxes as the owners or their tenants usually pay up the revenue due and in the case of non-resident landholders, whose addresses are known, the tax is recovered through the collector in whose district the owner resides.

The Township Officer ascertains the information as to whether the resumption or sale is appropriate from the headman concerned. But the general procedure in Upper Burma is to resume in the case of State land and to sell in the case of *Bobabaing*. In Lower Burma, lands in which landholder's right have not been acquired are resumed while those which have, are sold.

26. It is not the usual practice the headmen to apply for remission of land revenue which cannot be collected by him, but they generally apply for processes in the Township Officer's office for the recovery of such outstanding amounts.

II.—Register of Holdings as a Legal Document.

29. I hardly think that there is any necessity for this but perhaps a revision of the register of holdings would eliminate all the inaccuracies. If the register be revised, I consider that it should be attested.

30. Failure to report changes is frequent but not general and is due mostly to the indifference on the part of the cultivators and not due to the ignorance of the laws.

32. (a) My Superintendent of Land Records is correct when he says that a scrutiny of the Register VII foils in the Surveyors' offices shew that failure to carry out registration is somewhat general and improvement is somewhat nullified by non-compliance with paragraph 613 of the Land Records Manual.

(b) Very often the memoranda are prepared from old tax receipts which refer to previous assessed areas only. Up-to-date maps and extracts from registers should be insisted upon, if possible, when transactions are registered.

33. Registers and maps of the Land Records are not regarded as wholly conclusive evidence in Civil Courts (*vide* Upper Burma Rulings, *Mi Se Baw and 2 vs. Mi Min Ya and 9, 1907-09, Civil Evidence, page 19*).

Uncertified copies of maps are not accepted as evidence in Subordinate Civil Courts. Under circular Memorandum No. 8 of 1914 of the Court of the Judicial Commissioner, Upper Burma, certified copies are always insisted upon.

34. The deficiencies in the present system do not result in serious administrative difficulties nor do they hamper the collection of Revenue.

IV.—Survey.

As regards the questions under this head I would refer to the answers given by my Superintendent of Land Records. They are given below in his own words :—

40. "As mentioned in answers to question 50 the regular staff require systematic training. At present they are incompetent and revision survey work carried out by them is never better than second class work. Owing to their not having been systematically trained, they dislike survey work and the Superintendent is placed in the unenviable position of having to turn out 400 occupied acres of survey work per surveyor. The condition of survey work never improves and in fact becomes more inaccurate yearly owing to erroneous replacements under paragraph 739 of the Manual. The original Survey of India traverse survey work has been hopelessly mutilated and instead of working from a whole to the part, the present system is to work up to the whole by commencing with the parts."

41. "In my opinion a single holding should include the whole of any continuous parcel of land held by one man, irrespective of main kinds and soil classes. This simplifies work on the maps and does not throw the work into confusion in the registers nor does it add to work in the registers."

42. "There should be no duplication of work if possible. The maps should shew the holdings, owners' names, soil classes and main kind and the outturn per acre for the various crops if the present fluctuating assessments are to be maintained. All other information should go into the registers. The surveyors and inspecting officers should be required to sign and date the map whenever work is done on it or the map is inspected, but there is no necessity for the inspecting officers to write down all the numbers of holdings inspected on the map. If they initialled every holding inspected in the registers and wrote inspection notes, these should suffice. The detailing of holding

numbers of the holdings inspected on the maps and in inspection notes is absurd and serves no useful purpose."

43. "In my opinion each distinct field boundary which can be conveniently plotted on the 16" or 64" scale for rural and urban areas should be plotted, but it is also possible to resort to holding surveys in certain urban areas when the survey of houses can be conveniently omitted."

V.—Organization.

45. The present relations between the Land Records Service and the Executive Department make for the most efficient working of the Land Records System.

46. My Superintendent of Land Records thinks that the surveyors should have their headquarters at the inspectors' headquarters and says that it "permits of more careful supervision by the Inspector and the Superintendent and also avoids unnecessary delay in the preparation of Annual Reports. Government should either build houses for them (including the Inspectors) and charge them house rent or give them a house rent allowance if they had to keep up their offices in their dwelling houses. It would be better appreciated from all points if an office were erected for the inspector and his surveyors to work in. The building to be one which is safe from fire and unauthorised entrance." I think it may be far better if they are stationed at Township Headquarters rather than the headquarters of the inspectors if we only look to the better supervision of the work of the surveyors. My Superintendent goes on to say "The record of mutations would in no way be prejudiced, for changes could be recorded when the surveyors visit their kwins and villages." I am not sure if this would be troublesome to the cultivators. However they should be able to report the alienations of land as the surveyors would be visiting their kwins during the season as stated by the Superintendent.

47. I am of opinion that the present proportion of inspectors to revenue surveyors is adequate.

49. I doubt if it would be feasible to entrust the work of the revenue surveyors to a less highly trained staff of village surveyors. Even under the present system I do not think there is any harm in allotting some of the revenue functions of the Township Officers to the inspectors.

50. (a) and (b).

My Superintendent of Land Records writes: "I have no experience of survey teachers. Revenue surveyors and inspectors of Land Records require to be systematically trained in the use of the theodolite, so far as it relates to traversing and the necessary computations, and also in general work required of an inspector and a surveyor. Paragraphs 99 to 105 of the Burma Land Records Manual are never thoroughly complied with, for the simple reason that few, if any, inspectors or superintendents have the time to comply with them, and also to the fact that the supply of theodolites to each district is inadequate.

"The present arrangements for the training of members of the Indian Civil Service, the Burma Civil Service and the Subordinate

Civil Service should not include theodolite or survey training, for they are unable to make good use of this training later on and, in fact, no occasion arises for them to use the plane table or theodolite. They should only be required to learn the working of the revenue systems in maps and registers and how to inspect them and point out inaccuracies. Theodolite and plane table survey work is easily forgotten unless thoroughly acquired and put into practice frequently. The omission of the study in surveying would give them more time to obtain a thorough knowledge of records and statistics which would be of invaluable help throughout their service."

But in the case of 50 (b) I am of the opinion that the present arrangements are quite satisfactory and no changes should be carried out eliminating the training in actual survey work which is really necessary in checking assessments, maps and others.

Maung Shwe Zan, A.T.M., B.C.S.

Officiating Deputy Commissioner, Thaton.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Crop measurements are a safe basis for estimating outturns if the fields are carefully selected according to paragraph 4 of Circular No. 1 of 1916 issued by the Director of Agriculture.

The results obtained for this district have been fairly consistent. Records of prices are a fairly safe basis for valuing produce if the township headquarters are central, as most township headquarters are.

Burmans are as a rule extravagant, but they do not exaggerate their expenditure and a careful enquiry on the part of the Settlement Officer, as to the expenditure on necessaries and luxuries, should be a safe guide for reckoning cost of cultivation. I do not think Settlement Officers are over-liberal in calculating the actual cost of cultivation.

I cannot think of a more satisfactory basis than that of net produce, for a just and equitable assessment.

2. If the net produce basis is maintained, $\frac{1}{3}$ for Upper Burma and $\frac{1}{4}$ for Lower Burma would be suitable proportions (paragraph 29, Chapter II, Settlement Instructions). In my opinion the standard proportion of net produce to be taken by the State as $\frac{1}{3}$ is far too heavy on the poor cultivators.

3. As rents bear a relation to the value of the land, it may be used as a guide towards assessments, subject to the law of diminishing return.

4. The existing assessment is fluctuating, but it is desirable to substitute fixed assessments with proportionately reduced rates over settled areas, since the people would appreciate the reduction of rates and the system would have the effect of stimulating effort to cultivate a maximum area. It would also relieve the Land Records Staff considerably.

5. If fluctuating assessments are maintained it is not desirable to do away with the present difference between notified and unnotified areas.

6. The present system of fixing crop rates for onions, tobacco, etc., is quite fair and suitable.

7. It is but fair to make an allowance for factors which are likely to cause a shortage of crop, especially as the people in remote areas pay the full revenue rather than take the trouble to go to the Township Officer for remission.

8. The provisions in paragraphs 433 to 439 of the new Land Records Manual are sufficient and seem quite suitable.

9. The present period of 20 years seems the most suitable. A shorter period would worry the people unduly and a longer period would not make the assessment elastic enough.

10. The land if irrigated and made fit for wet cultivation should be still assessed at the same rate as other similar lands suitable for such cultivation without artificial aid. The water rate is a share of the difference between the value of dry and wet produce, *plus* the cost of import of the wet produce.

11. The arrangements for protecting a cultivator against undue enhancement of revenue for improving land are quite satisfactory and adequate. Wider publicity might perhaps be given to the public and cultivators, in general very few of whom know of the special orders.

12. The information now given in the tax-ticket is inadequate. It would be adequate if land could be shown by soil classes and rates. At present soil classes are shown by section writers; very often when there is only one class of paddy land, most section writers omit the class. Columns should be printed for classes and rates.

B.—Settlement Department.

13. No.

14. No.

15. Proclamation through headmen of each assessment three months before the soil classes are confirmed, and rates framed, for objections at a fixed place in the most central place of the tract should be given; and objections heard and disposed of by the Assistant Settlement Officer. A summary record for each tract should be prepared and compiled by the Settlement Officer.

19. In my opinion the Settlement Commissioner should be entirely responsible, while the control exercised by the Financial Commissioner should be limited to a responsibility for fiscal results.

C.—Land Records.

20. My opinion has already been submitted previously.

21. It is not desirable to substitute for the annual tax-tickets a receipt book to be kept by the cultivator, for not all owners are cultivators, nor do they reside permanently in one place, apart from the changes of possession by sale, mortgage, etc., especially when not all such transactions are reported or registered. It would lead to complications, sooner or later.

D.—Executive Department.

22. Verification of the assessment is adequate, and the tax-tickets and assessment rolls checked as far as possible.

23. Yes.

24. Yes.

25. Owners as a rule receive adequate notice of the processes for the recovery or remission of revenue before land is resumed or sold, except in a few cases of absentee owners.

At present the Township Officer refers to the Superintendent of Land Records. This takes up a good deal of time. In future, *i.e.*, two years hence, the Surveyor will have 12 years' records in hand.

26. Headmen apply for recovery of arrears and the Township Officer remits assessment or recommends remission of irrecoverable revenue.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings as it now stands can be regarded as a record of rights, unless rebutted, and 12 years' record should be sufficient to prove itself if certified by the Record Officer.

28. No summary enquiry is sufficient for this purpose.

29. No.

30. At present transfers of valuable property are generally registered by the educated people and townfolk, but the cultivators in the interior are still slack and will neither register nor report such changes, especially succession, mortgage and redemption. Surveyors report omissions and defaulters are as a rule fined under the Land Revenue Act. No improvement can be suggested.

31. Although the record of mutations is unsatisfactory it would not be advisable to allow the Revenue Surveyor to record the cultivator in occupation, even for purposes of assessment, for it would lead to many law suits.

The Torrens' system, though a very sound one, is doubtful of success in practice without hardship on ignorant people.

32. (a) The provision that every transfer of property above the value of Rs. 100 should be registered is in the majority of cases carried out in towns and large centres of population where the cultivators realize the advantages of registration, but it is still neglected in the interior especially amongst Karens, etc.

(b) The information now furnished to the Land Records Department by Registration Offices is by no means complete or satisfactory. Sometimes certain columns or items which ought to be entered are left out, sometimes holding numbers or names of past years are given, so that the revenue surveyor cannot act on it at once, without a reference to the Record Room at district headquarters. Sometimes land from different surveyors' charges, or from different Inspectors' circles are given in the same memorandum causing confusion and perhaps mistakes. If the holding number of the preceding or current year be entered in documents it would facilitate the work of bringing the maps and registers of holdings up-to-date.

33. Registers and maps of the Land Records Department are largely accepted as reliable in Civil Courts. Subordinate Civil Courts seldom or never accept uncertified copies of maps in evidence. The Land Records Department at present only carry out Civil decrees affecting land.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

36. No.

37. No.

38. Yes.

39. Special enquiries should be instituted only for information which is not available.

IV.—Survey.

40. At present the Land Records staff in most districts cannot keep pace with survey changes and the help of the Special Survey Party has to be obtained.

This is objectionable both from the point of view of an outside party working in a district, causing serious dislocation of work, and not getting the necessary help from *thugyis* and cultivators that they should, but also from the fact that the Special Survey Party is only generally called in when the arrears of survey have mounted fairly seriously.

It would be preferable to have a separate survey staff for each district according to its size and need for resurveys, apart from the Land Records staff. This survey staff could do only resurveys from November to May and resurvey recess during the rains. Work could always be found to occupy them throughout the year.

41. The present system seems most suitable. The first alternative proposal seems simpler but it would increase work for the surveyor in writing; while the other, though it would save the revenue surveyor some writing, would be more complicated and liable to more errors with the present class of revenue surveyors.

42. No; the present system should be adhered to. Inspections during the period when Register I and Register II were with the Inspector of Land Records or Superintendent of Land Records for check, would be valueless during an important period when the crops are on the ground.

43. Both field and holding boundaries should be plotted for both embanked and unembanked lands; for without field boundaries collection of statistics would be difficult and inaccurate.

44. Present arrangements for reprinting of maps are satisfactory, but they could be improved, *e.g.*, by the introduction of a separate survey staff as suggested in paragraph (40) above; and also as regards the colour printing of soil class traces. Soil class rates if printed too would be a great advantage.

V.—Organization.

45. The present relations between the Land Records Service and the Executive Department are satisfactory, but it could be improved

by strengthening the position of the Superintendent. The Superintendent of Land Records should, I think, stand to the Deputy Commissioner just like a District Superintendent of Police. This would also improve discipline a great deal. Under present arrangements discipline cannot ever hope to be good. Another improvement would be to grant the Inspector of Land Records and Superintendent of Land Records more revenue powers like Township Officer's and Subdivisional Officer's at present, so that action could be taken direct. At present whatever has to be done has to be reported to the Deputy Commissioner who in turn sends it down through the Subdivisional Officer to the Township Officer and there it ends generally, without action being taken at all. It is not therefore surprising that revenue surveyors are so unwilling to report any breaches.

45. It would be a good improvement to have the subordinate staff at Inspector's headquarters, from the point of view of control, discipline, outturn and check of work. Records of mutations would suffer little, if at all, for the revenue surveyor could accept reports during the field season when on field work.

47. The present proportion of Inspectors to surveyors 1 to 9 is too small; the most suitable proportion would be 1 to 7 or 1 to 6.

48. I have had no experience of settlement work.

49. The work of the Revenue Surveyor should not be entrusted to a less highly trained staff of village surveyors. The present staff should be kept on, with perhaps a larger proportion of Inspectors of Land Records, and further Revenue powers should be given to the Land Records staff, whether the present fluctuating assessment be kept on or a fixed assessment substituted.

50. Present methods of training are quite satisfactory.

VI.—Special Areas.

51 to 53. The present system for tracts outside supplementary survey is quite satisfactory and could not be improved without further expense, which would be unjustifiable.

54 to 56. We have no tracts under lump sum assessments in this district.

57. Cadastral survey should not be extended in advance of occupation, but theodolite survey should be, and permanent survey marks should be kept up properly for cadastral survey to be easily carried out by local staff yearly as cultivation extends.

58. Existing arrangements for the survey of grants, etc., are not satisfactory; not so much for the survey as for the check; potta surveyors by piece work get fees for survey, but Inspectors of Land Records have to check without payment in addition to their ordinary duties.

If Superintendents of Land Records or Deputy Commissioners were empowered to employ a staff of potta surveyors and potta Inspectors as long as the fees deposited were not exceeded it would be far simpler and more satisfactory. At present a potta staff on the monthly system is never asked for, both on account of having to ask

for sanction long beforehand, and because one cannot judge the number of the applications that are going to come in and the size of areas that are going to be applied for beforehand.

Maung San Aung, A.T.M.

Headquarters Assistant, Akyab.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Crop measurement, if done well and proper dryage made, would be a safe basis for estimating outturns. Such measurements done by official supervision is, to my knowledge, generally most perfunctory. The work is considered as an imposition as it exposes them to cold in the morning and evening and to the fierce rays of the sun in the day. The cultivator takes from 10 to 15 days to reap and thresh his crop, whereas the official measurement is hurried through in a day. The allowance at the last settlement for dryage in the district was calculated at 8 per cent. It is difficult to fix a rate because of the fluctuations in rainfall. A rainfall just previous to the flowering would produce a much healthier grain. There was very little rain at the time of flowering this year and it has been ascertained that the depreciation in measurement after only two days' exposure in one of the European mills was as much as 10 per cent. The cultivators, owing to difficulties of communications and other causes and also to delay occasioned by unfavourable prices, are usually unable to dispose of their paddy till after a considerable number of days have elapsed from the time it is ready for sale and consequently the dryage would be greater.

2. Record of prices has no bearing on the value of produce, but it is more or less dependent on the amount of supply and demand. Produce may not be as valuable in itself, but its value nevertheless may soar very high owing to scarcity or other causes. Out-of-pocket expenditure ought certainly to be taken into consideration when reckoning cost of production. Especially in Arakan, where large areas are cultivated by disproportionately scanty population, recourse has to be had to hired labour. During the busy season the latter has to be fed not only on the daily necessities of life but also on luxury such as betel and so on. Huts have also to be built for accommodation. The cultivator and his family also take part in the work and at the same time supervise that of others. For this labour an allowance of at least 10 per cent. of the produce ought to be made.

Regarding the cost of plough cattle in Arakan it varies from 200 baskets to 300 baskets for a pair of hefty buffaloes. These figures are undoubtedly high and arguments put forward on both sides for this amazing condition are certainly worth consideration. The owner maintains that the animals are made to do so much work by the employee that by the time the ploughing season is over and the animals return home they are reduced to mere skeletons and in a short while they die—in almost every case they are unfit to do field work again in subsequent years. So that to safeguard his interest

and to cover the price of his buffaloes in the event of their death, the owner is obliged to raise the cost of the hire. On the other hand, the employee admits that the beasts are taxed beyond their strength and endurance and that normally they cannot possibly be made to plough more than one *doon* of land (6.40 acres). But the cost of their hire is so great that unless he can make them produce much more than a *doon* of land is capable of yielding, he cannot hope to gain any appreciable benefit from their hire. He is therefore obliged to make them plough one and a half *doons* of land instead. Between these opposing arguments nothing has yet been definitely settled. The high death-rate of cattle in Arakan is very largely due to this deplorable state of affairs. If a sumptuary provision could be made prohibiting employees from ploughing more than one *doon* of land and owners from taking more than 20 per cent. of the total yield, much might be done towards solving this most intricate problem. The net produce is not the best basis for assessment for it has often led cultivators to great misery and hardship. These men were originally independent owners, able to maintain themselves with some degree of comfort at least. Their gradual involvement into debt and other attendant misfortunes is a matter of recent history and taxation is the most cogent cause of their present deplorable lot. In assessing them to land revenue greater reliance is apt to be placed on the high prices they obtain in the open market than to the high cost of living, increase of labour wages, absence of improved methods of cultivation, total ignorance of the value of soil manures and the gradual exhaustion of the soil. If a piece of land yielded 800 baskets before, it does so the same or sometimes less now, but at treble the cost of cultivation, so that the value of his land has greatly depreciated. To my mind, taxation should not be based upon produce but on the market value of the land. But if it is still to be dependent on produce a new system ought to be devised. If the net produce basis is maintained the most suitable proportion ought to be not more than one-fifth of such produce. But as items of expenditure vary accordingly in different localities it will be somewhat difficult to arrive at any satisfactory uniformity of incidence for so large an area as Upper or Lower Burma. The land value taxation system, I fancy, would prove more suitable in this respect.

3. I do not think that in Arakan rents can be relied upon either as a basis or a guide towards assessment. Experience here proves that rent is more or less dependent on the amount of land revenue assessed. The landlord as a general rule so adjusts his rent as to leave a small margin of profit after paying the revenue on his land.

B.—Settlement Department.

13. Three fertility soil classes in a *kwins*, if so much can be found, seem all that can be desired. To this it may be added tracts which are frequently liable to salt water floods in Lower Burma or of undulating high lands in the middle of even and extensive *kwins* fed only by rain and are liable to drought, and also those *kwins* which are radically wrong in the soil such as by appearance of salt ammonia (၀၀၀၀၀).

15. Objections to classification, areas, rates of assessment, etc., should, in my opinion, be open to all and they should be entertained as soon as possible after the Inspector has completed his classification as suggested in (IX) of the proposals in the Appendix. A clear day should be fixed soon after the Inspector closed his field work of a kwin. The objections put forward by each should be recorded in a summary way by the Inspector in a separate sheet of paper and his decision on the subject recorded then and there in the village. This, along with other statistics relating to each kwin, submitted to the Assistant Settlement Officer for his orders and, if necessary, the Assistant Settlement Officer will likewise submit his recommendations on questions of importance to the Settlement Officer for disposal.

C.—Land Records.

21. I do not think it is desirable or possible to substitute a receipt book for the annual tax tickets in the cultivator's hands as he would lose it very soon or keep it in such a way that it would get soiled and be useless.

D.—Executive Department.

22. Unlike most parts of Burma where the land can be visited practically throughout the year the rainfall here is very heavy and extends from June to the beginning of October. From this time onwards till the assessment rolls are sent in, the Revenue Surveyors are so very busy in preparing them that an executive officer, who has himself very little time, is rather reluctant to worry them with inspection. The preparation of tax-tickets also has to be hurried through and therefore there is little or no checking whatever. The only remedy, for better verification, possible is the extension of time for collection.

23. Regarding the assessment of fallow rates the matter has been fully discussed in the recent Settlement Report. My own idea is that the majority of the grazing grounds in the district should be abolished and that a certain portion of the land, in proportion to the size of the land, be assessed at privileged rates for the purpose of each land owner grazing his own cattle in his ground without application.

24. I cannot say that in this district the rules are satisfactorily applied because all deserving cases do not and cannot possibly take advantage of the concession owing to bad communications and the depressing nature of the climate and officers concerned are also so much occupied with other work that it is difficult for them to do justice to themselves and to the cultivators in question.

25. It is known to all owners that revenue must be paid in during the month of *Tabaung*. Failure to do so is not due to inadequate notice of demand but because of their inability to pay within the stipulated time. Headmen are reluctant to apply for processes of recovery of arrears for the simple reason that revenue so recovered does not generally carry with it a commission. In the collection of revenue with a view to getting as much commission as possible and also to be on good terms with outside owners, who are usually well-to-do people, they go about from place to place at their own

expense. The main object of Township Officers is to complete their revenue collections before the end of March each year, and whether adequate notice has been given to owners or not is to them only of secondary importance. In cases of sales due to non-payment Township Officers are compelled to adhere to their programme of tours, and in most instances when the land has been sold the processes have not been returned to the Township Officer. He gets them from the process-servers only when he goes back to his headquarters and whether they have been properly served or not the Township Officer is not in a position to say. Several sales therefore become illegal and the only remedy which I see is to extend the collection period. It will thereby prevent him rushing work and give the cultivators more opportunity to get the best price for their crop.

26. When a Township Officer finds arrears of revenue, he insists on the headmen bringing in or goes and gets the tax tickets personally and he forthwith issues the notice, attachment as well as proclamation of sale simultaneously. If the revenue is not paid in the meantime he visits the village on the fixed date and when he has failed to recover the revenue he makes enquiries as to the ownership of the land from the Revenue Surveyor or villagers and then he either sells or resumes it accordingly. The papers in these proceedings are not always complete at the time of sale. Only when the land has been sold and when the officer returns to headquarters he gets together all the papers from the process-servers. The present practice is to allow redemption of auctioned land by the owner within $2\frac{1}{2}$ months from the date of assessment provided he pays 10 per cent. interest on the purchase money. It seems to me that this compensation of 10 per cent. is hardly adequate for the trouble and worry caused to the purchaser and it is not punishment enough to the owner for his apparent indifference or neglect. I would therefore suggest that this compensation of 10 per cent. should be raised to 15 per cent. so as both to satisfy the purchaser for the loss of his newly acquired possession as well as to impose an appreciable penalty on the defaulter. Personally I do not think that the period allowed for redemption by the owner is quite sufficient and it should therefore be changed to that of one clear month from the date of sale.

Maung Chit Kaing, S.C.S.

Township Officer, Twante.

I.—The Revenue System in its Fiscal Aspect.

D.—Executive Department.

22. With regard to the first clause, it appears to be doubtful to me whether it means the verification of the correct rates of assessment or whether that the newly squatted pieces of lands had been correctly assessed. If it means the former, I am of opinion that the present method of verification of the same is adequate. The rate of assessment is according to the classification of the soil. The classification of the soil as determined by the last settlement is clearly shown on every current kwin map. The current kwin map is to be based

on the previous kwin maps. The rates of assessment on each class of land are clearly shown on these maps. Besides, there is a register showing the rates of assessment as determined by the last settlement. A revenue surveyor has to submit his rolls, maps and registers for two years. So the Inspecting Officers such as Inspector of Land Records and Superintendent of Land Records can easily check and verify the correct assessment. If it means the latter, *i.e.*, whether the newly squatted pieces of land have been duly and correctly assessed by revenue surveyors, I am of opinion that the present way of verification of such assessment is not adequate at all. In fact, there are no fixed and fast rules guiding the check and verification of such assessment. As it is, the verification of such assessment is generally done by Inspecting Officers only by chance, when such officers happen to inspect a kwin in which extension of cultivation is made. I may here submit that I may not be considered that I have gone too far in saying that Inspecting Officers in general would very seldom select for his inspection a kwin in which an extension of cultivation is likely to be done. More or less they would rather take such kwin as are near their camping places or those which come in their way in the course of their touring duties. I may say that from the mere inspection of kwin maps or from close observation of the same, one may find out in which kwins extensions of cultivation can be expected to be done. I would therefore submit that some sort of rules or regulations should be enforced to guide the verification of such assessments. My suggestions are as follows:—

Before the field season opens the revenue surveyor will submit a report with his kwin maps in which extension of cultivation is likely to be done to the Superintendent of Land Records through the Inspector of Land Records. The Inspector of Land Records will closely observe the kwin maps to verify the reports and then submit the same to the Superintendent of Land Records. The Superintendent of Land Records after an enquiry may submit to the Deputy Commissioner a list of such kwins with a suggestion as to the portion of checking work to be done by a particular officer during the coming open season. Then the Deputy Commissioner will send a list of such kwins to the Inspecting Officers concerned with a statement as to which particular kwin is to be inspected by a particular officer. So if this method be adopted I am of opinion that a verification of such assessment would be fairly adequate. (One may argue that a revenue surveyor may not submit some of the kwins in which extension of cultivation is likely to be done. But it is not difficult for an Inspector of Land Records or a Superintendent of Land Records to find it out. It is from the nature of the kwin map itself that such an officer can find out the true facts.)

With regard to second clause. From what I have found, I may say that they had been somewhat sufficiently checked. The *Akunwun* checks the rolls and the tax-tickets and sends them to the Township Officers who deliver them to the headmen concerned, who in turn compare the tax-tickets with the rolls and take them away for collection of revenue. It is true that some of the headmen simply verify the totals and go away with them when he finds the total correct. But they mostly go through again when they get back to their

respective villages to find out whether all the tax-tickets according to the rolls are given out to them. If the headman finds anything missing he always represents the matter to the Township Officer. It is that he uses to verify the amount in tax-tickets with the corresponding one in the roll in comparing them to find out the above mentioned facts. I would therefore say that a discrepancy of amounts in the tax-tickets and roll will scarcely escape detection. But with regard to such checking of assessment rolls and tax-tickets by Inspecting Officers, I may generally say, as it is, it has not sufficiently been done. There should be some rules or regulations to be binding on such officers in order to ascertain the sufficiency of such check. The present rules relating to kwin inspections, are too wide and general in order to realize the sufficiency or insufficiency of such check. The present rules are, that a particular set of officers should inspect a particular number of kwins without specifying any period in which any specific number of kwins are to be inspected. So, generally, officers inspect as many kwins as possible at the beginning of the open season or during the cold season or during the time when they find it convenient to do so. Thus most of the kwins are generally inspected during the cold season before the tax-tickets have gone into the hands of the cultivators. So it is quite obvious that such officers cannot possibly check the assessment rolls and tax-tickets with the kwin maps in the course of the kwin inspections. It is obvious that Inspecting Officers would find themselves more convenient to do such checking during the cold season. Thus I would say that checking of assessment rolls and tax-tickets has not been sufficiently done. I am therefore of opinion that a rule should be enforced specifying the number of kwins to be inspected before the tax-tickets have gone to the hands of the cultivators, and the number of kwins to be so done after the tax-tickets have been issued to the cultivators. It will be not difficult for a district officer to find out suitable periods to be inserted in such rule for such inspection.

23. I think this applies to the rules to be followed in Upper Burma. If it be so, I submit that I have no experience of such work in Upper Burma. The reasons as to why I have taken this question to mean Upper Burma work are that this question appears to be of the same nature as question No. 24. So far I find that no application is required for reduction of demand for partial or total failure or for fallows in Upper Burma. In Lower Burma for reduction of rates of assessment on lands in notified area, with regard to cultivating owners, applications are not required. But from what I have found, there is a doubt which needs to be cleared up, regarding the definition of cultivators. It is this. A non-cultivating owner has a large piece of land in the notified area. As the land is under flood he leased his land to a tenant on payment of revenue only to Government by the latter. It is that the tenant can cultivate only a portion of it leaving the other portions fallow. The question is whether the fallow portion is to be assessed at annas 2 rate by the revenue surveyor concerned straightaway or that he should apply to the revenue office for a privileged rate. This question has not been settled yet. Some officers consider that the tenants being *bonā-fide* cultivators are temporary cultivating owners.

of the land for the particular year, on the ground that they themselves have to pay the revenue and not the original owners. So the assessment at annas 2 rate made by the revenue surveyor has been considered as correct, under the existing rules. But some consider it otherwise. My opinion is that it is not correct. My interpretation is that an amount of revenue to be paid by the tenants is actually rental of the land in its sense. Thus the rental is low on the ground of the land being in the flooded area. So it should be definitely and clearly stated in the existing rule to clear up the question once for all. There is a point which I would like to discuss with regard to the rules relating to the grant of reduced rates of assessment to non-cultivating owners in the notified area. The provisions under the existing rules are too wide and general to be followed. In fact they would incur waste of time and energy in dealing with such cases. The provisions under Direction 116 read with Rule 77 are clear enough to be followed in selection of kwins for notification for reduced rates. But regarding the provisions for dealing with the lands of non-cultivating owners they are so wide and indefinite as to cause much waste of time and energy in an enquiry into these cases. I am of opinion that these non-cultivating owners should be granted a privileged rate only for such specific period of years as are necessary to improve their lands in order to be brought under cultivation under the circumstances as required under Direction 116 (1), clauses (a), (b) and (c). It is that they have sufficient money to improve the irrigation of their lands as in the case of (a) and (c) or that they try to unite themselves to do so. Thus only a certain period of years should be given to them to do so. If they cannot so improve their lands in such period it is high time for them to give them up for others who may be willing to so improve the same. To make them give up such lands is not to give them any privileged rates after the specific period of years. The provisions under the present existing rules and Directions may mean that privileged rates should be given to them for any indefinite time until Government has taken the work of such improvement by itself. So I consider that it is not a sound policy to give them privileged rates after a certain specified period of years so that such indifferent non-cultivating owners may not be encouraged. With regard to clause (b) a period of three years is quite sufficient to recover soil from exhaustion. Thus privileged rates should not be given more than three years in such case (b).

24. I have nothing to say except the points discussed above.

25. The actual procedure at present in the township offices in recovering revenue is thus. Generally a headman personally goes and asks for the revenue from the land-owners or deputes someone to get the same from the owner. When he cannot get the revenue from him he puts in an application in Form L.R. 111—Miscellaneous 14, to a Township Officer for recovery of the same under Rule 92. It is generally that the provisions under Rules 94 and 95 are followed. To save time and trouble the usual custom is that a Township Officer, after receiving an application under Rule 92, issues a Notice in Form L.R. 111—L.B. Notice No. 14 and also at the same time a proclamation for sale in Form L.R. 111—L.B. Notice 17 to the defaulter; if the owners are not present or residing in the

village-tract or in the township, such notices are affixed on the house of the headman and on the land or on a prominent place either in the village or in the neighbourhood of the land. If the revenue and cost are not paid up, the lands in question, after the expiry of the period mentioned under the rule, the land will be sold if it acquires any status of land-holder's right or a notice of proclamation for resumption of the land in Form L.R. III—Notice No. 9, will be issued when there is no land-holder right on it. Generally a Township Officer fixes a period of ten days, at least, from the date of publication of the above to the date of sale of the land or sometimes he gives a longer period of days; but when he makes up his mind to complete the collection by the 31st March the general period fixed by him is ten days. The owners who are present or residing in the village-tract concerned or in the township do receive adequate notice of process for the recovery or remission of revenue before land is sold or is resumed. Ten days are quite sufficient a period for him. My reason is that besides the notices and proclamations issued by the Township Officer under Rule 95, these owners did receive the notices of demand from the headmen under Rule 86. It is, therefore, that they have been well-warned and it is a reason that they should be well prepared to pay up the amount before the sale or the resumption of the land. In due consideration it is that absentee owners receive inadequate notices of the process for the recovery or remission of revenue before land is sold or resumed, especially when they happen to reside outside the district. However going deeply into the facts and circumstances of these cases I do not think that they should deserve any relaxation of the rules to the interest of the Revenue Administration. Absentee-owners may be non-cultivating owners receiving only rents from their tenants. It may be that they sold up their rental paddy in the threshing floor; it is then reasonable that they should pay up the revenue in time before action is taken. That the time of revenue collection is well known to these absentee land-owners. It is not likely that the cultivating land owners would leave their lands or the village-tract or the township without having disposed of their crops. So if they had disposed of their crops it is reasonable that they should pay up the revenue before they leave the land. It is, therefore, that they should not be given any privileged time. In the case of a squatter defaulter, it is not likely that he would leave the place or the village-tract or the township without disposing of his outturn paddy. Had he really disposed of his crops he should have paid up his revenue if he has any real intention to do so. Thus when he makes himself an absentee under such circumstances it is his own fault. So a privileged time should not be given to him on the ground of being absent. It is quite reasonable for him to leave his agent for settlement of his revenue. It is generally a case that their whereabouts are not correctly known or that they cannot easily be approached by post. It is that a headman uses to incur a great deal of unnecessary expenses in spite of their small remunerations. So the provisions under Rule 80 are quite sufficient. The Township Officer ascertains a fact as to the resumption or sale of a piece of land in the event of default, from the report of a revenue surveyor. A revenue surveyor is in a position to obtain the necessary information from his 12 years' records and

registers which are necessarily kept in his custody under paragraph 323 of the Burma Land Records Manual.

There is a point which I wish to clear up. This is the one relating to the rules with regard to the assessment of land at full fallow rates in the notified area. A person has a piece of land or some pieces of land in a notified area. It is that he earns his livelihood as a trader or broker or otherwise and at the same time he cultivates part of his holding or some of his holdings with his hired coolies in the said notified area or some other unnotified area. My question is as to how the remaining portion of his holding or the other holdings of his will be treated. Another case is this. In one year a person may cultivate a piece of his land, but in the following year and years he takes up another occupation. My question is as to how his land will be treated with regard to the fallow assessment. Another case is this. A money-lender will cultivate some of his holdings with his hired coolies only for one year in order just to show that he is a cultivator but in the following years he stops doing so. My question is as to how his land will be treated with regard to the fallow rate assessment in the after years. With regard to the first case, I think that he deserves the full fallow rates but not in the second and the third cases. In the second and the third cases, the person should be considered as non-cultivating owner.

26. In some districts it is a usual practice for headmen to apply for the remission of land revenue which they are unable to recover. But it may be noted that such a practice is not adopted in each and every case in which they are unable to recover the revenue; it is done only in particular cases. I may here mention such cases. When a headman from the information given by the revenue surveyor concerned finds that there is no status of land-holder right in respect of the land under prosecution, that the defaulter or the squatter had left the station without leaving any other property behind and that the whereabouts of such defaulter or squatter is not known to him or any other person, he usually applies for the remission of such land revenue. On such application the Township Officer, after having confirmed the contents of the application on oath, remits the account of revenue if it be within the limit of his power or recommends the amount to be remitted by the higher officers such as the Subdivisional Officer and the Deputy Commissioner if the amount exceeds a sum of Rs. 25, and at the same time issues a notice or proclamation for resumption of the said land—the Form L.R. 111—Notice No. 9. The object of such procedure is to save time and energy. The apparent reason for so doing is that since the defaulter has left the station for good or since the defaulter's whereabouts is unknown, it is considered to be unnecessary to issue any notice of demand or any other notice under Rule 95. Another reason is that since the land has not acquired any status of land-holder's right, it is considered unnecessary to issue any notice of demand or warrant of attachment or any proclamation as required under Rule 95. I submit that I am not in favour of such procedure. I really doubt the correctness of such procedure in the sense of legality. In fact I am of opinion that it is really a questionable procedure; it may be that too much undue power might be given to the headmen or headmen may abuse such procedure. I would therefore

consider that we should not depart from the procedure laid down under Rules 95 and 96 or under Rule 95 or 97 as the case may be, in the former when there is a status of land-holder's right in respect of such land or in the latter when there is no status of land-holder's right in respect of such land.

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Secretary and Chief Engineer, Public Works Department, Burma.

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Joint Secretary and Chief Engineer, Public Works Department,
Burma.

L. G. Nunes, Esq.

Officiating Superintending Engineer, Irrigation Circle.

1. (a) The members of the Irrigation Department are by profession engineers and not revenue collectors. Our so-called Revenue establishment includes no one above the rank of a canal inspector, and we are of opinion that the actual assessment and collection of revenue should continue to be left to the Revenue Department.

(b) Experience has, however, shown that a check by the Irrigation Department on the areas assessed is necessary and that the reconciling of differences in the figures of irrigated areas involved a considerable amount of detailed correspondence between the Irrigation and the Land Records Departments and that under present conditions the procedure is cumbersome.

(c) We are of opinion that the internal distribution of water over the land and its economical use by the cultivators requires considerable improvement. Detailed distribution by the Irrigation Department after the water has left the Government channels is neither possible, nor since it would have to be left largely in the hands of poorly paid subordinates is it desirable. Consequently the object to be aimed at is the education of the villagers through the establishment and agency of village committees in the economical use of water by properly maintaining their watercourses and constructing field channels and in its equable rotational distribution over the land in each village tract.

(d) Improvements in the methods of agriculture and the introduction of new crops are matters that primarily concern the Agricultural Department and do not, we consider, fall within the legitimate province of the Irrigation Engineers, but since the choice of lands suitable for such experiments depends largely on the facilities available for irrigation, the two departments should work together.

2. The appointment of a so-called Liaison Officer has been suggested and one such officer in the person of an Assistant Superintendent of Land Records has already been chosen and it is intended that he take up his duties in July next in the Shwebo District. This

Officer is intended to act as a link between the Irrigation, Revenue and Agricultural Departments. It is intended that he employ his energies in—

- (a) improving the methods of distribution of water;
- (b) fostering co-operation among the cultivators in maintaining their water-courses, constructing field channels, etc., and in assisting in the economical distribution of water;
- (c) keeping irrigation men in touch with the people;
- (d) suggesting simplification and improvements in Land Records and Irrigation procedure in the canal tracts.

The appointment is experimental and we agree to its being given a fair trial. We are however of opinion that a more intimate knowledge of irrigation distribution and methods is required than is possessed by an officer with only land records experience. What we really need is an officer not below the rank of a township officer with practical experience in the distribution of water, maintenance of water-courses and the construction of field channels, who would, by his training and experience be able to undertake the general control and training of the irrigation revenue staff and the education of the villagers as indicated in paragraph 1 (c) above as well as assist in reconciling differences in the irrigated areas as registered by the Revenue and Irrigation Departments.

A township officer has certain powers with respect to applications for remissions of revenue and we consider that if an officer of similar rank be appointed as a liaison officer that he might reasonably be allowed to exercise similar powers. If however it is not considered advisable to give the liaison officer such powers in remission cases this point might be left in abeyance.

3. We consider that the general formation of village committees would prove of great assistance not only to the Irrigation Department but would also be of great advantage to the cultivators themselves.

Some were started when Mr. Nunes was in charge of the Shwebo Irrigation Division largely by the assistance and influence of Maung Po Myit, who having been an inspector of land records joined the irrigation department and became its senior canal inspector. He worked along the lines indicated above with very favourable results. After some discussion and experiments he brought the proposals before a district meeting of the co-operative credit societies in Shwebo and worked out a scheme which met with their approval. The result of this was that about 120 committees were formed in the Shwebo District. The movement has to a certain extent spread to the Mandalay and Kyaukse Canals but requires guidance for its development.

Maung Po Myit as a reward for good work done in connection with the recruitment and training of men for the Burma Battalions raised during the war, was made a *Myoók*, and is now a township officer and has ceased to belong to the irrigation department.

We strongly recommend his appointment as a liaison officer or Special Canal Officer in the Kyaukse District. The deficiencies in the irrigation in this district have recently been much in the limelight and we are of opinion that the appointment of Maung Po Myit as a special officer here with the powers and duties outlined in the paragraphs above would have very beneficial results.

4. From another point of view the development of village committees should be encouraged. The management and care of water-courses is properly a matter for the village.

We hope in time to introduce generally the regulation of water supply by modules and then the people served by each water-course will have to make their own arrangements for the repair of their channels and the proper distribution of the water or they will receive no irrigation. At present water-course repairs can only be effected by the direct supervision of this department and by a rigid and troublesome enforcement of the provisions of the Canal Act.

5. The present arrangements with regard to remission are unsatisfactory. In the majority of cases, by the time cultivators have applied for remission to the township officer and by the time he has inspected the land and the papers have reached our department, there are no longer any crops to inspect, so that our right to express an opinion as to whether or to what extent remission should be granted cannot in practice be exercised. We should not object to a cultivator receiving total exemption from assessment if his crop is less than one quarter of the normal outturn. Under existing conditions differences of opinion on the question of yield occur between the irrigation and revenue departments. A settlement of these differences is generally amicably effected and we do not think that the introduction of the above system would lead to the occurrence of any undue friction. We, however, consider that such powers should be exercised only by a revenue officer of superior standing and would not care to see it exercised by an officer even of the rank of township officer. The temptation would be enormous and the chances of detection very small.

6. With regard to irrigation credits we are of opinion that the total increase of revenue due to irrigation should be credited to the irrigation department. Unless there is some relation between expenditure and revenue, it is possible to spend lakhs of money on putting up beautiful works which are just white elephants; thus slack supervision is encouraged. One officer will work hard to see that costs are reduced and good value given, another officer will be more neglectful and casual and unless there is some check on expenditure by the revenue received, good work is apt to be overlooked. As engineers, however, we are not solely concerned with the financial aspect of the matter. The Minbu Canal cost about 56½ lakhs and the area irrigated is about 60,000 acres. Thus the cost per acre was about Rs. 95. We are expected to show a return of 5 per cent. The cost of maintenance is Re. 1 to 1.25 per acre so that unless the average incidence per acre is about Rs. 6 the work cannot show a profit. In this connection we would draw attention to the fact that we receive no credit for embankments. From the embankments in Lower Burma the increase of net revenue has been about 22 lakhs a year, but we are only credited with Rs. 5,200 on one or two small works which were recently constructed in the Pegu District.

7. We are of opinion that an irrigation rate should be levied on lands which benefit by seepage from Government works and on those which take irrigation water as a preparation for the planting of crops but which are not at present assessed to irrigation as they do not take water while the crops are actually on the ground. Examples

of the former are certain plantain gardens in the Kyauksè District and wheat in the Shwebo Canal area.

8. When a Government irrigation work damages a petty private work the provisions of Chapter II of the Canal Act allow the payment of compensation. We do not wish to offer a suggestion on the proposal that a settlement officer should allow a rebate of water rate in such cases, because that is not a matter which concerns us. It would be difficult for a settlement officer to arrive at facts concerning the damage done to lands during the construction of the works; we are of opinion that the proper remedy is for the man to apply for compensation when he finds that he has suffered damage and if possible to compensate him with land in the area opened up by the canal.

We would, however, suggest that settlement should not be undertaken within five years of the completion of a large canal but that the Deputy Commissioner should fix interim rates of assessment as lands come under irrigation.

PART II.

Replies to Questionnaire by Land Records and Survey Officers.

Messrs. L. E. Palmer,
Officiating Deputy Director of Land Records,
and

W. C. Godfrey,
Officiating Assistant Director of Land Records.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

4. The existing assessments are fluctuating inasmuch as they approximate to outturns. I consider fixed assessments in a country like Burma with its improvident agricultural population worse than a mistake. I would prefer to increase rates and improve methods of assessments by more liberal remissions in kwins in years when outturns were notoriously below normal.

5. I would extend the exemptions on crops averaging less than one-fourth the normal outturn to all crops except *kaing*, and assess fallow rates more liberally in the case of holdings owned and worked by cultivators.

I consider that fluctuating assessments should be maintained and that the present variations of the system should continue in Upper Burma on rice lands.

In Lower Burma the fallow concession might be extended to all genuine fallow.

6. Crop rates on valuable crops (*kaing*) are preferable to a tax on the land.

8. I am of opinion the provisions are suitable. I have not seen the results of their application.

The provisions are suitable. In Akyab where they were applied in 1919-20 no serious difficulty was experienced.

Paragraphs 435 and 436 need to be made clearer.

9. Short settlements are unsatisfactory and retard development. I consider 20 to 30 years ample however.

Twenty years.

10. (a) A technical question. That the Public Works Department should take a share of the assessed land revenue in addition to the water rate is but just.

11. Yes.

12. I think so.

B.—Settlement Department.

17. Assessment Tracts.

C.—Land Records.

20. Most suitable except in a few minor details.

The forms are suitable with such amendments as may be found necessary after the experience gained in Yamèthin and Tharrawaddy.

21. No. A receipt book might be possible in the case of large land owners, but not in the case of small cultivators.

The tax-tickets, as now prepared by section-writers under the eye of the *Akunwun*, are checked properly before issue. It is not desirable to substitute for these a receipt book, for the entries therein will not be checked to the same extent.

D.—Executive Department.

22. A more vigorous check might be carried out by Land Records officers. Other District officers appear to take little interest in the matter, and in most cases do not know how to carry out the check. As a matter of fact I doubt if in a year the number of errors in tax-tickets aggregate more than 500 for the whole province for tracts under supplementary survey.

Verification of assessment rates is generally adequate but in the check of the rolls a higher percentage than at present should be carried out. In districts where the progressive system of submitting assessment rolls is adopted, it is believed the rolls receive better check for there is more time to check them. Tax-tickets are checked in the *Akunwun's* office against the rolls before issue and before settling up with the section-writers who are fined for errors found. Tax-tickets are checked later in the kwins by inspecting officers of the Land Records Department, but this check does not extend to more than one-third of the district—seven thousand tickets a year is about the average checked.

23. I do not consider the rules are liberal enough. I would give a Deputy Commissioner a free hand to remit revenue by kwins, tracts, or main kinds in years of distress. Second crops on lands on which the first crop has failed should be assessed to a mere nominal revenue, if at all.

The rules might be more liberal.

24. *Vide 23.*

25. The Revenue Surveyor is in the best position to say as to whether land-holders' rights have accrued. The Surveyor obtains the information from his copies of the assessment rolls, which for that purpose he keeps in Lower Burma for twelve years. In Upper Burma it is merely a question of "State" or "non-State" land.

It is believed that Township Officer ascertains from the Revenue Surveyors whether land-holders' rights have accrued or not. The Surveyor is best able from his records to furnish the information.

II.—The Register of Holdings as a Legal Document.

27. In this connection I would quote the remarks of Mr. Lowry in paragraph 7 of his letter to the Financial Commissioner No. 177C., dated the 4th May 1920.

The register of holdings which does not record the tenure on lands other than grants can only be regarded as a record of rights for the year. Reference to previous registers for status has to be made. The new forms will render the record more valuable.

28. Yes.

29. I think it is highly desirable. The Register should most certainly be attested by the Settlement Officer or Assistant Settlement Officer, and every change in ownership, where the name differs from that in the Land Records Registers. A proceeding should be opened for every change, or an aggregate proceeding for the kwin.

I think it should be done.

30. The rules provide for everything, but are weakly and inefficiently carried out.

Mutations by succession, and redemptions are hardly ever reported.

Headmen could help a lot in assembling their villagers on the day of the Surveyor's visit to report these changes, but they appear to be getting very indifferent.

For the improvement of the record we might consider headmen as recording officers of transactions. These memoranda may be handed over to Surveyor for verification in the field.

31. (a) Yes.

(b) The time has scarcely come for an application of the Torrens' system to Burma I believe.

32. (a) The provision is perhaps as frequently disregarded as observed. Our present system of accepting reports in Register VII of transactions that should be registered, encourages these breaches.

(b) The information furnished is frequently incomplete inasmuch as details are taken from old tax-tickets. Registration Officers take little trouble to verify the *bonâ fides* of persons presenting deeds for registration.

(c) Cultivators are, as a rule, casual in the matter of making reports of transfers and the fact that the Surveyor accepts a report of a transaction at a value exceeding Rs. 100 rather encourages them to avoid the expenses of registration. Reporting of unregistered and unauthorized by law transfers, have not produced any good results.

(d) Some difficulty has been experienced in dealing with registered memoranda where the information furnished is taken from old tax-tickets, where the names of persons and areas differ from those recorded in the registers of the year current.

33. (a) To the best of my knowledge their reliability is rarely questioned.

(b) I have no information.

(c) Without knowing the extent of the assistance afforded by the Land Records Department to Civil Courts in other provinces, I regret I can express no opinion. Revenue Surveyors should certainly not be regarded as process-servers.

The accuracy of the maps and registers of the Land Records Department is rarely questioned. Uncertified copies as far as I am aware are not accepted in evidence. Civil Courts, however, decide cases without calling for information from the latest maps and registers to ascertain whether the person against whom a decree is sought is still retained as owner of the land. The Surveyor generally finds difficulty in these cases in making the alterations.

34. I am not aware of any serious deficiencies, likely to result in administrative difficulties, or hamper the collection of revenue.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. The value of the statistics is not sufficiently known and it is only recently that a few firms have realised the importance. Of Settlement Reports which convey such valuable information, practically nothing is known outside official circles.

36. See my reply to No. 35.

39. Settlement enquiries are full and complete and leave little to be desired.

IV.—Survey.

40. By regular staff is meant I presume the permanent staff of Inspectors and Surveyors. Most districts are under-staffed and it is impossible to maintain survey according to the ideal of the prescribed system. As regards preparing reprints of maps approaching depletion, take a district of 2,000 kwins, how is it possible to prepare for reproduction of kwin sheets without starting work 20 years in advance?

As regards special survey, our special survey party if properly organized with a staff of permanent Inspectors, Surveyors, Computers and chainmen, could do everything required, provided the party was allowed to work on professional lines. The Special Survey Party has been called upon to do work in a manner which would not be countenanced by the Survey of India. I mean in respect to working with temporary men recruited from any source, dealing with too large and scattered areas with insufficient inspecting officers (Assistant Superintendents of Land Records, etc.) and carrying out traverse and detail operations in the same year.

41. The present system is in my opinion most decidedly the best. Why multiply work and tax-tickets? See question (21). The receipt book if brought in under the innovation would be a fairly bulky volume.

The present system is the best. It would entail too much work on maps and in registers to form holdings of a single soil class.

I should maintain the main kinds.

42. The map should be the Index and illustrate all entries in the registers. I would show everything in the map at present depicted.

The map should illustrate all entries in the register otherwise there would be no check on the latter.

43. In Lower Burma detail survey is perhaps carried to excess, especially in inundated tracts. Without detail survey however, how are fallows and remissions to be dealt with?

Each field boundary should be separately plotted in order to give effect to the rules for remissions on account of failure and fallow. The field should be the unit for assessment.

44. The original idea was that on kwin maps approaching depletion the latest copy would be sent to the Press for reproduction by lithography, the necessary trace on transfer paper for the purpose being prepared by a staff of draftsmen at the Press. The Vandyke process has ousted lithography. We know more about the actual state of affairs now and realise that it would be absurd to get a number of reprints struck off without bringing work on the sheets up to date by *kazin* corrections, renumbering and preparing new area statements, thus eliminating errors that might have crept in. Kwins that require resurvey throughout present no difficulty, kwins that need *kazin* correction only, do. There are two methods of dealing with the latter kwins (1) all *kazin* changes are noted in a printed sheet, a trace is made of this sheet, all plots renumbered and area statements prepared; (2) a trace of the original sectional sheet is made on sectional paper in pencil omitting plot numbers. This trace is taken to the kwin and all corrections made, the sheet inked up and plots renumbered and area statements prepared. In the case of (1) the trace is sent to the Press and in the case of (2) the sectional sheet. Method (2) is the more correct perhaps, provided the trace is carefully made, being in pencil, the drawing is apt to be scamped. The work requires skilled draftsmen and it is futile to expect it to be efficiently carried out by the average revenue surveyor working in a bamboo shanty. The work should be done at headquarters under proper supervision. It is impossible to say how many kwin sheets and area statements can be dealt with by a permanent draftsman-computer, probably 50 in a year. Imagine the state of affairs in Meiktila with 432 kwins, the printed sheets of which are running short; at least six draftsmen-computers are wanted there and in most of the other large districts from two to four.

The latest instructions issued for the preparation of soil class over traces should work satisfactorily. The traces must be prepared by proper draftsmen throughout and Superintendents give an eye to the work.

V.—Organization.

45. I am afraid officers of the Executive Département regard Land Records Officers as inferiors, knowing little of our work or the anxious nature of the duties of a Superintendent; even Deputy Commissioners often treat him with—putting it mildly—lack of sympathy. Extra Assistant Commissioners and Superintendents of Excise regard themselves as superior to Superintendents of Land Records, although officers of all three departments are recruited from the same class. Unfortunately the last revision of pay of the department, and the inadequate rates of Travelling Allowance drawn by junior Superintendents, support the mistaken view. The only way to

strengthen the position of a Superintendent is for Deputy Commissioners to treat him with the consideration accorded to a Subdivisional Officer.

46. The recording of mutations could be more efficiently carried out by village headmen who should get a small fee for each mutation from the person making the report.

The Subordinate Staff should in my opinion recess at Inspectors' headquarters.

The Subordinate Staff should recess at Inspectors' headquarters. See 30. I have already suggested that headmen should note the mutations.

47. I think the number adequate. A better class of man is required.

I think the number adequate.

49. I am of opinion that the work of assessment, whether fluctuating or fixed, will later on be entrusted to village headmen. Surveys should be carried out by revenue surveyors, who would then be probably considerably reduced in number. More Inspectors would be required.

50. (a) I think our present arrangement satisfactory. (b) The existing rules for the training of these officers are rarely carried out. Deputy Commissioners frequently put them on to do odds and ends of work at headquarters to the neglect of Land Records work and the final examination is a farce. The period of training should be extended to six months under Superintendents with grit, and the men made to work. It would not be a bad idea if the final examination of officers of the Commission was carried out by the Deputy Director and Assistant Director of Land Records.

(a) Present arrangements satisfactory.

(b) I consider three months' training should be sufficient but the members of the services should be posted during the field season, only and not during the recess season—when there is nothing much to learn—it is in this period that they are drawn away to do other work.

VI.—Special Areas.

51. For poor or remote tracts lump sum assessments or *thathameda* are most suitable. A lump sum assessment in an undeveloped tract like the Ye-u Canal Tract in Shwebo would be ill-advised. By an undeveloped tract is, I presume, meant a tract with possibilities; afford facilities for taking up land and assess low rates.

In poor and remote tracts lump sum assessments fixed for five years at a time would be suitable. In undeveloped areas the ordinary system of fluctuating assessments should continue.

52. I would have a quinquennial review of kwin maps and omit the collection of statistics, except to the extent required now in tracts under Land Survey Assessments.

53. *Vide* 51 and 52.

54. The lump sum assessments on kwins in Upper Burma are said to be working satisfactorily, but as visits to these kwins have not been made by the staff, it is too early to express an opinion. In Magwe the Land Revenue demand has been fixed for a period of ten

years for some 660 kwins or half the period for which the new Settlement is to last. After this period the question of resurveying the blocks and again bringing them under fluctuating assessment will be considered (Report on Revision Settlement Operations, Magwe, 1915-19, paragraph 242).

57. Not understood. Non-occupied areas would scarcely be cadastrally surveyed.

58. Grants and leases. No suggestions.

Fisheries.—All fisheries in tracts under Supplementary Survey should be surveyed on the 16-inch scale and the maps as religiously maintained as they are for areas under cultivation.

Town Surveys.—The tendency is to convert town surveys into "lay-outs," *i.e.* to show on the maps what is required rather than what exists on the ground. At the time of original survey every detail should appear on the map, but in unimportant towns it is waste of time to show on annual maps changes in internal details, or to keep up area statements other than for the lots.

It is also superfluous to keep up maps and registers in Municipal towns where assessments are based on frontage. In such cases the Municipality have no use for the maps.

Mr. W. J. Baker.

Superintendent of Land Records and Registrar of Town Lots,
Mandalay.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. to 12. Are purely settlement matters and I am unable to make any useful suggestions.

B.—Settlement Department.

13 to 19. More settlement matters.

Personally I think our settlements are far too elaborate and further differentiation would mean more rates to apply and the burden of this falls on the Land Records staff. If the results proved a benefit, either to Government or the cultivator, worth the extra trouble, I would not offer any objection.

C.—Land Records.

20. The Land Records forms proposed by Mr. Lowry, are, I think, on the whole good and feasible. They are clearly intended to result in useful information ready to hand for the Settlement Officer.

Whether the Settlement Officer will ever make use of them remains to be seen.

I have not heard anything of how the experiment with these forms in Tharrawaddy and Yamèthin has worked out.

Regarding the question of crop marking in tenths proposed by Mr. Lowry, I would like to emphasize—

(1) That in Upper Burma the crops are noted not merely for statistical purposes but also for assessment. And it is important to

the cultivator and to Government alike that the cropped area should be at least approximately accurate.

(2) That I do not think any attempt at accuracy will result if the crop limits and crop symbols at present entered on the map after visits to the field are abandoned, and no regard for locality is maintained. And I do not think it safe to do away with the recording of details *on the map*. This at least requires the land to be visited.

It will not be possible to check work properly unless you have the help which the map affords under the existing system.

If you insist on this being done the Surveyor must go to the spot.

He will, I fear, never do this if he can, by asking a few questions of the villagers, write up an estimate in the village.

As regards the two illustrations given in the proposed Manual by Mr. Lowry—*paragraph 479*.

(1) <i>Kaukyin</i>	}	S^5	<i>Kaukkyi</i>	}	C^7
season		M^5	season		G^5
in red.		X^5	in black.		X^7

This means taking both together—

S	...	...	30 %
M	...	...	20 %
C	...	...	10 %
G	...	...	20 %

Total ... 80 % cropped

therefore it is clear that 20 % represents the fallow.

Now the actual area left fallow is never definitely known till the last assessment.

By showing X^5 we get 50% at *Kaukyin* and X^7 we get 70% at *Kaukkyi*. That is apparently (fallow) 120% altogether, which is of course absurd and incorrect. I therefore wish to point out that showing X^5 and X^7 is altogether superfluous, if not misleading and likely to cause errors.

Similarly in the second illustration X^5 and X^7 should mean 40% fallow :

Whereas the true result is obtained by—

S^5	...	...	20 %
M^5	...	...	50 %
C^7	...	...	70 %
G^5	...	...	20 %

Total ... 160 %

As 100 represents the total area the twice cropped area is 160—100 or 60% and there is absolutely no fallow.

Now this appears very simple but the surveyor has to work out the area represented by each percentage before he can assess them.

I do not think this much of a saving of labour, if any, on our present system.

It is also not shown how a thrice-cropped area would be arrived at.

I suggest for argument's sake. Taking a 10-acre plot for example, if the surveyor shows nothing on his map but in his register as proposed;

For *Kaukyin* S 25 %
 N 25 %
 Fallow 50 %
 and at *Kaukkyi* J 50 %
 L 25 %
 again Fallow 25 %

Now his register will show taking both together—

S	...	...	25 %
N	...	...	25 %
J	...	...	50 %
L	...	...	25 %

Total 125 % also 75 % fallow.

But dealing with the cropped area only we find 25 % must be twice cropped. From the above it *cannot be seen* under which crop the twice-cropped area falls.

The surveyor has to assess each area once only.

If we have the limits and marking on the map we should have *Kaukyin*—

thus

S 2½	+ 5
N 2½	

and at *Kaukkyi*

thus

S 2½ J 2½	J 2½
N 2½	L 2½

Now the map shows clearly at *Kaukkyi* that there is absolutely no fallow, and that J (where it appears in the plot already under S at *Kaukyin* is twice cropped.

I place these points before the Committee for consideration in support of my view that the details on the map as to locality, etc., should not be abandoned.

21. The tax-ticket system is now well known and understood, and openings for fraud have been reduced to a minimum.

It is true the cost of preparing these tax-tickets in the Revenue Office must be considerable. But I think, before any radical change is made, experiments might be tried with proposed changes.

The tax receipt is often used as evidence of possession and in Lower Burma even to denote title.

D.—Executive Department.

22. I do not think that verification of assessment is at present inadequate, but we cannot have too much checking.

23 to 26. I am afraid I can give no opinion based on first-hand experience or suggestions for remedies. In Lower Burma owners of land are often too indifferent to apply for remission, while in Upper Burma they are often so poor that they will apply to get back even 4 annas, and if the crop and fallow and failure marking is correctly done by the surveyor, remissions are automatically granted by omission from assessment.

The surveyor has nothing to do with the collection of revenue and it is not his business to hunt for defaulters as a rule.

In Mandalay Town we formerly had a northern and a southern *thugyi*, and the areas they had to collect from were large and often scattered, and they only too readily returned tax-tickets to the Revenue Office as being unable to find the payees. We now have all revenue and rent as well as municipal taxes collected by Ward Headmen—the whole work is thus decentralized and I think a great improvement has resulted.

II.—The Register of Holdings as a Legal Document.

27. The register of holdings has answered its purpose quite well, I think, all these years, but I consider Mr. Lowry's proposals and new forms very sound and will result in avoiding a needless repetition of names and figures and thus save labour.

28. If the record of rights prepared at original settlement has been correctly maintained I do not think it can be improved by the Revision Settlement making further inquiries. But it will certainly provide a useful check in cases of laxity and for this reason I think greater details should be recorded at re-settlement.

29. Yes, the register of holdings should, I think, be brought up to date at re-settlement and should be attested.

30. Mutations affect the parties concerned more than they affect Government. There has been a great improvement in this line of late, yet, I think, penalties for not mutating are never enforced.

I do not mean to suggest that they should be enforced as a general rule. I know Government does not wish to harass and punish people for failing to report changes; I think that more interest will be taken as the people gradually realise that it is really in their own interest that Government orders them to report.

31. I have no knowledge of the "Torrens' System." The rules are good enough as they stand if properly carried out.

In cases of succession, impersonation has to be guarded against and as long as the real owners or inheritors are known to the surveyor things go right, but it is the slack *thugyi* or slack surveyor who may cause litigation.

I can only recommend more careful supervision.

32. (a) In towns such as Mandalay, most transfers are registered. The Judicial Commissioner's rulings in Upper Burma, I think, lay down that all transfers of immoveable property should be registered regardless of their value.

In the districts it is different; agriculturists have too far to go, and they generally report transfers to the surveyor only.

(b) The information given in the registration memoranda is sufficient as a rule. There should be some better check than at present over the sub-Registrars who do not send the memos, as each is ready, to the Land Records Department, but often wait till they have a large pile of them.

33. In my experience, the Land Records maps and registers are of great help and are generally made use of in Civil Courts. As far as I know our Burma Land Records system is far in advance of any thing they have in India and is well worth improving and perfecting. I refer to the system and not to the agency.

I have seen several cases in which *Myoōks* accepted uncertified copies. But *Myoōks* as a class are now better than they used to be and so are revenue surveyors.

I do not recommend the surveyor having anything to do with decrees affecting land.

The *fatwari* in India has far too much to do with all land cases.

34. I do not think so. *Thugyis* are often too ready to make over the tax receipt to anyone claiming the right to pay the tax.

He is constantly urged by his Township Officer; the latter by his Subdivisional Officer, who again is worried by his Deputy Commissioner to get in his revenue as early as possible.

I have known cases in which the wrong person got the receipt from the *thugyi* and this caused a lot of trouble.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35 to 39. I do not pretend to be competent enough on settlement questions and can offer no useful suggestions.

IV.—Survey.

40. It is generally not competent and is as a rule inadequate.

Too much is expected of a revenue surveyor.

I think that he should be only expected to keep his map up-to-date as to internal details and extensions which do not exceed 5 acres.

In all districts where extensions on a large scale are still possible there should be a special staff for purely survey work. Much on the lines of Mr. Gibson's "flying column."

All revision survey of entire kwins should be done either by the special survey party or by a special staff.

Revision survey by the revenue surveyors can generally only be done in Lower Burma between 15th February, after the rolls are in, and 30th April. That is two and a half months.

Often some surveyors have *kaing* work to do and they cannot be expected to do revisions. Others have perhaps four or five kwins

requiring resurvey, while others again have none. But they all have other duties which they are called on to attend to as well as doing revision surveys at this time and, if a Superintendent of Land Records forces a surveyor, who has no kwins requiring resurvey in his own charge, to go and resurvey kwins in another man's charge, this man has to leave his office and home. This is why revision survey work is very unpopular and disliked by all alike.

Surveyors are as a rule ready to pay any one to perform this duty for them.

They do the work with a bad grace as a rule and this must militate against the quality of their work.

It is true Government gets a fairly substantial area revised every year, but I am not sure that it gets quality; it certainly makes the staff discontented, and I think the matter should be reconsidered.

It has been said to me that the surveyors in Lower Burma have six months' recess and a slack time, that therefore they should be required to work hard and constantly for the other six. That is our way of looking at the question.

It is not the surveyor's view. He says Government made a certain *Tonzan* for several years and when the surveyors got used to it, Government started another *Tonzan* for revision survey work; gave the same pay, but demanded more work; naturally he complains and objects very strongly.

41. The existing system is, in my opinion, quite good enough.

42. I maintain that, the map and register constitute a double record which tends to safety against errors.

I deprecate leaning on the register solely and omitting details from the map.

When checking has to be done in the field, the map at present is the chief guide and I hope always will be.

43. The idea of holding surveys, omitting all internal *kazins*, is, in my opinion, against the cardinal principles of survey; it is never easy to check such work.

If for assessment purposes, extensions are approximately shown by a line run round the perimeter of a holding, the details should be surveyed later by the "flying column."

44. The present arrangements for reprinting of maps are, I think, far too slow. And colour printing takes a great deal more labour to get it through than it is worth.

The present soil class printing in yellow is, I have heard, considered unsatisfactory and I think it should be enquired into, to ascertain whether it is really worth the extra cost and labour.

Rumours of certain new arrangements in the Press have reached me, but I do not know what they really are; but I consider that some one who really knows Surveying and Land Records work and has a knowledge of the value of the various items should be in the Press section to see that nothing useful is omitted.

V.—Organization.

45. The present arrangement has tended more and more to the Superintendent of Land Records being considered, and often treated,

a kind of Head Clerk to the Deputy Commissioner on Land Records matters.

And out in the district he has far less *aura* than a *Myoff* (Township Officer).

If the Deputy Commissioner is asked for an opinion, he refers the matter to his Superintendent of Land Records and the Superintendent of Land Records is seldom asked for his opinion direct.

In my own experience I have had useful suggestions submitted in my diaries returned with the remark "If sent up endorsed by the Deputy Commissioner, they will be considered."

This was of course quite right and proper, but it discouraged me from sending in any other useful suggestions.

As regards the working of the whole revenue system, I do not see how you could alter the relations between the Superintendent of Land Records, his Inspectors or Surveyors with the Deputy Commissioner, Subdivisional Officer and Township Officer; but I think you can strengthen the position of the Superintendent of Land Records as regards his standing with regard to his own staff by:

(i) treating him as head of his department in the district similar to that of a District Superintendent of Police;

(ii) the appointments, promotion, leave and punishments should be within his powers, subject of course to an appeal to the Commissioner of Settlements and Land Records, not to the Deputy Commissioner or Commissioner of the Division;

(iii) in matters of departmental interest the Superintendent of Land Records should be consulted and allowed to send in his opinion direct;

(iv) do away with the order book, which now has to be submitted to the Deputy Commissioner for every little change the Superintendent of Land Records wishes to make;

(v) Progress reports and diaries might be sent as at present.

46. I deprecate any change as to the subordinate staff. As long as the surveyors do their work well and finish by fixed dates, I think it better not to treat them like schoolboys and tie them down to fixed hours or to make them work in fixed places away from their homes. As long as Superintendents of Land Records move about regularly and see that their Assistants, and Inspectors do likewise, I feel sure good results will be obtained. I would suggest—Hold the Superintendent of Land Records responsible for all the work of his staff and not the Deputy Commissioner.

47. Eight surveyors to an Inspector should, I think, be the best, but exceptions above and below this rule are bound to occur.

48. My personal relations with Settlement Officers such as Mr. Hertz, Mr. Lowry, Mr. C. F. Grant and Mr. Page were always cordial and happy and I am of opinion that relations between the Settlement Officer and the Superintendent of Land Records should always be of this nature.

The Superintendent of Land Records should, I think, instruct his men to place their maps and registers and any information required of them readily at the disposal of the settlement staff when so desired.

If this is done at the start there will be no delays caused by a foolish standing on their dignities by the Land Records Staff saying "We have no orders to do so from our Superintendent of Land Records," etc., and of course if the Settlement Officer informs his men that this arrangement has been made and treats the Superintendent of Land Records with ordinary consideration the staffs of both sides will take their cues from what they note of the relations between the Settlement Officer and their Superintendent of Land Records.

Superintendents of Land Records on posting to a new district should always, as a first step, study the last Settlement report.

In the ordinary course of his work he is bound to have to refer to the Settlement maps and records and I think all Superintendents of Land Records do make full use of the settlement office's records.

It is the Land Records statistics that are generally not sufficiently made use of by Settlement Officers, except perhaps for purposes of comparison and then only generally to condemn them.

Perhaps one reason for this lies in the unsatisfactory way they are presented and Mr. Lowry's efforts to improve this state of things will, I trust, tend to an improvement in this line.

49. (a) As long as we have a fluctuating assessment, the present system, which I have always been led to consider is far in advance of anything they have in India, is quite good enough, though it may be expensive, and unless it is now found by this Committee to be really efficient besides being cheap, I deprecate any retrograde changes.

I know that in India a man is born in a certain caste and to a certain trade or profession. And that the *fatwari's* (village surveyor) post is generally hereditary and there is thus some hereditary interest in the work which our revenue surveyors lack.

But I know also that deservedly or undeservedly, the honesty of the *fatwari* is generally doubted by the villagers and they have not our system of work as a check and safeguard.

It is true our surveyors are often greatly mistrusted too but we have records which can prove cases and the surveyors know how far they can go.

As a workman the Indian is in my opinion far more industrious than the Burman and for actual survey work the Burman costs twice as much and the results are not near as good. But for Land Records work we must have the Burman and do the best we can with him. If properly dealt with good results are quite possible. There has been a marked improvement in the last decade. It was not long ago admitted in a Government resolution that the Land Records Department was a very efficient one.

We cannot have the best of every thing, if we are not prepared to pay the price. Improvement in pay and prospects together with a pension must tend to make the staff steadier.

(b) If we have a fixed assessment, of course some cheaper arrangement might be feasible, but until experiments are tried, I do not care to offer any suggestions.

50. (a) I think they are quite good enough as at present.

(b) But as regards Assistant Commissioners, Extra Assistant Commissioners and *Myoōks*, I do not think any one ever remembers

or ever needs to remember what he has learned regarding the theodolite in the course of his work and in my opinion it is only a waste of time compelling Assistant Commissioners and Extra Assistant Commissioners learning the use of the theodolite. What they learn about it is very meagre and so easily forgotten if not kept up and as it is never kept up it is useless.

Surveying of details is different, it teaches officers how the thing is done and prevents them giving absurd orders later on to surveyors. The Land Records training is also useful and teaches them how to read a map at least. I have no improvements to suggest.

The general principles of surveying should be carefully explained to them and they should know how one step follows another right up to settlement and subsequent Land Records work.

I have found from long experience that very few officers ever take any real interest in Land Records work.

Officers with the unique experience of Mr. Lowry and the energy of Mr. W. S. Morrison are quite exceptional.

As regards the Burman Extra Assistant Commissioners I do not think their interest in Land Records work worth having at all.

I remember one officer checking a kwin and noting that he was the only Government officer who had ever visited this kwin. The errors he noted led to my calling on the surveyor for an explanation which showed that the surveyor had told the Subdivisional Officer that he had not at the time completed the kwin. The Subdivisional Officer deliberately took the previous year's map and checked it on that record. No wonder he found errors, he did not record the fact of using the old map.

Another Extra Assistant Commissioner, Burman, being rather cock sure of himself wanting to check a kwin on his line of tour, while the surveyor was at District headquarters, went to the surveyor's office and got the wife of the surveyor to give him the key of his office almirah and took the map of the previous year by mistake and checked the kwin with it and never discovered that the map referred to the previous year. This explanation resulted when I called on the surveyor to show cause, etc.

Both these officers have been recently acting as Deputy Commissioners—men of long experience.

I mention these merely to support my view expressed above.

VI.—Special Areas.

51. In remote areas, outside supplementary survey, I have always found that in order to make a useful check some sort of a map is absolutely necessary, and I think that all such areas should be mapped, even if not geographically fixed. These maps should be brought up-to-date every three years by the responsible surveyor. I suggest this, as I think there should be a record of rights even if rough.

The assessment rates are as a rule Re. 1 or Rs. 1-8-0 per acre (not very high) and it is generally only when crops are destroyed, that remission is applied for. Failures and fallows are few.

We can get along without any soil classification and settlement.

In Upper Burma such areas are not assessed *thathameda* being the custom, but even here a map should be made.

52. I therefore quite agree that a survey should be made, for assessment purposes in Lower Burma and in the interests of the cultivators in Upper Burma. But do not think statistics should be collected.

53. My idea is to have a map first, then assess on *occupied area*, at a fair uniform rate.

My experience leads me to think that cultivators from these remote areas will not worry about a few failures or fallows; these are rare in Lower Burma and if crops are destroyed by wild animals, rats or pests, the people are bound to apply of their own accord.

It is in many cases quite impossible for the surveyor to visit each holding every year, but he should be expected to visit one-third of his area each year and to map whatever he checks. In this way he will get over all the ground in three years and have rough maps of all the holdings with owner's names recorded.

Where the cultivation forms large compact blocks the area should be demarcated in *kwins* and traversed and details surveyed by a special staff.

54. I have had no experience of lump sum assessments and the working of the *thamadi* system.

But I think the proposals made above better. The village headman's jurisdiction is the best unit; *kwins* are gradually becoming arranged to suit this jurisdiction. I mean as they are split up, etc.

55. No. I do not recommend the *thathameda* system.

If you revert to it and have no surveys, you deny the cultivator the privilege of having a record of his rights.

56. I have had no experience and can offer no opinion.

57. Cadastral survey before occupation is only resorted to in cases of "lay outs" for Colonies—and as there are no fields to survey, it cannot be a cadastral survey.

In these cases if you wish to lay out plots of 10 to 25 acres for allotment, my advice is to lay out your ideal first on paper, then demarcate with pipes in accordance with it.

When the area is cultivated and *kasins* are permanent, first traverse by *kwins* of roughly one square mile each and do the cadastral survey.

The existing rules already provide for surveys when they follow occupation.

But I have already stated elsewhere that the local surveyor should not be expected to survey extensions above five acres in detail and that either the Special Survey Staff of the District, or the Special Survey Party should deal with larger areas.

58. I think that the present arrangements for surveys of grants, leases, and fisheries are quite good enough. This all depends upon the practical experience of the Superintendent of Land Records who is responsible.

Town Lands.

Question of scale.—I maintain that it is not at all necessary to survey a whole town on an expensively large scale simply because a

Deputy Commissioner says he wants the map to show encroachments of say even "six inches."

The Deputy Commissioner's wishes can be met, by showing the encroachment itself on any scale, or better still on no scale, but giving actual measurements, either at the side of the existing map or in the field measurement book. The number of town blocks may run to 1,000 and the encroachments to one or two in a block here or there.

Why survey the whole 1,000 blocks on an expensively large scale just for the sake of being able to show an encroachment of six inches in a few cases only?

Mr. R. S. Carrapiett.

Superintendent of Land Records.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

4. I have not worked in Lower Burma for 10 years, so am not in a position to satisfactorily discuss this question so far as it relates to that part of the Province. But in Upper Burma especially in the unirrigated areas, the existing assessment fluctuates within very wide limits. In these areas fixed assessments are quite out of the question. I cannot see how they would be feasible except, of course, in blocks of sparse and poor cultivation, which yield very little revenue. In the irrigated areas receiving irrigation from major works which are in good working order, I think fixed assessments would be possible. But in areas served by minor works, much would depend on the works themselves. In the Salin canal area (Minbu) the instability of the works would make it impossible to apply fixed assessments. I understand that, in Kyaukse, the minor works irrigate with great regularity, in which case fixed assessments would appear to be practicable in that district.

5. With reference to Upper Burma, the variations should be retained with one exception. In irrigated areas no exemptions should be granted by the Land Records Department at all. There are really almost no irrigated fields in which the crop is *abandoned unreaped*, so that the surveyor is now being empowered to grant relief in cases where claims strictly speaking can hardly arise. The power given him is largely used for dishonest purposes.

12. The information in the tax ticket is not adequate; village headmen in Upper Burma have to make frequent references to the assessment roll for missing details to enable them to locate the assessee correctly. The tax-ticket entries could be fuller, but I do not think any particular advantage would be gained by adding to the details so long as village headmen have the rolls to refer to.

D.—Executive Department.

22. In the dry zone districts verification of the assessment is, I think, inadequate; elsewhere it is sufficient. In the dry zone the correct marking of crop failures plays the most important part in the accuracy of the assessment, but under present conditions, the surveyor's work

under this head is subjected to very insufficient inspection, as a result of which there is considerable dishonesty causing a loss of revenue to Government, as also considerable carelessness as a consequence of which the unfortunate cultivator suffers, at times, by being assessed when he should not be. The Land Records definition of a "non-matured" crop is that it is one whose outturn is less than one-fourth of the settlement average. It does not require much experience of dry crops to realise that outturns will not fall below this figure except in years of very protracted drought. In all other years—even in those where the seasonal conditions have been undeniably bad—outturns will be poor, but I think, it will be the exception and not the rule for these outturns to be "failures." My experience in Minbu and Sagaing was that large areas yielding four to six anna crops were marked as "non-matured" and I have come to the conclusion that, assuming the same average rate of leakage prevails in the other dry zone districts, the loss of revenue to Government amounts every year to at least Rs. 25,000 at a low estimate. The chief difficulty in dealing with this dishonesty—for such in large measure it is—lies in the fact that the time for effective inspection of crop "failures" is so limited. Cotton assessed as a *kaukkya* crop, is almost completely plucked by the end of November, so that there are barely three weeks for verification of the surveyors' markings. As for the other crops there is no more than seven or eight weeks available for the purpose. In this short time inspectors cannot satisfactorily get through more than about 50 kwins out of over 200 in their circle. This number is inadequate. I am of opinion, therefore, that steps should be taken to increase the amount of inspections in November and December when the crops are still on the ground. This can be done by doubling the inspection staff temporarily for two months by appointing officiating inspectors from the ranks of the 1st and 2nd grade surveyors. Apart from other reasons which may commend this suggestion this increase in inspection should be a good business proposition. I cannot give exact figures as I do not know what the re-organised scale of surveyors' salaries is. The following details should be approximately near the mark:—

Number of officiating Inspectors required, 40 (officiating allowance Rs. 10).
 Menial staff, 40 chainmen (Rs. 10) and 40 messengers (Rs. 12).
 Number of officiating surveyors required, 40 (officiating allowance Rs. 12).

	Rs.
Therefore cost for two months = 2 { 40 (10 + 10 + 12 + 12) }	= 2 × 1,760 = 3,520
Add for sundries	480
Total	4,000

That is for an expenditure of Rs. 4,000 it would be reasonable to expect an enhancement of the revenue to the extent of about Rs. 20,000, with the added advantage of protecting the interests of those cultivators who now lose through slack surveyors not marking their "failed" crops as such.

As for tax-tickets and assessment rolls I think the former are sufficiently checked for all practical purposes, but not the latter. Despite the rules against rushing the Land Records Department into unduly early submission of the rolls, I have found in most Upper

Burma districts that my predecessors had agreed to dates for submission which made it utterly impossible for any really thoroughly checking to be done. The position is quite different in Lower Burma, where checking is a comparatively easy matter. In Upper Burma on the other hand, if it is to be effective at all it requires time. On the average two days must be allowed an inspector for each surveyor's rolls in the *kaukkyi* season. This is the minimum but actually no inspector devotes this amount of time to this branch of his work. A move in the right direction will be to fix 20th February as the latest date for submission, and to resist all attempts to get the first rolls submitted by the Superintendent earlier than the 5th February. The Revenue Department can speed up the issue of the tax tickets by employing a larger number of section writers.

24. The rules are either unsatisfactory or, if satisfactory, are not suitably applied in the case of remission of revenue erroneously assessed by the Land Records Department. I incidentally discovered in Minbu District that it was a farce to prepare *plus* and *minus* rolls for outlying villages in respect of holdings over-assessed, even if the over assessment amounted to the considerable sum of Rs. 5 on individual holdings. I do not know the detailed procedure followed in Township offices, but what used to happen was that the assessees would be called into the Township headquarters and be sent back for some reason or other with instructions to come again. The cost of a double journey from villages 20 miles away, the incidental expenses and the loss of two days' work, at the best only about equalled the amount refunded, but in many cases actually involved a loss. In several villages I was specially asked *not* to prepare a roll for over-assessed holdings, the people merely expressing a wish that I should warn the surveyor not to repeat the error in future.

Some method should be devised whereby refunds of excess revenue could be made to the assessees in their villages. Why should it not be done through the village headman?

II.—The Register of Holdings as a Legal Document.

27. The contents of the register of holdings cannot be regarded—as it now stands—as being anything more than evidence of rebuttable facts relating to the rights of the persons whose names are therein recorded. The record should be accepted as conclusive, unless sufficient and satisfactory evidence to the contrary is adduced. Surveyors, when put into the witness-box, invariably swear to a given holding's being in the ownership of the person recorded as owner in the Supplementary Survey registers, or to a person shown as tenant being the actual tenant. But statements such as these are never statements of facts within their knowledge, except in the very rare cases where they have required the owner or tenant shown in the registers, to walk round his land in the presence of the adjoining interested owners and the boundary claimed has not been challenged.

28. Yes, these enquiries do provide an adequate basis. I judge by the results of the older settlements of Sagaing, Minbu and Shwebo Districts. Whenever questions arose affecting rights, the people almost invariably admitted the accuracy of the settlement records.

I do not think a record in greater detail is required at re-settlement. To make such a record will doubtless result in some improvement, but the small measure of improvement will, I think, be quite incommensurate with the labour involved in its preparation.

29. I do not think this necessary. Recently provision has been made for the bringing up-to-date of the register of fields by the Land Records staff, who are required to recast up all these registers in the space of five years. These orders should eliminate the chief errors in the Register of Holdings so far as concerns "holding areas by soil classes." As regards errors in mutations, see remarks in answer to question 30 below.

30. I should think in properly supervised districts, about 90 per cent. of the mutations are brought on to the register. The record of mutations can be improved by requiring the surveyor to comply with the following instructions:—His charge should be divided into three parts and during recess, he should proceed to the villages falling in one of the parts, read out the details in the corresponding registers to the assembled cultivators and bring these registers up to date where necessary. The date of his visit to each village should be communicated to the headman several days in advance, and the headman should notify it by beat of gong the night previous to the date fixed.

In three years the surveyor will thus work through his entire charge. I adopted a similar method in Minbu District where I found the record largely obsolete. The results were good. Attention is invited to the remarks on the Minbu plan of improving the record, in the Land Records Administration Report blue book of 1912-13 or 1913-14 (*N.B.*—It is one of these years. I do not exactly remember which).

31. The surveyor should invariably record the cultivator in occupation, even though no formal report of mutation has been made; provision already exists in the Land Records Manual for this. The record should be temporary and a formal report should be insisted on; failing the report within a reasonable time, the person at fault should suffer the penalty prescribed for such failure.

Voluntary registration conferring a clear title would be a useful innovation, especially in and near the larger towns where land is of value and the title to it of much greater importance than in the outlying parts of a district.

32. (a) In and near large towns transfers affecting property exceeding Rs. 100 in value are, I think, duly registered almost without exception. Further away, registration is not carried out so generally.

(b) Registration offices furnish, with a few exceptions, complete information regarding transactions registered with them. But this information is really of negligible assistance to the Land Records Department, which gets all the details from the parties when they make their reports to the surveyor. The parties in practice take the deed of transfer to the surveyor, who extracts from it all the information he requires. If the law requiring formal reports to be made to the surveyor be insisted on, the need of supplying the Land Records Department with information from the Registration Offices will immediately cease.

34. I know of no serious difficulties either in administration or in revenue collection.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. The regular and special staffs are quite adequate and quite competent to maintain the maps and survey according to the prescribed system, and if the Superintendent does his duty there should be much less need of a special staff than apparently exists at the present time. As regards the regular staff these remarks apply only to field work and to all branches of recess work except draughtsmanship. Anyone can be trained to make a survey and to calculate areas, but draughtsmanship of a higher type is a gift. Some districts cannot produce more than one or two capable draughtsmen from the ranks of surveyors. To that extent alone do I consider the regular staff lacking in competency to maintain their maps.

IV.—Survey.

41. I should certainly not treat as a separate holding each parcel of land which has been classified in a separate soil class. I speak from actual experience of the experiment. In 1901 or 1902 I went on three months' leave from Sagaing in the recess season. The Superintendent who took my place came from Mandalay, where apparently no holding included two soil classes. He conceived the idea that the same system should be applied to Sagaing and gave effect to it. When I resumed charge I found the staff in difficulties. The number of holdings had been very largely increased; many of the registers, already fat, had become still more swollen; the number of pages to be totalled had correspondingly increased, and so also the page totals carried forward at the end of the register. There was really more work for the surveyor to do, greater expenditure of forms and, of course, higher binding charges.

The alternative suggestion of including in one holding all the land held by one man in a continuous parcel irrespective of main kinds and soil classes, seems to me to be far preferable to the other suggestion. I have no registers by me to work out the result, but, as far as I can see, it has many advantages—less work for the surveyor, less forms and lower binding charges. There would have been one small drawback in the case of *mayin* holdings. Up to 1919-20 the *mayin* assessment began the revenue year, so the preliminary entries for *mayin* holdings had to be prepared in April before the field was taken. This was possible, as the holdings were few and no other land of a different main kind was included in them. But if main kinds had been disregarded, the preliminaries of *all* the holdings would have had to be written, and this would not have been possible in the short time available. Just before I left Burma the amalgamation of the *kaing* and *mayin* assessments was sanctioned. I presume that the *mayin* assessment, after the amalgamation, has now become the *last* assessment of the year. If so, the drawback I mention above does not exist, and need not be considered.

42. Crops and fallows vary largely in Upper Burma from year to year, and unless first marked in the map, entries in the register relating to them cannot satisfactorily be made. There would, I think be no

appreciable disadvantage if the other details were omitted in the map and recorded solely in the register.

43. I do not think the present rules can safely be altered. Unless interior details are plotted in the case of embanked lands, verification of holding boundaries would become very difficult during kwin inspections, and in Upper Burma, I do not see how the various crops and fallows could be marked with any facility in districts like Sagaing where paddy is only one of several crops grown in embanked river inundated areas. These drawbacks will be immediately realised by anyone who has inspected a *patta* kwin in which the *patta* boundaries are shown without interior details. If the holdings in such kwins are over 3 or 4 acres, estimation with the eye is not sufficient to gauge the accuracy of the boundaries, and tedious chaining must be resorted to.

In unembanked lands interior details need only be sketched in. The rules already provide for this.

V.—Organization.

45. My answer is based largely on my own relations with the officers mentioned.

(i) As between the Superintendent of Land Records and his Deputy Commissioner, the relationship is, I think, satisfactory on the whole. There are, of course, exceptions, but this, one would naturally expect in matters of this kind.

Friction, when it occurs, arises almost invariably in connection with personal matters relating to the subordinate staff, their transfers, punishment, etc. It is impossible, to my mind, to lay down a hard and fast rule defining the degree of control to be exercised by the Deputy Commissioner over his Superintendent of Land Records, for it largely depends on the age, experience and proved impartiality of the latter. A young Superintendent obviously requires close controlling; as his experience widens and his impetuosity gets restrained with advancing years, the control should diminish till it practically ceases to exist, unless of course, that worst of all characteristics in a person with power—partiality—continues to remain ingrained in him. A partial Superintendent of Land Records is a curse to his staff and cannot be too closely controlled.

(ii) As between the Superintendent of Land Records and his subordinates on the one hand and the Commissioner of the Division on the other, I think there should be a closer relationship than that which generally exists. The view of Commissioners appears to be that we have our own Commissioner (of Settlements and Land Records). True, but surely our department should not be relegated by the head of the Division to the background, where its existence and little more are all the recognition it receives. Whatever else results from this general aloofness of Commissioners, there is one adverse effect which it has beyond question; *viz.*, its bad moral effect on the subordinate staff. They see village headmen and the subordinate police, all in touch with the Commissioner on his tours, and feel themselves very much out in the cold on such occasions. This is human nature and particularly, *Burmese* human nature.

(iii) *The Superintendent of Land Records and the Commissioner of Settlements and Land Records and Assistant Director of Land Records.*—I must ask pardon for what, perhaps, is too frank a confession on this point. When I first joined the department, and for many years thereafter, there seemed, indeed, there was, a close bond of sympathy between the probationers and Superintendents and the Director (as the Commissioner was called in those days) and his Assistant. We were as enthusiastic then as the best of us are now, and yet because of imperfect training, the standard of our work was not as high in the earlier years of our service as it is now in the case of junior Superintendents. Despite our imperfections our relations with our superior officers were most cordial,—I may almost say affectionate. It was common to find probationers in charge of districts and Superintendents (even seniors) writing demi-officially to the Assistant Director of Land Records for advice and help. I know even one or two Superintendents who actually went down to Rangoon for interviews at which to obtain assistance. Then came an astounding change. From being on the whole a body of satisfactory workers the Rangoon Secretariat began to regard Superintendents, irrespective of age, experience and reputation, with suspicion and distrust. Diaries would come back with stinging remarks, which did not merely cause discouragement in the extreme but left deeply bitter feelings in the minds of those subjected to them. I know of no Superintendent who was not hurt in this way to a greater or less degree. There was little they could do which was declared really satisfactory, and, doubtless, several, like myself, dreaded the perusal of the remarks on returned diaries. Surely this was a deplorable state of affairs to arrive at, more so from the fact that much that was said (I here speak of my own case) was based on a misconception of facts or on presumptions which were wrong. In conversation Superintendents have complained bitterly to me about this matter. The trouble ceased at the end of 1918 and I am sure Superintendents with their nerves less on edge have worked much the better since the “sniping” stopped. I mention the matter, because I know its evil effects were not realised in Rangoon, and because I hope that my representation will prevent all possibility of its repetition and thus enable Superintendents to maintain the old time cordial relations which have now been happily re-established between them and their superior officers. To treat Superintendents as a body as well as apparently Extra Assistant Commissioners are treated, is the best way to strengthen their position. To ridicule or to otherwise discount what they do, is to weaken that position for what is said against them soon becomes known to their subordinates.

(iv) *Surveyors and Inspectors and Township Officers and Subdivisional Officers.*—Township Officers and Subdivisional Officers throw much unnecessary work on to the Land Records Department largely through thoughtlessness. Every new district I go to I have to point out that Township Officers and Subdivisional Officers should get from the staff as much of the information as possible which they require, on the day fixed for disbursement of pay, instead of halting them in again on some other day. The fixing of a programme of kwín inspections only after consultation with the Inspector on pay

day would avoid delays and disappointments. I find moreover that the Superintendent's office is quite unnecessarily used as a distributing agency,—as a Post Office. Orders from Township Officers and Subdivisional Officers to surveyors and inspectors should issue direct, if there is any irregularity to be checked, it can be done when the Superintendent of Land Records has the matter brought to his notice by the aggrieved surveyor or inspector or when, during the course of his tours, the Superintendent of Land Records inspects their offices. The distribution of registration memoranda, of revenue proceedings, etc., all addressed to the subordinate staff for compliance, should be done direct by the office concerned. The accumulation in the Superintendent's office from six or seven townships and three subdivisions is considerable and should be discouraged.

46. I am much in favour of this proposal. As for the record of mutations, I do not think it will suffer at all. A week or so before the surveyor takes the field he could be required to go round his charge, warning the village headman and cultivators of the date of his visit. Mutations could then be recorded.

47. The proportion is adequate with the present class of Inspectors. If the recruitment of Inspectors is improved I see no reason why, except in a few scattered areas, an Inspector should not efficiently supervise a dozen surveyors whose charges comprise some 350 kwins.

49. With the present system of fluctuating assessments a less highly trained officer than the revenue surveyor would not be able to carry on the work efficiently. I speak from experience. When a Settlement Party was being disbanded some six or seven years ago, the Land Records Department was asked to find places for them. I tried one or two of these men in Minbu and found they could not cope with the work. I also tried a Settlement Inspector as Land Records Inspector. He came with good recommendations but he did not fit in successfully.

But if fixed assessments were introduced I should think village surveyors of a lower standard than revenue surveyors would be able to manage. In that case the revenue surveyor would, I suppose, drop out altogether. The Inspectors will have lighter inspection work and could be allotted such functions of the Township Officer as the granting of *pattas* and leases, the dealing with remissions of land revenue, etc.

50. (a) The training of Surveyors, Survey Teachers and Superintendents is now satisfactory, but Inspectors still receive no special training, although, so long ago as 1916 Mr. Arbuthnot told me that he had a scheme in mind for the better recruitment and more efficient training of these officers. That scheme, if given effect to, will remove one of the chief flaws in the department. So very much depends on the Inspectors that too much cannot be done to improve on their present unsatisfactory standard. It is a great mistake to draw them all from the ranks of the Surveyors. As one of that class they have almost inevitably succumbed to the temptations to be corrupt. It cannot be expected that such officers on appointment to an Inspectorship in their 35th or 40th year, will view with disapproval the self same shortcomings of their subordinates of which they themselves were guilty when they were one of their number. Nor is the present day Inspector as a rule, successful in controlling his men. He is not used

to exercising authority, so that, when suddenly armed with it in later life, he either misuses it or does not use it to a sufficient extent. Mr. Arbuthnot's scheme provided, I believe, for the restriction of promotion of deserving surveyors to Inspectorships, and had in view the direct appointment of young men with good educational qualifications. Their training was to be on the same lines as that of Assistant Superintendents of Land Records. The sooner this scheme is brought into force the better.

(b) I do not think the arrangements satisfactory. What is worse is that, such as they are, these arrangements are not fully carried out. I do not believe one per cent. of these officers takes, or is made to take, his training seriously. Why should he? He knows what is known throughout the Province, *vis.*, that the examination is not a proper test. I mean "proper" in the sense that the officer is not tested and proved to possess the qualifications set out in the certificate given him. More than one of my Deputy Commissioners has told me that he had been "put through" his Land Records examination. Two or three of them did not know how to hold a pair of dividers correctly. One was hazy regarding the use of an acre-comb. This should not be.

Mr. W. F. Ripley.

Superintendent of Land Records, Shwebo.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

8. I am afraid I am not in a position to give an opinion as to method of granting rebates, but from the Manual it appears to me that the working will be rather intricate for the surveyors and will not be understood.

Intermediate rates fixed at different periods are not only simple but are well understood. Now that the intentions are to print the soil class rates on the maps, in place of the soil symbols, there should be no difficulty or errors.

I admit rebates are the fairest, but to me it seems that cases will escape notice and the working will be too complicated.

10. All lands when irrigated from Government systems should be liable to assessment at special water-rates in addition to Land Revenue called occupiers' rates. These should be fixed according to kind of crops raised by irrigation on the commercial value of water supplied and not by the soil. In addition to wet Land Revenue a dry rate should be applied when irrigation fails.

The scale of water-rate should be the same for State and Non-state land.

In minor irrigation works where the supply is irregular separate water-rates should not be levied but Land Revenue rates should include the sum due for water inasmuch that no water rate should be included in the cost of cultivation.

I am not in a position to give an opinion as to irrigation credits, but I am not convinced how the department could have established the claim to this credit.

Should any schedule be revised of credits, it would simplify the accounts work by distributing the consolidated rate into dry rates to be credited to the Land Revenue and the balance to the Irrigation.

1. Yes, the rules are satisfactory and generous as they give the landholder exemption for a term of years to enable him to recover the capital cost of improvements.

I am inclined to think that these rules are not sufficiently known or we should have had more applications. I have only come across one case in my experience and this was a European in Kyaukse, even then I had to show him how generous the terms were. I think that not only should these rules be widely made known but that Government should help cultivators by a financial arrangement, otherwise it is hopeless to expect cultivators to make improvements.

12. The information now in the tax receipts is adequate. In fact I think it is not necessary to shew tenancies. Only owners and occupiers from whom revenue is due should be entered up in the receipts.

Here in Upper Burma separate tax receipts are made out for the areas worked by tenants, I fail to see why this should be done as it is a private contract between landlord and tenant.

In doing so the work is heavier firstly in the maps and registers in having to split up such areas, and making more holdings, then writing up an assessment roll for each and entries again in the tax receipts which are separately issued. Collection is also made more difficult.

The landlord is responsible to Government for the revenue, so why should we worry about the revenue from tenants or increase our registration work in forming more holdings.

C.—Land Records.

20. I am unable to give an opinion, but they appear suitable and it will simplify the work I think.

21. It appears to me that it is not desirable to substitute a receipt book for the present tax receipt on the grounds that not only will it be more expensive but will involve extra labour. Then there is the chance of its being lost and cultivators will not be any more careful than they are at present.

My opinion is, that it would be preferable to continue the use of the present tax receipt, but instead of writing up the assessment rolls from which tax receipts are written up, and from the Register of Holdings from which the rolls are copied, the Revenue Surveyor should be made to write up the tax receipts in place of the present assessment rolls which could be entirely dispensed with.

The information in the rolls is already in the Register of Holdings from which it is copied. The time, labour, and expense saved would not only be invaluable but a better check could be made and the work simplified.

The receipts would be forwarded together with a revenue synopsis for collection.

The argument put forward would be that frauds would result if these were used, but this could very easily be prevented as no tax

receipt would be paid unless signed by the Superintendent of Land Records and the Deputy Commissioner's seal.

Then again the blanks for the kwin name and number in the receipt could be printed and the Surveyor be made to certify the return of the balance number of forms on the synopsis.

The printing of the blanks and the stationery saved in doing away with the assessment rolls would be considerable when it is taken into account as to the number of thousands of assessment roll forms now used in each district.

D.—Executive Department.

22. Beyond the ordinary arithmetical check and kwin inspections I consider the check is inadequate as the time allowed is too short and the work has to be rushed. If the date of collection was postponed to a later date a more careful and proper check could be made.

It seems strange that under the present system more complaints of over or under assessments are not made. As it is proposed to have the soil rates and limits printed on the map in place of the soil symbol there will be less chance of errors.

With the short time allowed for check I have not heard of any large frauds on the revenue that have come to light.

23. I think so. The general opinion of Revenue Surveyors is that they would prefer not to have anything to do with failures and to assess all such lands, as too much blame and responsibility is thrown on to them and their markings always looked on with suspicion.

24. Yes and are generous. There may be cases where cultivators have been hard hit by the Township Officers not having the time to visit all areas.

25 (i). The procedure under the revenue rules is that a notice is served by the Village Headman and on expiry of date he files an application for recovery. The Revenue Officer issues orders for attachment. The *thugyi* prepares a list of the property attached and gets defaulters to furnish security for payment of arrears. He submits list and report to the assistant collector. If the amount is not paid within 15 days of attachment the assistant collector orders sale of property. Proclamation of sale is notified and property sold by auction in the case of non-State land and resumption in the case of State lands. In some Districts the date of collection of revenue is notified. Absentee landlords are asked to register names and addresses. Registered notice is sent twice, failing which, property is sold by auction.

(ii) The Township Officer acts on the report of the Headman. Revenue Surveyors do not as a rule report in this connection.

26. In the case of a defaulter who changes his residence to some other village unknown to the Headman and without the knowledge of the latter, the Headman usually applies to the Township Officer for remission of revenue due from him.

If the defaulter has no attachable property in the village the amount due is remitted by the Township Officer up to a sum of Rs. 25 and higher by the Subdivisional Officer.

II.—The Register of Holdings as a Legal Document.

27. The Register of Holdings is the most important Register of the Land Records. It exhibits the state of the holdings at the end of the year previous, the changes during the year, tenures and assessment.

The orders of Civil Courts and Registration Memoranda of changes are noted.

It gives the Courts and all intending purchasers all the information possible as to titles and rights over and interest in the land. Alienations permanent and temporary are noted.

28. I think so, considering that a very careful enquiry is made for the record of rights.

I do not think that steps should be taken at re-settlement, as the annual Supplementary Survey brings these to date.

29. I do not think it is necessary beyond the check of areas. As regards titles and ownership complaints would be made if anything was wrong.

30. Under Chapter X, Part E, the law requires reports of alienation whether permanent or temporary. These are brought on to the records by verbal reports or in writing through Register VII, Registration Memoranda received, Décrees and Orders of Civil Courts.

It could be improved if it was made compulsory to register all verbal reports to the Headmen in a Register which should be sent to the Registration Office at the end of every month and the Registration Office to issue same in a special form to the Revenue Surveyor. A period should be fixed for which reports are to be made and a penalty inflicted in changes not reported.

31 (i). Yes.

(ii) I am unable to give an opinion as I do not know the system.

32. (a) It is carried out fairly satisfactorily in Lower Burma but not so in Upper Burma as agreements drawn up prior to the annexation have in very many cases not as yet been registered.

(b) In many cases incomplete and unsatisfactory. Anything is registered so long as the Registration Department receive the fees.

In very many cases, names of owners, holding numbers and year are wrong.

My opinion is that no registration should be made unless deeds are supported either with the latest copy of the map or tax receipt. Only Government records and maps should be filed and private survey plans refused as they are generally on a scale quite different to the Standard kwin map and areas or lots made privately are most difficult to locate unless a survey and visit is made to the ground.

Registration should be made according to property by kwins separately as our records are by kwins. Cases have been met where property falling in 3 and 4 Revenue Surveyors' charges in two different Districts have been made in the one document. It is not only difficult to give a true valuation of the land and there is no authority to support the change as the document or memorandum is filed by the last surveyor.

Government loses stamp revenue and record of right is made difficult.

Industrial areas or houses should be differentiated and area and value separately shown in the Registration Memorandum. For a surveyor receiving a memorandum for a sale of a mill and land for one lakh of rupees is at a loss to know what to do when valuation of lands in the locality is required. Registration of sales such as these swell the valuation and Government is the loser in the end.

Would it not be possible to order parties to the transaction to pay the sums stated in the deeds in the presence of the Registration Officer? If it could, it would prevent bogus sales, which are arranged and common, with a view to a higher valuation when it is discovered that Government wishes to acquire lands.

The result is that the record of rights is not only made difficult and no assistance given in keeping the register up to date.

33. Maps and surveys made for revenue purposes are official documents prepared by competent persons and with such publicity and notice to persons interested as to be admissible and valuable evidence of the state of things at the time they are made. They may be wrong but in the absence of evidence to the contrary they may be accepted as correct when made. They are not accepted by Civil Courts generally as Courts go by evidence of witnesses.

IV.—Survey.

40. The staff allowed is inadequate and charges excessive in size. If good and efficient work is required the Register of Fields and Assessment Rolls should be done away with, as there is too much repetition and duplication of work.

The Register of Holdings should show fields, the total being the holdings, changes are shown, soil, rates, revenue, fallows, matured areas and twice-cropped.

At present much of the above information is written in the Register of Fields, which is then copied into the Register of Holdings, from the Register of Holdings the assessment rolls are copied and repetition of work of the above is again copied.

The tax receipts could be written out straight off from the Register of Holdings which gives all the information wanted and the revenue for the different seasons.

In the past one register sufficed and work was just as efficiently done. The time that would be saved in the copying of holding numbers, names, soil class, rates, revenue, would be enormous.

Surveyors have not the time to make proper visits to the kwin with the result that the work is scamped and hurried in order to get the rolls in in time.

The surveyor is at the beck and call of every officer in the District and much of his time is wasted.

41. The present system of splitting up parcels of lands in both the maps and registers entails an enormous amount of labour in having to enter-up and write up many more holdings formed by this, and preparing page totals and abstracts for each main kind.

My opinion is that a single holding should include all main kinds and soil classes.

By so doing, no page totals will be required by main kinds.

Holdings will run serially and no confusing index required, less labour involved and finally the result in the abstract gives all the information by Main Kinds required.

It is simpler and gives the same results and worked well before the introduction of the Manual, and there seems no reason why the old method should not be re-adopted.

42. To copy on the kwin map, the information given in the Supplementary Survey Registers is needless duplication of work. The map should show the soil class, rate of assessment, holding boundaries and name of occupier, there is no justification in entering names of tenants except where a holding is worked partly by a tenant paying an economic rent.

43. (i) Yes, it is absolutely essential to show each field plot in the case of embanked land. As, unless this is done, how is a surveyor to calculate the area by soil classes or show the soil class limit on his maps?

If fields are not shown, portions of fields sold or failures or fallows will not be able to be shown or calculated.

(ii) Unnecessary, a holding survey is all that is required and limits of fallows roughly plotted. Estimates and percentages shown as suggested in the New Manual would relieve the enormous labour now involved in plotting and surveying the areas under different crops.

It may be said that this is an invitation to the surveyor to do his crop marking of *ya* lands in the headman's house but the procedure is to simplify the work, and if the surveyor can get correct information from the headman, there is no harm in it and he must go over the ground to verify his information and he has no excuse to say he was told something else.

The present method of plotting and surveying *ya* crops makes the plan exceedingly difficult to read.

44. The arrangements are satisfactory but would it not be cheaper in the end to let each District do its own printing by giving a litho stone and paper for mapping work? We have the staff to do it.

At present we make a trace which is sent to Rangoon and is retraced and printed, it could be done at once here and more conveniently and expeditiously.

The printing of soil classes is satisfactory and saves the surveyors work, and in place of G¹ G³ why not print 5/4 or 3/2; it will prevent error of wrong assessments being made.

A special staff in the Press would not be required and the work is not difficult. Record-keepers and their assistants could learn the system in a few days and the District needs could be attended to without great delays, and the stock of maps brought up to date.

There would be no excuse of shortage.

The arguments against it are that the maps would not be uniform, but having specimen maps before us in those now printed, we could follow on these lines. I do not think it would be expensive in supplying the litho stone. They could be distributed to the District and the permanent staff and the press disbanded.

V.—Organization.

45. (i) No.

(ii) Could be improved by strengthening the position of Superintendents of Land Records in giving more controlling powers in revenue matters with the Subdivisional Officers and Township Officers. Work will be more efficiently and satisfactorily done and the Revenue Department will be in closer touch with the Land Records staff.

46. (i) It is highly desirable that Revenue Surveyors should be grouped together at the Inspectors of Land Records' headquarters in order to carry out the recess work, the same as is done by the Survey of India and Settlement Department.

By this the surveyors will be under daily supervision by their Inspectors of Land Records and receive more frequent inspections and instructions from the Superintendent of Land Records. There should be great all round improvements in the quality of the work turned out and less delays. Good recess is the basis of good field work.

At present Revenue Surveyors are expected to give up a portion of their houses for an office and Government property while in their charges. Some satisfactory financial arrangement should be made to Revenue Surveyors for the recess for inconvenience caused.

(ii) The only reason for making a surveyor live in his charge is in order that reports of alienation may be made to him. Most reports come through the Registration Office or Courts and the balance is so small and unimportant that the reports might well be made to the Village Headman during the absence of the surveyor as was formerly done in the old Register IX in Upper Burma. Recess is really not the time when alienations are likely to take place.

Revenue Surveyors could examine the Village Headmen's Registers on his visit to the kwins in the open season and sign the certificates that he had entered the changes in his records.

On the other hand, reports of succession are as likely to be made in the rains as at any time and the sixtieth day after redemption may fall in the recess. Hardship is caused to Revenue Surveyors by being away from their families.

If the work is to be done on proper lines Revenue Surveyors should recess at the Inspector's headquarters and have help given them.

47. Yes, but the charges of Inspectors of Land Records and proportion should be gauged by the size of the charges and the amount of work.

No hard and fast rules can be applied nor should the revenue be taken as a criterion. A charge may have a few kwins but work made heavy by the large number of holdings, etc., and the rate small. Then again charges with many kwins but very few holdings which are scattered, the time lost in travelling should be the main factor. For good and efficient work a charge should not be larger than 7,000 acres. It is a physical impossibility to expect Revenue Surveyors' work to be good when larger; they have not the time to visit and record information now required.

48. I myself think that the Settlement and Land Records staffs should work together and carry on the survey and assessment under the Settlement Officer when such operations are in a District.

Superintendents of Land Records should be appointed Assistant Settlement Officers and do the work which is at present generally done by the Provincial Civil Service. Superintendents of Land Records who are fully qualified surveyors and have been handling maps and doing kwin work would be of more help than untrained men.

It has never been given a trial.

49. Work of Revenue Surveyors should not I think be entrusted to village surveyors. It will not only be objectionable but will take years and years before any standard of work can be got from them.

The present arrangements are quite suitable and Government must trust surveyors by allotting the petty functions of Township Officers to them.

Subordinates such as Police and Excise are given enormous status and powers. Why not the Revenue Surveyor? They are quite aware what the result would be if they were caught tripping.

It speaks well for the Department that in all these years there has been no large fraud on the revenue.

I think Surveyors are all branded as being dishonest and in making more money than other Subordinate Government officials, but this is public opinion without enquiries being made or true facts known. If you ask me I should candidly say that they are more honest and that more money is made by other Departments.

50. They are not satisfactory. The Superintendent of Land Records is, if he does his work properly, a very busy officer throughout the year. It is a fallacy to hold that he has less work to do in the recess than in the field season. Why then impose on to the Superintendent of Land Records the training of Inspectors of Land Records in the use of the Theodolite as Theodolite Instructor and can the result as a rule be useful? The instrument requires to be continuously used for proficiency to be obtained in its manipulation. I.C.S. officers after a training of three months confess to having forgotten the handling of the instrument a year or two later. The case of a less intelligent Inspector of Land Records or Surveyor is worse. I hold therefore that any Surveyor or Inspector of Land Records who wishes to be preferred to others for an appointment because of his knowledge of the Theodolite should have a proper and not a sketchy crammed training and the Superintendent of Land Records should not have the duty of instructor imposed on him. The training can best be imparted by the learner accompanying a sub-surveyor in the field for at least a month. He should be required to personally traverse one or two large kwins. If a Survey Party was operating in the district he could be attached to it for a few months and learn fully the duties of a field surveyor and traverse computations.

The idea of the annual field instruction to surveyors is wrong.

For the surveyors who have been at their jobs for a number of years, it seems idle to suggest they need instruction year after year to go over a kwin to mark crop fallows, etc., and extensions. No advantage is gained in plodding over a kwin with him to instruct him in what he is thoroughly competent to do.

All that is required, is to arrange camps once a year and to read over the rules and new orders of the manuals and have some uniform system of work.

(b) With regard to members of the Provincial and Civil Services, the instruction in the Theodolite is not required. The survey knowledge of a field to field survey in plane-table is wanted and he can learn this in a Survey School; as for the Land Records portion he could learn this by accompanying the Superintendent of Land Records.

Training of officers should only take place in the field season as no survey instruction can be imparted in the recess.

VI.—Special Areas.

51—54. In poor and undeveloped areas the present holding system is quite satisfactory. The only thing required is a triennial holding survey of all extensions to be correctly and clearly surveyed in by the surveyor. A map is maintained to shew roughly the scattered holdings in the tracts outside the supplementary survey by the surveyor.

I would not recommend the omission of the collection of the statistics? If these can be collected now without difficulty why not use them. After all areas outside the Supplementary Survey are not very large in each District and due allowance has been made to include such areas and work in the adjoining surveyor's charge. Now that reservists are to be granted Rs. 25 they could be sent to map and bring in such maps and correct figures on the lines of a Supplementary Survey. It is only in very large unsurveyed tracts that difficulty would be met but as I have said above the reservist of a District surveyor can be put on to this work in each district. The Land Records Administration Report Statement gives the areas roughly under each district. They do not appear to be so large or to be difficult to deal with.

In such localities the assessment on the matured area should be levied and not on the occupied area and I think Revenue Surveyors should have the powers to grant remission on fallows and failures. My reasons for this are, these areas are so small and generally in heavily wooded country that great damage is done by wild animals and hardship caused on cultivators in having to be in their fields both night and day to try and get some outturn for a living. These areas being in valleys are heavily flooded as a rule from hill streams and rains. To expect these poor cultivators to come in from these remote areas many miles to the Township Office on a certain date for submission of applications for remission at a time when he should be watching his crops causes not only great hardship, but is absurd.

Surveyors even if they wanted to swindle by using these powers could not get very much from these cultivators who can barely eke out an existence for themselves. Inspectors of Land Records and Superintendents of Land Records who visit such areas could supervise their work.

I do not recommend the assessment by *thamadis*, nor lump sum assessment as these clearings are made according to local condition and rainfall. It would fall hard on cultivators if a lump sum assessment was levied. Assuming that Rs. 50 was fixed in a locality for ten

different cultivators, and five of them had left the locality through loss of cattle by wild animals or disease, or other reasons the assessment would fall heavily on the remaining five; what is wanted is an assessment at the lowest rate of assessment of the nearest kwin; this would help to have these areas speedily developed and cleared. Fever, cost of cultivation, clearing, hardship endured, low prices received, should all be taken into account.

The village-tract should be taken as the unit and not the kwin.

55. I am unable to give an opinion.

56. Surveyors do not assist *thamadis* in lump sum localities in the distribution of Land Revenue Assessments.

57. Cadastral survey of interior details in such localities should not be extended until very large areas of the size of a kwin has been cleared and field bunds established.

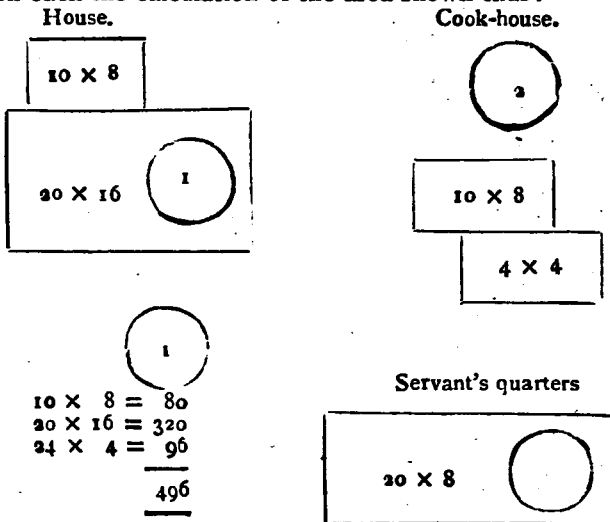
It is not worth the trouble and expense to cadastrally map such areas when cultivation is shifting and changes frequent.

58. The existing arrangements in respect of Grants, Leases, Fisheries, etc., are quite suitable, but my opinion is that applicants should be compelled to demarcate their claims with concrete pillars to avoid disputes, and for identification of their areas. Wooden posts are useless. Applicants for areas of 50 acres and above should I think be so ordered as they should be in a position to afford it if they have the means to cultivate these areas.

Town Lands.

With regard to Town Lands a map is absolutely essential but in order to simplify the work which is complicated by noting every change in the minute details, a register or measurement book should be kept up in place of the elaborate registers now in use.

The dimensions of every building could be shewn on the same scale as the map once a year. In this book the buildings would be shewn in rectangles and the measurement marked on the diagrams and underneath each the calculation of the area shewn thus:—





$$10 \times 8 = 80$$

$$4 \times 4 = 16$$

96



$$20 \times 8 = 160$$

Diagrams to be corrected in red ink when necessary and year of change noted.

This could be depicted on the 64" map once a year for a guide to Magistrates in case of disputes and would be useful to officers when making proposals for schemes of acquisition.

The towns have already been surveyed in detail and no great difficulty will be experienced in keeping up the survey from the measurements which have to be made of every building hereafter.

The map would not be used for assessment but the measurement book. There are advantages in connection with assessment in having a detail survey.

Mr. C. F. Cooper.

Superintendent of Land Records, Mandalay.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment:

1 to 9. While not wishing to deprecate against the excellent work of any settlement, yet much might be done, to simplify assessment by abolishing all ground rates and substituting crop rates for every variety of crop that might be grown on the land. Separate rates would, of course, be applied where, as in the case of paddy, different varieties of a crop were grown. A district would be split up into assessment tracts comprising a certain number of kwins, but the kwin itself would not be subdivided into soil classes. *All fallow as well as non-matured areas in both Upper and Lower Burma should be exempt from assessment.* As regards the rebates outlined in paragraphs 433—439 of the draft Land Records Manual, I have grave doubts as to its actual working by the ordinary class of revenue surveyors and would abandon the idea. No settlement should be for a longer period than fifteen years and any enhancement which the settlement might decide being applied every fifth year. At the same time, it should be open to the Deputy Commissioner to introduce an immediate enhancement on any crop if the outturn is materially raised through the instrumentality of Government such as irrigation works, or to maintain or reduce the crop rate where the outturn is clearly proved to have fallen.

10. By applying the next enhanced rate if not already paying the maximum rate or by having a distinct irrigated crop rate. The question as to how the water-rate should be calculated is purely technical and best decided by the Irrigation Department. The special

additional rate "Cost of construction of water-courses" should be abolished, the initial outlay being recovered through the application of the higher rate of which 50 per cent. of the difference between the old and new rates would be credited to the Irrigation Department.

11. Each case will have to be decided on its own merits and it is impossible to lay down any hard and fast rules. Petty improvements such as raising the height of the *kasins* round an individual holding to keep out flood water pay for themselves in the return received.

12. Yes.

13. See paragraphs 1 to 9 *ante*.

14. See paragraphs 1 to 9 *ante*.

15. The present rules allow of ample scope for any objections to be dealt with satisfactorily.

16. They most probably serve as useful guides in the framing of new rates following settlement as well as for land acquisition purposes. Once the records in the Land Records registers have been entered and deposited in the record-room, no verification is ever made. Share produce rents are common in Mandalay and there is no real reason why they may not be utilized, provided the other factors such as cost of cattle, etc., are taken into consideration in conjunction therewith.

17. It all depends on what is meant by "permanent." I doubt if there is any soil that can be classed as "permanent," in any part of the world if productiveness and superficial soil conditions are included in the term.

18. and 19. These are matters which could be better decided upon by the Financial Commissioner and Settlement Commissioner respectively.

20. There appears to be still too much repetition in the new forms while the instructions are altogether inadequate for the average revenue surveyor to be able to properly compile what is required. It is the surveyor who has to do the filling up of the registers and simplicity should be the first consideration however much the information to be collected is desirable from a settlement officer's point of view. Although the new forms are a distinct improvement on the existing forms, there is much still against them.

21. No.

D.—Executive Department.

22. Generally speaking the present working of the verification of the assessments is satisfactory, but we cannot have too much checking. This is only possible by reducing the average size of surveyors' charges and very materially increasing the strength of the inspecting staff.

23. to 26. A uniform system for both Upper and Lower Burma is very desirable and the concessions made for the upper province might be made to apply equally to the lower. The surveyor in Upper Burma has far too extensive power which I would transfer to a communal board of selected persons. The Township Officer should only be a supervising factor, the Board dealing with all matters and being directly responsible for remissions, collections, etc.

II.—The Register of Holdings as a Legal Document.

27. The law requiring registration of immovable property under the Indian Registration Act and the Transfer of Property Act have a whole lot of sins totted up against them. In years gone by, the register of holdings was undoubtedly looked upon as a proof of title but this is not quite the case at present when the *pyatpaing* is looked upon as having greater value and even this does not stand for much. No transfer should be made unless ordered by a Civil Court. To avoid congestion I would give all Communal Boards jurisdiction over all civil cases where transfer of property is concerned.

28. In cases of original settlement, enquiries into the question of rights undoubtedly afford a good basis for a record of rights though not without error. If the subsequent year-to-year Land Records maps and registers have been correctly maintained there should be no call on a revision settlement party to compile what has already been done.

29. This question needs expanding to be understood. Is it assumed that the Register of Holdings is a record of rights? What is the nature of the attesting to be done and by whom?

30. Where changes in possession are brought to the surveyor's notice they are no doubt brought on to the register, but there is not the least doubt that numerous cases are not so reported, while if on the kwin a surveyor does not meet with someone directly interested in a holding he will pass on to another holding assuming that no change has taken place. As already noted against item 27, a Communal Board would, I believe, be the best solution of the difficulty.

31. It is some years now that I remember seeing a note on the Torrens' system and I am sorry I cannot recall all that was said in it. In the colonies where there are still large tracts of undeveloped country the Torrens' system might be useful, but I doubt the feasibility of applying it to Burma generally. The present system for recording mutations is very unsatisfactory. A registration officer will register any rubbish brought to him provided it is properly stamped and attested even though the document might be fictitious.

32. It is impossible to say definitely what percentage of transfers are actually registered, but I should say that all depends on the distance to be travelled and the value of the property. Cases too numerous to mention have recently cropped up where the memoranda from registration offices have not been worth the paper on which they were written.

33. Land Records maps and registers are made use of very considerably in civil courts and are of great assistance. Uncertified copies have to my knowledge been accepted as evidence in Civil Courts, but this was in years gone by since when the average standard of *Myobks* and surveyors has certainly improved. I do not think surveyors should be called upon in giving effect to decrees affecting land. In a good many parts of India the *patwari* has too much to do with land cases.

34. There is generally far too great a rush in endeavouring to get in the revenue by the time fixed. The *thugyi* is harassed by the Township Officer, the Township Officer by his Subdivisional Officer and so up the ladder.

35. to 39. These are questions on which I cannot offer any suggestions.

IV.—Survey.

40. Far too much is expected of the revenue surveyor. He should not be called upon to do any revision survey of whole kwins except where changes are ordinary and extensions under five acres each. Every district in Burma should have its own flying column who would deal solely with revision or original survey. As an alternative, revision should be dealt with by the Special Survey Party or by a special staff. Revision survey work by the revenue surveyor is more often than not lacking in quality or unsatisfactory and is loathed by every revenue surveyor. The Lower Burma revenue surveyor has a soft job compared with the Upper Burma man.

41. The present system of splitting up areas according to main kinds will disappear if crop rates are introduced. It would perhaps be better to treat as a single holding every continuous parcel of land held by one person irrespective of main kinds and soil classes.

42. I think that the map should show all particulars as hitherto, it being the chief guide when checking has to be done or when reference is desired.

43. Field boundaries should always be shown when *kazins* are permanent. In inundated lands where *kazins* are temporary or of a shifting nature, holding boundaries only need be shown. There is however, an exception to be made in the case of crop boundaries which have to be mapped.

44. The reprinting of maps takes far too long. I hope there will come a time when each district will be self-contained for its needs and that it will be possible to do away with the usual extra trace for the revenue surveyor's use when kwins are republished or resurveyed. A ferro-prussiate print can be turned out in an hour's time and I recommend the use of such prints. Colour printing by the press has not been satisfactory and the Superintendent of Land Records is blamed for the result said to be due to the density of the ink not being uniform or some other quibble.

V.—Organization.

45. Under existing conditions, the general tendency is to cramp all originality. The Superintendent of Land Records is more often than not looked upon as little better than an ordinary clerk and this idea is probably supported by the fact that although it is well known that the Superintendent of Land Records is the brains of the Deputy Commissioner in Land Records matters yet when is he ever asked for an opinion or corresponded with direct? If it is contended that the Deputy Commissioner as head of the district should know of what is taking place, what is there simpler than letting the correspondence pass through him if of sufficient importance. What Superintendent of Land Records is there that is not looked upon as of less significance than the average Township Officer within his township unless capable of exercising considerable personality or driving power. He is hemmed in by a multitude of rules, and Land Records work is

now so burdened as to be little better than any ordinary machine. Any attempt at originality is immediately met with the question. Does the Manual say so or what is your authority for doing so and so? The Superintendent of Land Records should be treated as on the same lines as a Settlement Officer or District Superintendent of Police. Give him greater freedom of thought and action and it will soon be evident whether a Superintendent of Land Records is worth anything or not. As a beginning the following suggestions are submitted: Recognize him as the head of his department in the district as suggested above, all appointments, postings, removals, leave, transfers, and pensions, should be in his hands subject to appeal to the Commissioner of Settlements and Land Records and not the Deputy Commissioner or Commissioner of the Division.

46. The control of the staff should be entirely in the hands of the Superintendent of Land Records as suggested in the previous paragraph. The question of mutations should be left either to the Communal Board or Civil Court.

47. A hard and fast limit is neither expedient nor possible, but I think as an average not more than six surveyors should be placed under an inspector.

48. Whenever a settlement party intends to start operations in a district, arrangements should be made to utilize the revenue surveyors on regular settlement duty either over a part of their charge or for at least a year over the whole of their charges. The surveyor is much more conversant with the conditions prevailing in his charge than a settlement man who is only a bird of passage. The settlement party in their turn should replace all Land Records men taken away for settlement. There will then be greater sympathy between both Land Records and settlement men. The Settlement Officer should deal direct with the Superintendent of Land Records. Unless cordial relations exist between the Settlement Officer and Superintendent of Land Records the subordinate staff of both will not be slow to note the same and probably useless correspondence and waste of time take place. By this I mean that it is not in the least intended or implied that the Deputy Commissioner should be ignored, but what I do mean is that the Superintendent of Land Records is the best or at any rate should be the best person to be acquainted with the conditions of the district and his opinion should not be ignored. I would even go to the extent of putting the Superintendent of Land Records on settlement duty for the whole term of settlement as an Assistant Settlement Officer and make arrangements for his temporary relief for the time. Only then can reasonable understanding and mutual benefit result.

49. The revenue surveyor is the mainstay of the revenue administration and any change on Indian lines would be inadvisable. So long as we have a system of fluctuating assessments we must trust the surveyor but we can make it much more difficult for him to indulge in any malpractices by increasing supervision, by reducing the number of surveyors to an inspector's circle, by reducing the average size of his charge and by giving every district an Assistant Superintendent of Land Records. Communal Boards if established would also hold a check on the work of surveyors. Inspectors might, first as an experiment and then if satisfactory, be entrusted with remission cases and thus relieve the Township Officer.

Fixed assessments are only suitable in special cases. If acre rates are maintained, most of the old and well established holdings of Lower Burma might be given fixed assessments.

50. *Revenue Surveyors*.—I would abolish all apprentices and reservists and in their place I would bring in a new class and call them assistant revenue surveyors. Their number would be equivalent to the number of surveyors' charges in a district. On passing out of school they should be attached to a charge for one year. The second year I would give them charge of one whole *thugyi's* circle within the charge and in the third year placed in charge of an easy surveyor's charge. He would then be examined and if he passes he would start as a regular revenue surveyor or if he fails, got rid of if considered worthless.

Survey Teachers.—No one should be appointed as a teacher unless he has had a thorough training in surveying, both in theodolite and plane table survey of at least two years with a survey party.

Inspectors.—Appointment to this grade should be by promotion from revenue surveyors. I would bar all others such as Settlement clerks, etc.

Assistant Superintendents and Superintendents.—At least 50 per cent. of the appointments should be held by lads of European extraction as a stiffening to the department. The period of training should be four years, *i.e.*, two years Survey, one year Land Records and one year Settlement. If favourably reported on by each successive officer, no final examination appears necessary. In other respects the existing rules appear suitable, except that the High School final might be accepted in the case of applicants whose mother tongue is English.

Members of the Commission, Provincial and Subordinate Civil Service.—The theodolite training is an out-and-out farce. By all means let them have the plane table portion. Six months solid with a survey party and six months in a Land Records Office. The Land Records portion should be only in an Upper Burma district and should include the actual work of the surveyor for at least one kwin.

VI.—Special Areas.

51. to 56. The population and extent of cultivation are factors to be taken into consideration in deciding whether any particular area should be brought under the lump sum assessment scheme. Where conditions are such as to render regular supplementary survey operations difficult or expensive, compared with the probable return, I think it would be sufficient if maps were prepared by *thugyi's* charges on, say, a 4-inch scale showing kwin boundaries and the limits of cultivation omitting all holding boundaries and interior details. Instead of acre rates, an outturn rate might be adopted, the demand being made on the kwin and distributed by the *thugyi* and *thamadis*. The district surveyor should have a set of these maps to be renewed once in three years and his charge should be split up into three divisions, one of which he might attend to in rotation for survey of new cultivation. He would be more an assistant to the Township and Subdivisional Officers for checking outturns and in helping the *thugyi's* and *thamadis* in working out the demand. If the population is considerable and the area great I would introduce regular Land Records principles. A reversion to the *thathameda* system is not desirable.

57. The only instance where cadastral survey may precede occupation is in colonization schemes, but I would not call it a cadastral survey but a "lay-out." You might have blocks of about a square mile with interior plots of 10 or more acres demarcated on the ground and a working plan not necessarily to scale, but showing the measurements like a Public Works Department plan along each line. After cultivation had been well established only then would a detail survey be advisable.

58. Existing arrangements in respect of surveys of Grants, Leases and Fisheries are satisfactory.

Town Lands.

As regards Town Lands this is an altogether different problem where various factors have to be considered, *e.g.*, nature of Municipal (if any) assessments, size of the town and its needs, etc. Each town has its own peculiarities to be considered.

Mr. H. A. Hardless.

Superintendent of Land Records, Officer in charge of
Special Surveys, Burma.

Survey.

IV.—This branch of the Land Records work should always be left in competent hands—in the charge of an officer, who can spend the whole of his time to supervise it, or the work is not worth the paper it is done on, without this supervision.

2. In the two branches of this work (traverse and cadastral) every effort should be made to have the traverse ahead of the cadastral, the traverse being done in the first year and the cadastral in the following year. By adopting this procedure better work and a bigger outturn will be the result; and it will stop "fudging" on the part of either the traverser or the computer that is setting up at Head Camp. Should the work be hustled and both branches be completed within a year, the chances are that at some future date the work, when properly scrutinised, will be found to be faulty, if there has been any "fudging" on the part of the survey staff.

3. Another point that ought to be emphasised is "the area given for survey." This area should be personally checked by a responsible officer (not lower than the rank of an Assistant Superintendent) and his report taken, and when the area has been surveyed and completed and traces of the new survey sent to the Land Records office, the Inspecting Officer when on inspection should comment on the resurvey work, and give his opinion whether the survey was justified, and point out those kwins which did not need survey.

4. The division and formation of kwins, when resurvey is going on, should be solely in the hands of the Superintendent, and he should be the authority for any subdivision into smaller units, or amalgamation with other kwins; this duty should not be delegated even to a very senior Inspector of Land Records.

5. Partalling of kwins in the field should be done on the lines of the Survey Manual, and done in a professional manner, with a record to show that partals were done, so that were a single offset doubtful, it could be referred to in the field book. Board partals should be abandoned as it is only an incentive to first class fudging.

6. The recess work must be checked and supervised daily by the officer-in-charge, who will see that everything relating to the day's work is being done under his very own eyes or the system of check, which is so essential in surveying, will be lost. Too much stress cannot be laid on this point, and every Superintendent of Land Records, and every Inspecting Officer knows the value of this supervision.

7. The traverse portion of the work, being entirely professional, should be carried out in terms of the Survey Manual, but care should be taken to see that the man that works out the traverses should not be the man to check it. The work done by any one man should never be checked by him at all. All work must be checked and counter-checked before it is put up for final passing by the officer-in-charge, who will then employ his own checks to satisfy himself that the work is of a high standard.

8. In conclusion, I would like to say that efficient work is the output of men with experience, men who have worked at the job for a number of years and have mastered it. However good a new worker may be if he has never done work of this nature, it will take time for him to turn out work of any high standard which will bear the scrutiny of a professional eye.

Duties and Proposed Reorganization of the Special Survey Party.

I have always advocated the separation of traverse work from cadastral work. The traverse work should precede cadastral work by at least one field season. Only on this system can professional accuracy be guaranteed. I am therefore of opinion that it would be a sound thing if the Survey of India were to take over the traverse work. There would, however, probably be difficulties as they would be more exacting than myself. They would insist on being supplied with two inch pipe maps showing the condition of the permanent survey marks with printed sheets of the kwins for resurvey showing the proposed subdivisions, and with the original sheets or the latest revision survey sheets for all adjacent kwins. I have to get these at present by worrying the Superintendents for them which takes up time, and is apt to cause friction.

2. If there were no traverse work, I consider that a suitable area, for a season's cadastral survey (provided that it was reasonably compact and not scattered over various parts of Burma) would be 150,000 acres. For this area the Special Survey Staff should consist of the Superintendent, one Assistant, five Inspectors, thirty to thirty-five surveyors, and about 150 chainmen, three to each Inspector and four to each surveyor. At the present rates of pay such a party would cost about Rs. 40,000 a year.

3. With such a party confined to cadastral work it would be well to place the organization on a permanent footing. At present the

men are re-engaged from year to year. We have men working in the Rangoon office during the whole field season. These are not at all employed on survey. The survey work is largely done by Indians who go to India during the rains; last year all the Indians about forty in number went to India for three to six months. There is therefore no certainty of our being able to get them back again. But as a matter of fact all of my present Surveyors except three or four were working under me last season as surveyors or chainmen. There are two difficulties in placing the staff on a permanent footing. One is that a larger staff is required in recess than in the field, and some men would therefore have to be engaged temporarily. This difficulty, however, could be surmounted by treating these temporary hands as apprentices who would do recess work in office and gradually train on from chainmen in the field to become surveyors. Another difficulty is the custom of finishing the work by the first of October when our maps are due to be sent to the Press. If the recess work can be carried on throughout the year and the maps sent as completed instead of by a fixed date this difficulty would be removed. A third difficulty is that cadastral work is impossible in Lower Burma until the beginning of December; at present we utilize the month of November for traverse work which can be carried on without damage to the crops. Although the paddy is not off the ground until the middle of December or later we get along with the cadastral work in December by sending our men first to the higher lying areas.

4. Almost the whole of the work done by my party for the Revenue Department is purely cadastral, field to field survey. We therefore have nothing to do with holding marking and as the holdings can be marked from the fields plotted on the map nothing further is required of us. Two or three years ago in Myaungmya an experiment in holding survey was made. A similar experiment had previously been carried out in Bassein. The survey of holding boundaries without interior details should be preceded by demarcation. In Myaungmya we were supposed to receive plans from the Demarcation Officer showing the position of his demarcation posts but we did not receive these for all the kwins, and for some kwins in the south of the district the Survey Inspector had to demarcate the holdings for the surveyor. The arrangement was that we should supply the Demarcation Officer with maps so that he might complete his proceedings. Had there been any dispute it would have been necessary for us to resurvey the disputed area in accordance with the rules and directions under the Boundaries Manual, but in no case were we called upon for any resurvey of this nature.

5. In cadastral survey very little time is saved by omitting to survey field details, it takes nearly as long to survey holding boundaries as it does to survey field details. The difficulties with regard to field details would arise in maintaining the survey; in area where holding surveys are likely to be suitable cultivation is not usually established, and field details alter considerably from year to year. This difficulty could be overcome by plotting the *kazins* with dotted lines instead of with firm lines. It would then be unnecessary for the surveyor to attempt the maintenance of field details in such areas and the map would probably be sufficiently accurate in most cases to give considerable assistance in fallow marking.

6. So far as I understand the description now given me by the Committee of the Sight-Vane plane-table survey and the manner suggested for its application, I see no difficulty in adopting it and it would afford a very considerable saving of labour. I understand that by Sight-Vane system, plane-table system, the Committee suggests that holdings might be surveyed by erecting pegs at bends and plotting these by the intersection of lines from two fixed points without any chain survey at all. The system would not be accurate, but if connected up with permanent survey marks at frequent intervals it would not be seriously wrong and quite accurate enough for ordinary revenue survey. It would be found especially suitable in broken country and on *ya* land with large holdings.

Mr. W. M. B. Smart.

Superintendent of Land Records, Kyaukse.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. I do not think there is a more satisfactory method of estimating outturns both in Upper Burma and Lower Burma than by crop measurements. Selections, however, I think should be more numerous and crop measurement operations should extend for a period of at least two if not three years in Upper Burma. Even in a well irrigated district like Kyaukse the small annual rainfall (28 inches) has a very appreciable effect on crops. In Lower Burma, where the rainfall is certain, probably one year's crop measurements would suffice. Generally speaking records of prices can be accepted as a safe basis for valuing produce. Enquiries into out-of-pocket expenses appear to be a safe basis for reckoning cost of cultivation. At present the cost of all commodities is very high, and as no one can state whether they will rise or fall in the near future, some allowance will have to be made in ascertaining the cost of cultivation. The allowance to be made for the labour of a cultivator and his family should not be less than Rs. 15 per mensem for each adult and Rs. 10 per mensem for each child, *i.e.*, those under sixteen years of age.

3. Rents may be a rough guide but not a safe basis for assessment for the following reasons:—

(a) Tenants seldom state correctly the amount of rent (baskets of paddy) paid by them to the landlord.

(b) The actual outturn of a holding cannot be ascertained by a Revenue Surveyor unless he actually supervises measurements, and this the Revenue Surveyor has no time to do (paragraph 578 of the Land Records Manual).

(c) Rent is paid in kind and its value in rupees worked out at the average rate during the month of March. The value divided by the area of the holding gives the rate per acre paid by the tenant as rent. As prices are not constant the rent per acre paid by the tenant varies. In many cases also the price of the seed and cost of hire of plough cattle, etc., supplied by the landlord to the tenant have to be taken into account.

The above remarks apply generally to paddy holdings cultivated with paddy. In Kyauksè conditions are more complicated. A tenant grows two or more crops on a holding. A part of the holding may have early sessamum in the *Kaukyin* season and the whole holding may be under paddy in the *Kaukkyi* season or only a part is under paddy in the *Kaukkyi* season and the remainder under beans in the *Kaing* season.

4. A reference to the assessment rolls shows that the assessment in holding in Kyauksè varies considerably from year to year. This is due to the variety of crops grown at different seasons and to the existence of crop rates. Fixed assessment, I take it, means that a certain assessment will be fixed for the period of settlement and the cultivator must pay whether he cultivates or not or even if his crops fail. Such a system I think is not advisable especially in Upper Burma districts.

I would state however that I see no reason why crop rates should not be abolished in preference to soil class rates. In the latter case there would be only one assessment in a year no matter how many crops are grown. I think crop rates discourage the introduction and extension of new crops, e.g., sugarcane in Kyauksè is assessed at Rs. 12 and Rs. 10 per acre. The area under sugar-cane in 1901-02 = 783 acres, it rose to 1,047 acres in 1902-03. The area then fell to 153 acres in 1909-10. In 1919-20 the area = 730 acres. That is to say the area under sugarcane has been for the last nineteen years more or less stationary. In the case of plantains it is the same. In 1902-03 the area under plantains = 8,864 acres and rose to 10,823 in 1906-07. It then fell to 4,050 acres in 1909-10 and gradually rose again to 5,652 acres in 1911-12. The area in 1919-20 = 6,936 acres.

Both the crops fetch a good price and that the area under them has not extended, is I think, due to the high crop rates added to the high cost of cultivation.

5. Conditions in Lower Burma and in the irrigated and precarious tracts of Upper Burma are not the the same and hence the system of granting exemptions must vary.

6. I do not think assessments should be fixed on crops.

Rates should be soil class rates no matter what crop is actually cultivated.

8. The provisions of paragraphs 433 to 437 of the draft Land Records Manual appear to be quite suitable both as regards Lower Burma and Upper Burma. In Bassein after the recent revision settlement the demand on certain holdings was doubled, not on account of the raising of the rates, but chiefly due to the raising of the classification.

11. The arrangements mentioned in Chapter IX, Part B, appear suitable.

12. The following information is entered in the tax-tickets as prepared in Kyauksè District :—

- (a) Name of owner.
- (b) Name of mortgagee and tenant, if any.
- (c) Names of crops grown in the holding.
- (d) The total demand on the holding.

This information is I think sufficient so long as the present

system of making over the assesment roll to headmen for the collection of revenue is continued. The cultivator can easily satisfy himself as regards rates and areas by referring to the roll when he pays the demand to the headman.

The Draft Land Records Manual does not contemplate that the roll should be made over to the headman. In this case it will be necessary to show the soil class area and rate, and if crop rates are continued the preparation of tax-tickets will be a lengthy business.

B.—Settlement Department.

13. and 14. Assessments should be as simple as possible and any further differentiation than is at present followed will lead to a multiplicity of rates which should be avoided.

17. In irrigated districts like Kyauksè I do not consider it is possible to fix the classification permanently. Deterioration of and improvements to canals and the opening of new works are certain to affect the productiveness of the soils, *e.g.*, *kaing* land may be converted into paddy land as happened in several instances in Kyauksè owing to irrigation. Again deterioration and exhaustion of the soil on account of continual cultivation will also have an affect on the classification.

C.—Land Records.

20. Mr. Lowry's revised Land Records forms are not in use in Kyauksè as yet. I have only recently prepared sample entries for 20 holdings in a kwin for a period of four years and have found the forms quite suitable.

21. I do not think it is possible to substitute a permanent receipt book for the annual tax receipt. It is bound to be lost in a short while and when there is a change in ownership I have my doubts if the old occupant will make it over to the new occupant. The Burman is much too casual to do so.

D.—Executive Department.

22. Each assessment season lasts about three months and within this period (i) Revenue Surveyors do their crop marking and prepare their rolls and (ii) Inspectors and Superintendents check the work of the Surveyors. This period is too short for a thorough check of assessments even in Lower Burma, where there are only soil class rates and paddy is the only crop, owing to areas to be checked being very extensive.

In districts where crop rates are in force the checking is still more difficult.

As regards the Revenue Office, the *Akunwun* can only check the assessments against the rates and classification shown in the roll. He cannot however check the classification as the maps are not sent to the Revenue Office with the rolls. In the time available I think the rolls and tax-tickets are sufficiently checked.

23. Total failures and fallows are not assesed in Kyauksè District. As regards partial failures I think the rules are satisfactorily applied.

24. There are no fallow rates in Kyauksè. The present procedure, see Direction 143, Upper Burma Land and Revenue Regulations,

for dealing with application for remissions requires to be amended. It is not always possible for Township Officers to inspect the crop soon after the receipt of the application and the cultivator is not allowed to remove his crop until the Township Officer has paid his visit. What generally happens is, the cultivator refrains from applying for a remission, removes the crop and pays the demand so that he may have sufficient time to raise a second crop. Perhaps it would be possible in the case of failures to allow the cultivator to report to the headman. The latter in company with two elders and the Inspector of Land Records could visit the land and then submit the application to the Township Officer with recommendations. The Township Officer should fix a date to visit the land within 10 or 15 days of the receipt of the application. If the Township Officer does not visit the land on the date fixed the cultivator should be permitted to remove the crops that have failed.

25. The following is the procedure followed.—

(a) *State Land*.—The Headman after ascertaining the whereabouts of the owner as far as possible, reports to the Township Officer who submits the proceedings through the Subdivisional Officer to the Deputy Commissioner. A notice of demand is then issued, one copy being fixed on the land and the other on the headman's notice board. If the demand is not paid within a month the Township Officer reports to the Deputy Commissioner who resumes the land and remits the demand.

(b) In the cases of non-state land the land is attached by the Township Officer and if the demand is not paid the Township Officer proceeds to auction the land. Having sold the land the proceedings are submitted to the Deputy Commissioner, for confirmation of the sale.

In both cases absentee owners I believe do not receive sufficient notice. Cases of resumption and sale are few as absentee owners generally arrange with their tenants and the latter pay the demand and deduct the amount from the amount which they pay as rent to the landlord.

26. Headmen do not apply for remission of revenue which they cannot collect. See 25.

II.—The Register of Holdings as a Legal Document.

27. When an original settlement takes place the Settlement Officer holds the necessary enquiries into tenures and occupancy rights (Chapter X, Part B of the Settlement Instructions). All details regarding tenures, names of owners, etc., are copied from the Settlement Registers into the Land Records Registers in the first year of Supplementary Survey. Year by year all changes in occupancy and area are recorded in the Land Records Registers. These changes are based on reports of transfers received by the Surveyors. When the entries in the Registers do not agree with the actual facts it is chiefly due to the failure of persons concerned to report transfers. It seems to me therefore that the Register of Holdings is a Record of Rights.

28. Once the Settlement Officer has completed his enquires into tenures at the time of original settlement operations I do not think the

matter should be re-opened at Revision Settlement. It is up to the occupants to appeal against the Settlement Officer's findings at the start.

29. I do not think it is possible for the Settlement Officer to bring the Register of Holdings up to date as the Settlement Registers would be at least two years old before they came into the hands of the Land Records Surveyors and in these two years changes would have taken place.

30. Judging from the errata statements that I have received from the Revision Settlement Office now working in the district I should say that at least 40 per cent. of the transfers are not reported by cultivators. The only remedy seems to me to be to fine heavily all who fail to report.

I would also like to point out certain difficulties experienced in recording mortgages.

Example—(i) A, the occupant, mortgages the holding in 1917-1918 to B, and this mortgage is duly recorded in Registers I and V. In 1918-19, B mortgages the said holding to C, and C mortgages to D. As the first mortgage has already been recorded, it is not clear what should be done as regards the second and third mortgages. The Land Records Manual states that only the last mortgage should be recorded.

(ii) Again A mortgages (usufructuary) his holding to B, and B mortgages (non-usufructuary) it to a Co-operative Society. How should these mortgages be dealt with?

31. I do not consider it advisable to permit Surveyors to make any alterations without a report being received.

32. (a) Property exceeding Rs. 100 in value is generally transferred by registered deed.

(b) The information furnished by the Registration Office is generally complete. I have come across a few instances in which the name of the alienor does not agree with the name in the Land Records Registers. This is generally due to an intermediate transfer that has not been reported.

As registration memoranda are filed in the Register of Mutations, I think that transfers relating to two or more kwins should not be included in a single document. There should be separate documents for each kwin.

34. Any deficiencies that may exist do not seem to result in serious administrative difficulties or hamper the collection of revenue.

IV.—Survey.

40. The regular staff of Revenue Surveyors is not adequate or competent to carry on surveys of whole kwins. The practice followed in some Lower Burma districts of calling away surveyors from their respective charges and grouping them in areas where revision surveys are taking place during the months of March and April is unsatisfactory. It means that in these charges work on Supplementary Survey Registers and compilation of figures for the annual reports has to be done by surveyors not engaged on survey. It puts the surveyors who do not draw big salaries to a lot of extra expense and hence is the cause of discontent. In districts where there is a succession of

assessment seasons, as is the case in Kyaukse, the above practice cannot be followed. In Kyaukse, there is a flying column of three surveyors who do all revision surveys. I think every district should be furnished with a flying column. The strength of the column should be determined according to the size of the district. There are at present in the Province two Special Survey Parties. One Party is engaged in revision of cadastral areas and the other in executing surveys of Mines and Rubber leases. I think there should be at least one more Party for re-survey of kwins.

41. I do not think any holding should contain more than a single Main Kind, but I see no objection to there being one or more soil classes within the same holding. That a holding should contain only a single soil class would lead to an increase of work. I do not think it advisable to have more than one Main Kind in a holding.

42. The present practice of recording all details both in the map and registers should be continued. The kwia map is the most convenient record for handling out in the field. It is also necessary to record the details in a register for the purposes of working out cropped areas, assessments and other statistics.

43. All field boundaries should be surveyed and shown in the kwia maps both in the case of embanked and unembanked lands. Without field boundaries it would be impossible to work out :—

(i) the areas under each crop and (ii) the assessment when the crop rates are in force.

44. (i) Judging from the time it takes to get maps printed it is clear that present arrangements are inadequate.

V.—Organization.

45. I think the Superintendent of Land Records should be given some authority over headmen so far as Land Records work is concerned. In every instance that I have had occasion to report a headman both the Subdivisional Officer and Township Officer have invariably sided with the headman and put the blame on the Land Records Officers and headmen knowing this take little or no notice of Land Records Officers.

Superintendents should I think be given the authority to transfer inspectors and surveyors without first obtaining the Deputy Commissioner's approval.

46. I think it would be an excellent idea if surveyors were grouped at Inspector's Headquarters.

I would also suggest that quarters be provided by Government for the inspectors and surveyors for which the men could be charged a small rental of Rs. 5 per month.

An office building in which they could all work should also be provided.

I do not see why the grouping of surveyors at Inspector's Headquarters should prejudice the record of mutations as the cultivators will be certain of finding the surveyors at certain definite periods of the season.

47. The present proportion of inspectors to revenue surveyors is, I think, adequate.

49. I do not think it is at all possible in any case to entrust the work of revenue surveyors to a less highly trained staff of village surveyors. Nor do I think that the present class of inspectors and surveyors could be entrusted with functions of Township Officers.

50. (a) It is really the apprentice surveyor who needs a proper grounding in Revenue and Land Records duties for a start. The arrangements for his training as laid down in the Draft Land Records Manual I think is suitable. The rest is a matter of time and experience.

(b) As regards members of the Commission, Provincial and Subordinate Civil Services, I think the period of training should be extended to six months. During this period they should be made to do the recess and field work for at least two kwins and to survey a whole kwin, to ink up the map and prepare the area statement. This will give the officers an idea of the duties of a Revenue Surveyor. The training should be in a selected Upper Burma District.

Mr. R. C. Barber.

Superintendent of Land Records, Yamèthin.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

1. Crop measurements (carried out during the settlement operations) may be said to be a *safe guide* for estimating outturns in Upper Burma, but I do not think they can be said to be a *safe basis* for estimating outturns, for various reasons, *e.g.*, due to seasonal conditions, selection of fields, faulty reappings, several other causes beyond the control of the cultivator, etc. (*vide* paragraph 112 of the Report on the Tharrawaddy Settlement and paragraph 124 of the Report on the Meiktila Settlement).

As stated by Mr. McCallum, in paragraph 112 of the Tharrawaddy Report above referred to, "the best indication of fertility is the admitted outturn, for a whole holding, provided that the truth of the admission can be assured." He used the information freely. Mr. Arbuthnot also used them as a check on his reappings (*vide* paragraph 85 of his Report on the Settlement of the Hanthawaddy District). Mr. Keith was, however, rather sceptical as to the reliability of these statements. Now these admitted outturns can be compiled with greater accuracy from the Revised Land Records Register IV. In terms of paragraph 536 of the draft Land Records Manual the normal outturn to be shown in column 24 "is that which the landlord asserts when fixing the rents." Hence, they can be used with greater confidence by the Settlement Officer.

In addition to the crop reappings to be done by the district agriculturists, the Inspectors of Land Records and selected surveyors should also be made to carry out crop measurements each year without detriment to their regular duties. These figures will be of great assistance to the Settlement Officer.

Record of prices.—The average price worked out by the Settlement Officer may certainly be taken as a safe basis for valuing produce

in *safe areas* or *protected areas*. For precarious areas like Yaméthin and Meiktila, for instance, I do not think they can be so explicitly relied on (*vide* paragraph 161 of Mr. Keith's Report referred to above).

Cost of cultivation.—In order to get the *net produce*, on which the calculation for assessment is based, some explicit rules should be prescribed for deriving at the *true cost* of cultivation. As pointed out by Mr. Keith in paragraphs 67 and 68 of the Meiktila Settlement Report "out of pocket expenses" should include the plough cattle and the home labour. In fact the expenses should be so calculated that the resultant figures should represent the amount for which "a non-agriculturist could get all the operations of agriculture performed."

2. *Proportion of net produce.*—No definite proportion of net produce as the share of the State can be laid down. So long as fluctuating assessments are in vogue, the proportion to be fixed in different localities should be left to the discretion of the Settlement Officer. The procedures hitherto adopted by the different Settlement Officers appear to be quite fair.

3. *Rents for Assessment purposes.*—Generally rents are of no value for determining rates suitable for a fluctuating assessment (*vide* paragraph 175, Meiktila Report, and paragraph 112 of the Hanthawaddy Settlement Report). They can, however, be used as a check on the proposed rates.

4. *Fluctuating and fixed assessments.*—Mr. Keith in paragraph 141 of his report says "the wholesale extension of the system of fixed assessments in a district like Meiktila would undoubtedly involve a large annual loss of revenue." This also applies to all the other Upper Burma districts. The saving of the costs of maintaining the Land Records staff would not counterbalance the loss of revenue on well established kwins. The system of fluctuating assessment should be retained, but in the safe areas like Lower Burma (excluding notified areas) and the protected areas irrigated by major canals (as in Shwebo), the system of fixed assessment on holdings might be introduced.

5. *Variations in the system of fluctuating assessment.*—The answer is in the affirmative.

However, in connection with places where crops are only exempted if they are total failures, I would suggest that in an admittedly bad year (as in the case of this year) this order should be temporarily superseded for that particular year by a notification in the *Burma Gazette*, or by authority of a letter from the Local Government, exempting from assessment all crops, if they yield less than one-fourth of the average.

Again, there are certain places, which, though included in the non-precarious areas, nevertheless enjoy no better seasonal conditions than those of the precarious area in their neighbourhood (for instance, the northern portion of the Pynmana Subdivision). For these areas the Financial Commissioner should have the authority to declare by notification that in such localities all crops should be exempted from assessment if they yield less than one-fourth of the average (on the analogy of Rule 77A of the Lower Burma Land Revenue Manual).

6. *Special Crops.*—When net produce is calculated, it is only fair and equitable that only the staple crop should be taken into consideration. "Special crops" will cost more to cultivate, but the value of the

gross outturn is greatly in excess of the proportionate cost of cultivation. Again, although a certain area is in one year cultivated with onions (a special crop) it may be cultivated with chillies (which is generally also a special crop) in the next year. Perhaps it may be followed by a non-special or an ordinary crop, hence, the net produce cannot be deduced on such lands. Mr. Keith, in paragraph 282 of his Settlement Report of Meiktila, writes "the cultivation (*i.e.*, onions) fluctuates in sympathy with the harvest of the previous season, increasing with widespread failure and falling off when the outturn from the winter crops has been good."

As no extra trouble is caused to the surveyor, special assessment on special crops should be continued.

11. *Exemption Certificates*.—They are of no use. The Financial Commissioner in his Inspection Notes of the Revenue Office, Yamethin, writes "As the Deputy Commissioner cannot reclassify land in an upward direction and as no Settlement Party is due before 1922, this certificate is not of much use and cannot be considered as a precedent for supposing that these exemption certificates are of any use. When the new Revenue Code is considered they may conveniently be dropped out."

12. *Tax-tickets*.—Now that the system of permanent holding numbering is to be introduced, the information contained in the tax-tickets is quite sufficient.

C.—Land Records.

20. *Revised Land Records Registers*.—Owing to the introduction of the revised Land Records forms, there will be a great saving of much copying, numbering of holdings, etc., during the recess. It cannot, however, be said that the work during the field season has been cut down—on the contrary, experience gained during the current year shows an increase. I am referring to Register III. This is only entered up during the field season, field by field in Parts I, II and IV and sometime also in Part III. This register should be simplified.

Register I should be made into a permanent record of rights. Register II as it stands is not of much use to the Settlement Officer, whereas it gives extra work to the Land Records Department and doubles the risk of errors being made by transferring the entries from the map to Register II and from Register II to the different columns in Register III. Only the first three columns of Register II should be retained.

Register IV. The irrigation columns from this Register should be transferred to Register III. The remarks column should find its place in this space. The space below the form should be left for page totals. Price of produce per 100 local units should be written on top of the page as entries are not required for each holding and in this column the revenue demand on fixed tenancies should be entered. For showing outturns in local units there ought to be four sub-columns, *i.e.*, (a) normal (baskets); (b) actual (baskets); (c) normal (viss); (d) Actual (viss).

For detailed notes please see my criticisms on the revised Land Records Manual.

21. *Receipt Book*.—This is not feasible. It might be suitable for a highly civilised country, but not for Burma. Here, the headmen will not even keep up their visitors' registers and fine registers, which are very simple to maintain.

D.—Executive Department.

22. *Assessment Rolls and Tax-tickets*.—So far as the Land Records Department is concerned the verification of the assessment rolls and the tax-tickets is quite sufficient. The Subdivisional Officers and the Township Officers as far as I am aware, never check the assessment rolls. Tax-tickets are sometimes checked, but in a most perfunctory manner.

23. *Remissions for failures and fallows*.—Rules regarding the reduction of demand for partial or total failures are not very satisfactory. More liberal allowances should be given. In connection with certain crop failures only the Township Officer has the authority to grant remission. The Township Officer has not the time to pay the attention such cases deserve. This power should be delegated to the Inspectors of Land Records. I shall refer to this elsewhere. In connection with fallow rates, however, the term "cultivators" is nowhere defined. I had great difficulty with fallow rates for the short period that I was in Pyapôn.

II.—The Register of Holdings as a Legal Document.

27. *The Register of Holdings*.—As it now stands, owing to omission to report mutation of names, the register of holdings cannot truly be called a register of rights. Mr. Keith in paragraph 336 of his report above mentioned refers to the Register of Holdings as a "Register of Wrong." More stringent steps should be taken than is done at present, to have the alienations of lands reported.

30. and 31. If more stringent orders are adopted as suggested in 27 above, and if the Register of Holdings is to be recognised I think the desired objects will be obtained.

32. *Transfer of Property Act*.—This is carried out near large towns, but in remote places, the cultivators still fail to register alienations. Registration Memoranda are forwarded for registered deeds and these do, to a certain extent, help to keep the Register of Holdings up-to-date.

33. The Deputy Commissioner's remarks "I believe, there is a ruling to the effect that the Civil Court is only to accept the name on its first record."

34. As far as I am aware the present system has not caused any serious administrative difficulty. Faulty names on tax-tickets sometimes do give a bit of trouble in revenue collection, but the headman can always refer the matter to the revenue surveyor. However, now that permanent holding numbers are to be introduced, the headman will gradually come to learn which holding is referred to even though the name in the tax-ticket may not be correct.

IV.—Survey.

40. Unless the work has been neglected in the past or unless a whole heap of maps gets out of stock at the same time, I think

the regular staff is quite adequate. The surveyors and inspectors do require a little more training than they have hitherto received and if this is done they can easily replenish the stock of maps in the district by resurveys and *kasin* corrections. With the proposals now under consideration to reduce the recess work a great deal, the surveyors will have ample time to finish their resurvey recess duties.

41. *Holding Boundaries*.—The existing system is the best.

42. *Maps and Registers*.—The system now prescribed in the revised Manual is very suitable. As regards entries of names on maps, paragraph 480 is quite sufficient. Crops must be shown on the maps, as they are easier to handle in the field. They will also facilitate checking by inspecting officers.

43. In the case of permanent embanked land the existing system of field to field survey should be retained. In the case of *yas*, holding surveys will be quite sufficient. In the Pynmana Subdivision, there are some paddy lands, which are now grown with sugar-cane in alternate years. When this crop is grown all the *kasins* are destroyed, this being the case, in *kwins* where sugar-cane is grown only the holding-survey should be done.

44. Reprinting of maps is quite satisfactory. In the case of colour-printing of soil classes, a little more care should be taken first by the Land Records Office and then by the Press to see that the soil class boundaries coincide with the field boundaries.

V.—Organization.

45. The existing system has been working fairly well, but I think the position of the Superintendent of Land Records and the Inspectors should be strengthened. Take for instance, the remission on partial failures and fallows. It must be admitted that the Superintendent of Land Records and the Inspector of Land Records know more about the matter than the Township Officer, and yet the Township Officer has the authority to grant remissions. As already stated above, the Township Officer has not the time nor the training to attend to these remissions with care. I think the Inspector of Land Records should be given some of the revenue functions of the Township Officers. Of course, if this is done, the pay and the status of the Inspectors of Land Records should be improved proportionately. Personally, I do not see why the Inspectors of Land Records should not be treated on the same lines as the Inspector of Excise or the Inspector of Police. If we improve the status and the pay, a better class of men will be attracted to the department, with this, incidently of course, better outturn of work. While on this subject, I think it is mere waste of time and money in writing out tax-tickets in the Revenue Office. It can be easier and more quickly done by the revenue surveyors (please see notes on Land Records Manual).

46. All the surveyors should be brought to work in Inspector's headquarters. This will ensure better work. It will not prejudice the record of mutations, as these can be attended to in the field, and from reports from Registration offices.

47. With the present class of men, I do not think the proportion is adequate. It should be say, at least 1 to 6 or at most 1 to 7.

48. It has always been dinned into our ears that the Settlement Officer knows something of Land Records work, but the Superintendent of Land Records knows nothing about settlement work. As the Land Records Department and the Settlement Department are akin to each other I think Superintendents of Land Records should always be given a couple of years' training in the Settlement Department, and one or more posts as Settlement Officer should be kept open for the Land Records Department.

50. Revenue Surveyors should be given more thorough training in all branches of Land Records work, including surveys.

If the status and pay of the Inspectors of Land Records are to be improved they should also receive some special training.

Maung Tin Gyi.

Superintendent of Land Records, Lower Chindwin District.

I.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

4. The present system of assessments is fluctuating to the extent that the cultivator is never assessed when his land remains fallow. In years of bad rainfall his holding is generally omitted from assessment, but often it happens that the revenue surveyor is too strict in his marking of failures and the holding is assessed though it may not have produced one-fourth the usual outturn. The degree of strictness exercised by the surveyor depends on how his superior Inspecting Officers have been classing lands as failures. Sometimes the surveyor is too lazy to visit every part of the kwin with the result that the cultivator does not always get the full benefit of the rule which entitles him to remission of revenue in the case of partial failures. In my opinion, fixed assessments with certain modifications would in the long run benefit the cultivator. In Upper Burma the fallowing of lands is often a matter of necessity and is due sometimes to lack of rains at ploughing and sowing time and sometimes due to the exhaustion of the soil. The precarious nature of the rainfall also causes sometimes a total destruction of crops and it is in these years of disaster that the cultivator is in need of relief from taxation. Complete remission of revenue in the case of fallows or total failures should in my opinion be allowed.

5. The maintenance of the present system of fluctuating assessments has several drawbacks which is to the detriment of the average cultivator. Theoretically the cultivator always gets remission of revenue when his holding does not produce one-fourth the usual outturn as ascertained at Settlement, but in practice the estimation of outturn has to be done while the crops are still on the ground and it is therefore dependent on the surveyor's idea of what constitutes a one-fourth outturn. If the Superintendent of Land Records and his staff of Inspectors are strict in crop-marking, the surveyor generally tries to err on the safe side by not allowing crop failures too freely. Only obvious failures are therefore omitted. His neglect to visit all parts of the kwin thoroughly also accounts for many of the errors met

with in marking failures and the net result of all this is that the cultivator often gets his holding assessed. My own inspections convince me that a very strict watch is necessary or incorrect crop-marking is the usual result and it is doubtful if the cultivator gets remission of revenue in all cases which should entitle him to this concession. Moreover, the temptation to commit fraudulent assessments is great in all places where the revenue rates are high and the strictness which is necessary to guard against the evil practices of the surveyors leads to the disadvantage of the cultivator. In my opinion surveyors on a small pay should not be given power to omit fields from assessment in the case of partial failures. It is true that the cultivator whose holding has been assessed can apply for remission to the Township Officer, but the small holding cultivator in Upper Burma rarely if ever resorts to this remedy as the small amount of revenue involved does not compensate him for the time and trouble required to apply to the Township Officer. The present revenue rules which require the cultivator to keep the crops standing for inspection and the time limit imposed for the application of remission of revenue deters cultivators from applying for remission. The present year illustrates how cultivators would rather pay the revenue by some means or other than think of going to the Township Officer for relief. All over the district the crops have been partial failures and yet there has not been a single application for remission of revenue in any Township Office. Joint petitions were however presented to the Deputy Commissioner by many villages asking for relief from taxation this year.

12. The information given on the tax-ticket in this district does not contain the name of the owner when the land has been mortgaged with possession, the name of the mortgagee only being entered. It would be more satisfactory if the owner's name be also entered as this will help the owner in ascertaining if his holding is still shown in his name. At present the tax-ticket merely shows the actual area assessed during the year and does not give any information of the size of a man's holding. If the tax-ticket gives fuller details, it would afford the cultivator a valuable means of ascertaining the accuracy of the records in the Land Records Department and the area of his holding so that he will take a more intelligent interest in the work of the department and make reports of all changes in the area and the ownerships of the holdings in which he is an interested party.

C.—Land Records.

20. As the revised Land Records forms have not yet been given a trial in this district, it is difficult to say whether it will in actual practice tend to reduce the labour of the revenue surveyor. There is no doubt however that recess work will be reduced a great deal and fewer mistakes will be made in copying, but it is doubtful if there is any material reduction in the labour involved in preparing the registers at the field season. The number of registers has been increased and the necessity of transferring the entries from one register to others seems to me cumbrous and does not facilitate checking by inspecting officers.

II.—The Register of Holdings as a Legal Document.

27. The number of errors found in the record of names in the registers and maps during all my kwin inspections leads me to the conclusion that the present Register of Holdings is very unsatisfactory as a record of rights. Sales and mortgages are reported but successions by inheritance or gift and redemptions of mortgage are never reported in this district. This unsatisfactory state of affairs is due not only to the neglect of the surveyor to make enquiries of changes in names but is also due to the apathy of the Upper Burma cultivator to come forward and make a report. Owing to the large number of cases in each village, it has hitherto not been possible in this district to take action against cultivators who fail to come and report changes in ownership. The inaccuracy of the record of rights may also be attributed to the revenue surveyor's attempt to obtain some remuneration for the trouble involved in recording a transfer. No doubt this action on the part of the surveyor sometimes deters men from reporting. The present Register of Holdings is in my opinion satisfactory only for purposes of revenue collection. The previous year's Land Records Administration Report of this district shows that out of 51,955 holdings checked by the Land Records Inspecting staff, 6,909 errors in the record of names were discovered.

29. Even if the Register of Holdings be brought up-to-date at each settlement and the entries attested, it appears to me that many of the entries will get out of date after a few years owing to the failure of the cultivators to come forward and report. Unless steps be taken first to combat the tendency on the part of cultivators to neglect the report of changes in names, it appears to me that there is little use in correcting the Register of Holdings occasionally at each settlement.

30. Sales are more often reported than mortgages; successions and redemptions are seldom if ever reported. When an owner dies the land passes into the hands of a number of heirs who never take the trouble to report that the lands are now held jointly by a number of heirs and when the property is subdivided after several years, a report is seldom made to the revenue surveyor, who, when the cultivator does come forward and report generally requires all the parties interested in the estate to declare that the division of the property is agreed to. The mutation of names in many cases is delayed on this account and the ownerships in the Register of Holdings continue to be shown in the names of persons who died quite long ago though the land may now be held by the deceased persons' sons and grandsons. In my opinion, the unsatisfactory condition of the Register of Holdings as a record of rights is due to want of facilities for villagers to report as soon as a transaction is completed. Generally when the surveyor comes to a village he is so much occupied with the marking of crops and the preparation of the registers in order that his assessment rolls may be submitted punctually, that he can devote little attention to the changes in ownerships and mortgages and the work of the surveyor in this respect is generally scamped. In my opinion parties to any alienation of land should be able to make a report to the headman as soon as the transaction is completed. Both the alienor and alienee must of necessity go to the village where the land is situated and if there are facilities for making a report, I

think that more changes in names will be brought on to the registers of the Land Records Department. Now that the permanency of holding numbers has been assured there should be no difficulty in recognizing any holding if a Register be maintained by each headman who will send to the revenue surveyor monthly the counter-foils of all reports made to him during the month.

IV.—Survey.

40. So far as my experience goes, I find that the survey done by the regular staff of surveyors is of inferior quality and is unsatisfactory. In an Upper Burma district the time available after the submission of the *kaing* rolls is short and the resurvey of a *kwin* done during the hottest part of the year by a surveyor in a hurried manner is poor in quantity and quality. Instead of having work of indifferent quality passed for reprinting, it would be far better if each Superintendent of Land Records be given powers to employ a number of thoroughly trained surveyors to survey all *kwin* in need of revision. The pay of these surveyors could be paid out of the allotment for chainmen.

For the last two years in this district, I have been employing reservists who are good workers, to carry out *kazin* corrections in all *kwin*s in need of reprint and the results have been highly satisfactory as every field is visited and errors corrected. The work was started as soon as the rains were over and the year's programme completed in time to permit of a thorough check by both Superintendent and Inspector. It was found that the *kwin*s entrusted to the regular staff were generally poor in quality, especially in portions needing a partial survey.

41. The division of holdings according to different soil class rates would increase greatly the number of holdings and it would mean extra labour to the surveyor in preparing his registers. A single holding containing different main kinds and soil classes on [the other hand would materially lessen the work of the surveyor as the number of holdings would be reduced. As the totals of the different main kinds and soil classes can be made separately, there should be no difficulty in adopting this procedure. Any method which would reduce the work of the revenue surveyor would be welcome as he has at present too much to do in the short time he has at his disposal before the *kawkkyi* rolls are submitted. In many charges it is really a race against time and this no doubt militates against any good work being done.

42. If the various details now recorded on the maps are entered only in the registers or in a special field book, the task of checking the surveyor's work would be rendered difficult as it would be impossible to inspect a *kwin* without turning up the pages of the register on passing through every holding. It is on the map that the surveyor records all the various details required and it appears inadvisable to discard the basis on which all the assessments are made at present. I think many mistakes are liable to be made by the use of the note-book only.

43. The limits of a field form the unit of survey and assessment and I do not see how it would be possible to survey only the boundaries of holdings without interior details. Not only would it render difficult the task of checking the survey but it would be almost impossible to rely on the survey map in the case of disputes, etc.

In the case of unembanked lands, the survey of *kasins* on the map renders the work of crop-marking easy as the *kasins* form efficient land marks. In an Upper Burma kwin, it is by no means easy to mark accurately the variety of crops grown within each holding.

44. As regards the reprinting of maps, the only means by which good work may be sent to the Press is to employ a special staff of trained draughtsmen. The work could never be entrusted to the regular staff as supervision is difficult and efficient draughtsmen are few in number. Now that the Press will accept only first class mapping work, provision should be made to employ a small staff of draughtsmen and special funds should be provided without encroaching on the annual grant of money for the employment of chainmen for the regular staff. The computing of areas cannot be done by the regular staff alone as a small staff is absolutely necessary for the second and third workings before an area statement can be passed. By insisting on the preparation of the area statement according to the rules prescribed in the Survey Manual, I have always had considerable trouble in disposing of this work every year.

V.—Organization.

46. The subordinate staff of surveyors should be made to stay at either the headquarters of the township or the Inspector's circle. Better work would result through closer supervision especially during recess time. At present much time is wasted in going about during the rains from one charge to the other and more frequent and extensive check would be possible by grouping the surveyors in one place. It is during the recess season that the surveyors need constant supervision and check, but it would mean considerable hardship to him if he was made to reside for the whole of the recess season at the Inspector's headquarters and within his charge for the rest of the year. I would therefore propose to keep the surveyors at the Inspector's headquarters throughout the year. As they must present themselves at the township headquarters every month to draw pay, surveyors at present have to make a journey, and no great inconvenience would be caused by keeping them at township headquarters permanently. During the field season they can carry out their duties just as well by staying at township headquarters instead of within their respective charges. Government should however provide a suitable building for the use of the surveyors.

As regards mutation of names I do not think it would affect to any great extent the accuracy of the records by the surveyor's residence outside his charge. Even when the surveyor visits the village during the field season, little trouble is taken to come forward and report changes. If facilities for recording changes of ownership be provided by making the headman the recording officer, more frequent reports are likely to be made as soon as a transaction is completed than would otherwise be the case if the parties concerned were to await the arrival of the revenue surveyor when most probably the necessity to report would be overlooked or forgotten. At present non-compliance does not entail any punishment and in most cases the parties are too apathetic to take the trouble to report with the result that our maps and registers get out of date and quite untrustworthy as a record of rights to which any interested person may turn for information.

PART III.

Miscellaneous Notes on the Land Revenue System.

The History and Growth of the Land Records Department.

Supplementary survey in Burma was introduced experimentally in 1880 in the more accessible parts of Hanthawaddy and Bassein Districts. By the end of 1883, five districts had been brought under supplementary survey under the charge of three Superintendents, one from the Survey of India Department, one from the Provincial Settlement Department, and one from the Subordinate Executive Service. Proposals for a gradual increase in the number of Superintendents as fresh districts came under survey were approved by the Government of India in December of that year, but, owing to a lack of funds, the sanctioned totals were never worked up to, and by June 1891 only eight districts in Lower Burma and one in Upper Burma with a total staff of eight Superintendents had been brought under survey. In view, however, of the rapid extension of survey which was expected in the future, sanction was obtained in 1892 to an increase of the number of Superintendents to twenty (eight in Upper Burma), and to the appointment of three probationers. The intention was that gradually, and as actual requirements necessitated, each district should be provided with a separate Superintendent who would work under the control of the Deputy Commissioner, and subject to inspection by a Director of Land Records. Six grades of Superintendents were to be formed on pay ranging from Rs. 200 to Rs. 800 a month. Owing to the special and technical character of the work demanded the appointments were to be distinct from the Subordinate Executive Service. The department was to be open both to the Subordinate Executive Service of Burma and to the officers of the Junior Division of the Survey of India Department.

2. *The Reorganization of 1899.*—By 1897 the scheme sanctioned in 1892 had almost been worked up to, and it was found that with the growth of cultivation in Lower Burma several additional appointments were required to secure efficient administration. Proposals to this end were put forward, and in 1898 the sanction of the Secretary of State was received to the appointment of six new Superintendents on pay ranging from Rs. 150 to Rs. 450.

3. *The Reorganization of 1900.*—Even before the above increase, which had been proposed chiefly with reference to Lower Burma, had been sanctioned, it has become clear that revenue would be lost in Upper Burma, and that the cadastral surveys already carried out would be largely wasted unless the Land Records staff there was strengthened. Accordingly in the 1900 the staff of Superintendents was raised to thirty-one and two additional posts of Probationers, making five in all, were created, while an Assistant Director on Rs. 1,000 was appointed to help the Director in supervision and inspection.

4. *The Reorganization of 1905.*—On the formation of the Pyapõn District an additional appointment was sanctioned in the lowest grade of Superintendents and one of the Probationerships was abolished. In 1904 the cadre consisted therefore of thirty-two Superintendents and four Probationers (including the Rangoon Town appointment). In view of the spread of cultivation, the increase in the Land Revenue, and the growing responsibilities devolving on the department, proposals were made to raise the number of Probationers to five and

to increase the cadre of Superintendents by two appointments, one to provide a Superintendent for the charge of Revision and Extension Surveys and the other for the new post of Registrar, Rangoon Town. Further, owing to the fewness of the well-paid appointments, the slowness of promotion, and the fact that officers who had been transferred to the Department from the Survey of India were suffering a considerable pecuniary loss a revision of the cadre was recommended. All these proposals were sanctioned and as a result the superior establishment in 1905 consisted of the following appointments:—

	Pay. Rs.	Number.
1st grade	700	1
2nd grade	600	2
3rd grade	500	4
4th grade	400	5
5th grade	300	7
6th grade	250	7
7th grade	150—200	8
Probationers	100	5

5. The next reorganisation took place in 1908. The strength of the establishment has been found inadequate to provide for leave vacancies except by putting untrained probationers in charge of districts or by temporarily borrowing officers from the Subordinate Civil Service. The consequent reduction of efficiency made it imperative to obtain sanction to a further increase in the cadre of Superintendent.

An enlargement of the staff was necessitated by the constitution of the Insein District and the appointment of a Land Records officer to supervise the map department of the Government Press.

As the result of this reorganisation the superior establishment included the following posts:—

Number of Posts.	Grades.	Pay. Rs.
1	Assistant Director	1,000
1	1st grade Superintendent	800
2	2nd grade Superintendents	700
3	3rd grade Superintendents	600
10	4th grade Superintendents	500
12	5th grade Superintendents	400
13	6th grade Superintendents	300
<hr/>		
Total	...	42
<hr/>		
3	1st grade Assistant Superintendents	250
3	2nd grade Assistant Superintendents	150—200
<hr/>		
Total	...	6

This cadre provided one Superintendent for each of the thirty-four District Charges, one for the charge of the Special Survey Party, one for the charge of the Map Section of the Government Press and a reserve of six officers for leave vacancies and casualties.

The following special allowances were drawn in addition to their substantive pay by the officers holding certain posts :—

	Rs.
(1) The Superintendent attached to the Government Press—Local allowance	100
(2) The Superintendent in charge of Rangoon Town Lands—Local allowance ...	100
(3) The Superintendent in charge of Rangoon Town Lands—Conveyance allowance ...	60
(4) The Superintendent posted as Registrar, Mandalay Town Lots—Conveyance allowance	50

6. This was the position at the time that the conditions of service were examined by the Public Services Commission. The effect of their recommendations is shown below but, independently of their recommendations regarding the department as a whole, certain re-adjustments were found necessary. The reserve, which represented 14 per cent. of the total strength of the superior staff, did not permit officers to take so much leave as efficiency required. In 1915 sanction was obtained to a further increase of the reserve of officers from 14 to 15 per cent. This added one additional Superintendent to the cadre. It was also found that the casualty rate for the Land Records Service was nearly double the rate estimated in 1907 and almost reached 6 per cent. An additional post was therefore added to the probationary ranks. Thus in 1915 the total strength of the department was :—

1	Assistant Director.
42	Superintendents.
3	Assistant Superintendents.
4	Probationers.

Total ... 50

7. The recommendations of the Public Services Commission are contained in Annexure xi on pages 240 to 243 of the First Volume of the Report. These are summarised in paragraph 15 of the Annexure as follows :—

(1) That so far as practicable a Burman or Indian domiciled in Burma should be appointed to at least every second vacancy in the Department.

(2) That a Committee of persons should be constituted to advise on the selection of recruits.

(3) That the educational standard for recruits should be raised gradually as opportunity offers.

(4) That the possibility of promotion from the subordinate staff to the department should be recognised.

(5) That an incremental system of salary should be introduced and the rates equalised with those proposed for other similar departments.

(6) That the figure for the leave and deputation reserve should be revised every three years in the light of actual requirements.

(7) That an opening should be created in the Settlement Department if this could be arranged without prejudice to the rights of members of the Provincial Civil Service.

Action has been taken to give effect to these recommendations, but it is only necessary to note that the cadre now comprises 1 special post, the Assistant Director of Land Records on Rs. 1,000—50—1,250

forty-one Superintendents on a time-scale of Rs. 300—20—800, four Assistant Superintendents on Rs. 250 and six Assistant Superintendents on Rs. 150—200.

Extracts relating to Conduct of Subordinate Staff from the Annual Land Records Administration Reports.

Dismissed 12. Removed 25. Reduced 3. Otherwise punished 1907-08.
26.

Eight members of the staff were criminally prosecuted for forgery, fraudulent transfers of land and other corrupt practices.

In Thatôn the replacement of the worst of the older members of the staff by new men has improved the discipline, but not the morals of the staff.

In Katha as in Mergui the difficulty of obtaining men makes it necessary to retain men whose services would otherwise not be required.

Tax-tickets.—In Pegu one error of Rs. 10 was discovered on a tax-ticket.

In Ma-ubin 3 headmen were found to have falsified tax-tickets and duplicate tax-tickets were found in the possession of a fourth.

In Magwe cases of tampering with tax-tickets are under enquiry and in Yamèthin one headman is under trial for wholesale alterations.

Six Inspectors and 19 Surveyors left the service for various reasons. 1908-09.

Two Surveyors were dismissed and 1 Inspector and 26 Surveyors removed, 4 Inspectors were reduced to Surveyors and 10 Surveyors to Apprentices.

Although Mr. Paul, Yamèthin, visited a large number of kwins (203) the checks applied scarcely seem to have been sufficient, for later enquiry disclosed gross under-assessments which should have been detected and prevented in the field season.

Tax-tickets.—In Thatôn two tickets were found to be tampered with. One similar case is still under enquiry in Magwe. One village headman in Shwebo is under trial for having collected amounts in excess of the demand by means of altered tickets.

Dismissals 13. Removals 33. These represent major punishments only. 1909-10.

In Shwebo serious under-assessments and falsification of Registers during successive years were discovered and 3 Inspectors were reduced and 5 Surveyors dismissed and 5 others reduced. Eight other Surveyors in this district were discharged for bad work and incompetence.

In Yamèthin irregularities in assessment have not entirely ceased. Three Surveyors were removed for this cause and 10 others reduced for bad work. The work of the field staff is reported as unsatisfactory in Frome, Ma-ubin, Meiktila and Katha.

Thirty-four Surveyors were removed or dismissed in the course of the year, but no Inspectors were so punished. 1910-11.

The staffs which are badly spoken of are the Kyaukpyu, Katha, Shwebo, Yamèthin, Thatôn and Ma-ubin staffs, but in the last two districts there has been an improvement.

Tax-tickets.—Only in two districts did the check bring to light anything except clerical errors.

1911-12. In Shwebo though the tickets in one village had been altered, responsibility could not be fixed on the headman.

In Magwe the tickets were tampered with in 4 villages.

One headman who had delegated the duty of collecting his revenue was fined; in other cases inquiry was pending at close of the year.

1910-13. Two Inspectors and 36 Surveyors were removed or dismissed during the year, while 3 Inspectors and 40 Surveyors were reduced.

It was found necessary to take drastic action against the staff in Shwebo, Meiktila and Yamèthin on account of dishonesty and slackness.

Tax-tickets.—In most districts the check of tax tickets was on the whole less in quantity than in the previous year, revealed clerical errors only. One of these in Yamèthin District, would, if undetected, have involved a loss of Rs. 200.

The errors found in Henzada were astonishingly few and in Sagaing extraordinarily numerous.

In Thayetmyo a headman who was caught tampering with the tickets absconded.

A suspected case of fraudulent alteration in Thatôn was under investigation at the close of the year.

Three Inspectors and 45 Surveyors were dismissed and 3 Inspectors and 52 Surveyors were reduced during the year. It was found necessary to take drastic action against the staff in Akyab, Thatôn, Thayetmyo, Minbu, Shwebo and Yamèthin.

In the last named district a Surveyor was prosecuted for what seemed clearly to be fraudulent failure in marking, but the Court held that he had acted honestly within the limits of the wide discretion allowed him.

1913-14. Two Inspectors were removed or dismissed and 4 suspended or reduced during the year. Fifty-eight Surveyors were removed or dismissed and 62 suspended or reduced.

These figures represent the disciplinary measures taken by the Department, and though the totals appear formidable, the figures would probably compare favourably with those of any other department considering the conditions under which the men work, * * *

Only two men were criminally convicted during the year. The districts showing the highest number of punishments are Akyab, Myingyan, Minbu, Hanthawaddy and Pegu.

One case of fraud in Kyauksè, Surveyor convicted and Inspector suspended.

Tax-tickets.—In Prôme, Lower Chindwin and Katha alterations or fraudulent collections of revenue were detected.

In Prôme a headman had by alteration collected Rs. 10 in excess for his own benefit.

In Lower Chindwin the *thugyi* and his son altered tax-tickets and collected Rs. 138 in excess.

1914-15. In Katha apparently a duplicate set of tickets was issued for nine holdings and the headman collected the demand twice.

During the year 1 Inspector was dismissed, 3 removed and 6 reduced or suspended.

Amongst Surveyors, 10 were dismissed, 36 removed and 70 reduced.

or suspended. There were also 28 resignations and several of these were undoubtedly due to pending enquiries.

Two Surveyors were criminally convicted during the year.

The following districts show the highest number of punishments, Akyab, Rangoon Town, Tharrawaddy, Shwebo, Kyauksè and Meiktila.

The punishments in Kyauksè have been due partly to corrupt practices in the past.

In Meiktila the district authorities consider that too much discretion is given to the Surveyor in crop marking and that he is unable to resist the temptation of false fallow and failure marking when properly approached by the cultivator.

Tax-tickets.—The check of these indicated fair standard of accuracy, most of the errors found were clerical, and it appears that these were due mostly to faulty section writing of the tax-tickets.

In only two districts were fraudulent alterations of tickets found.

During the year 1 Inspector was dismissed and 13 suspended or reduced.

Amongst Surveyors, 14 were dismissed, 32 removed and 70 suspended or reduced, a decided improvement on the returns of last year.

Four Surveyors were convicted of criminal offences.

Tax-tickets.—The majority of errors found were clerical and of little importance and this indicates the section writing is on the whole well done.

In Akyab a *thugyi* had altered the tickets and made over-assessments, yet it was only after considerable difficulty that the villagers were induced to admit the fraud on the part of the *thugyi*. 1915-16.

Another fraud was detected in Insein District and there is reason to believe that two *thugyis* in Katha and three in Shwebo tampered with the tickets.

In Minbu two *thugyis* assisted the Superintendent in detecting frauds on the part of two Surveyors who were subsequently dismissed.

A private individual on a bogus ticket raised a considerable mortgage on a fictitious holding. This rogue is now in jail.

Three Inspectors were removed, one dismissed and 8 suspended or reduced. Amongst Surveyors, 19 were dismissed, 30 removed and 68 suspended or reduced. In more than one district several men resigned to avoid punishment. 1916-17.

Tax-tickets.—Action has been taken in Sandoway, Henzada, Toungoo and Sagaing against headmen for altering tickets, elsewhere none but clerical errors were found.

In some parts cultivators scrutinize their tax-tickets closely but in other places, through the hurried and bad writing and the fact that details by soil classes and revenue rates are not entered, the cultivator, who too often has no idea what an acre means, pays the demand, whether greater or less without question.

Except perhaps in Myaungmya and Amherst the change for the better in the conduct of the staff is remarkable. Of the Inspectors, 2 were removed, 1 dismissed and 8 suspended or reduced during the year. 1917-18.

Among the Surveyors, 8 were dismissed, 24 removed and 77 suspended or reduced.

The number who resigned to avoid punishment and other causes was less than half the number who resigned last year.

Tax tickets.—Compared with last year the check of tax-tickets by Superintendents and Inspectors shows a falling off in the number of kwins checked. Only in three districts did the check bring to light anything but clerical errors.

In Henzada two headmen are under trial for tampering with tax-tickets and in Mergui though the tickets in one village had been altered, responsibility could not be fixed on the headman. In Shwebo one case of tampering was brought to light and the enquiry is proceeding.

The practice of merely comparing the tax receipt entries with corresponding entries in the register of holdings whilst sitting under a tree or in a *sayat* constitutes no check and should be discontinued; the check of 10 receipts with a map and registers on the spot and in the holdings they concern is of considerably more value than 50 receipts compared as above.

1918-19 The permanent field establishment of the Land Records Department now comprises 200 Inspectors, 1,891 Revenue Surveyors and 20 *Taiksayes*.

Two Inspectors were removed, 12 suspended or reduced and 6 resigned or retired during the year.

Among surveyors, 7 were dismissed, 20 were removed, 80 suspended or reduced, and 50 resigned or retired.

The field staffs of Rangoon Town, Insein, Hanthawaddy, Tharrawaddy, Katha and Yamèthin are said to be good and Ma-ubin, Toungoo, Tavoy, Pakòkku and Magwe satisfactory.

The Deputy Commissioner, Sagaing, says there has been widespread dishonesty among the staff, but speaks hopefully of the possibilities of improvement.

Tax-tickets.—The total number of kwins in which tax-tickets were checked by the Superintendents of Land Records and Inspectors has arisen from 6,108 last year to 7,274 this year.

In three cases in Bassein District demands had been raised to a higher figure than that in the Rolls.

Statement of Dismissals, Removals, etc.

Year.	Dismissed.	Removed.	Reduced or Suspended. (a)	Otherwise punished.	Criminally convicted.
1907-08 ...	12	25	3	26	8
1908-09 ...	2	27	13	25 (c)	...
1909-10 ...	13	33	18	...	...
1910-11 ...	34 (b)	...	...	...	...
1911-12 ...	38 (b)	...	43	...	...
1912-13 ...	48 (b)	...	55	...	1
1913-14 ...	60 (b)	..	66	...	2
1914-15 ...	20	39	76	28 (c)	2
1915-16 ...	15	32	83	...	4
1916-17 ...	20	33	76	Several	...
1917-18 ...	9	26	85	Several	...
1918-19 ...	7	22	92	56 (c)	...
Total ...	278	237	611		
Average ...	43		55		
Percentage	2.15		2.75		

(a) Includes men subsequently removed or dismissed.

(b) Includes removals.

(c) Indicates resignations, in several cases to avoid punishment.

**Extracts relating to Remissions from Annual Revenue
Administration Reports.**

1911-12.—The total amount of land revenue remitted during the year was Rs. 7,10,971. The figures reflect the exceptional extent of the damage done by floods in various parts of the Province. Most of the districts which show the heaviest remissions show also decreases of assessed area owing to the non-assessment of tracts where the destruction of crops was complete. The principal sufferers were Hanthawaddy (Rs. 3,09,330), Ma-ubin (Rs. 1,99,855), Thatôn (Rs. 18,593), Tharrawaddy (Rs. 15,409) and Myaungmya (Rs. 12,491).

The area on which crops failed to mature in Lower Burma was 337,454 acres. An increase in the amount of irrecoverable revenue due from squatters who disappeared after the harvest, is recorded from some districts. (Figures are not given.)

Upper Burma.—The total land revenue remitted in Upper Burma was Rs. 39,531. The largest remissions were from Mandalay (Rs. 10,000), Yamèthin (Rs. 15,022), Kyauksè (Rs. 4,555) and Meik-tila (Rs. 3,871). In Mandalay and part of Kyauksè floods were the principal reason and in the other districts failures of crops from insufficient rainfall.

The total area that failed to mature in Upper Burma was 727,151 acres.

1912-13.—The total amount of current land revenue remitted was Rs. 1,80,915, and was smaller than had been recorded for several years past. The principal sufferers from damage by flood were Hanthawaddy (Rs. 76,389), Insein (Rs. 13,790), and Ma-ubin (46,939) and between them made up three-quarters of the total amount remitted. In the remaining districts of Lower Burma only Rs. 7,081 in all were remitted on account of agricultural calamities. The principal items were Prome (Rs. 3,750) and Thatôn (Rs. 1,204) on account of damage by floods and Mergui (Rs. 1,490) on account of the death of plough cattle from disease.

The area on which crops failed to mature in Lower Burma was 75,782 acres. The total amount remitted as irrecoverable was close on Rs. 32,000, the bulk of this amount being due from squatters who disappeared after reaping their crops. The amount remitted as erroneous assessments was nearly Rs. 12,000.

Upper Burma.—The total amount remitted in Upper Burma was Rs. 14,630 of which Rs. 6,500 was remitted on account of floods or other calamities and chiefly from Mandalay (Rs. 3,395) on account of drought in the upland tracts and floods in the riverine areas, Kyauksè (Rs. 1,792) owing to damage to the mango crops by high winds and a shortage of early rain, and Minbu (Rs. 748) on account of the destruction of crops by floods.

Practically all the balance of the remissions was the result of erroneous assessments.

The total area that failed to mature in Upper Burma was 484,661 acres.

1913-14.—The total amount of current land revenue remitted was Rs. 2,05,133. The districts chiefly responsible were Ma-ubin (Rs. 61,774), Hanthawaddy (Rs. 33,431), Amherst (Rs. 32,876), and

Thatôn (Rs. 22,057). In Ma-ubin the remissions were largely due to destruction to crops caused by rats and in the other three districts to floods. In Insein (Rs. 8,966) damage by insects was responsible for the larger share of the total remissions and in Mergui (Rs. 3,662) a sum of Rs. 2,548 were remitted mainly owing to the death of plough cattle from disease.

The area on which crops failed to mature in Lower Burma was 68,368 acres. The amount remitted as irrecoverable was Rs. 15,000 and that owing to erroneous assessments Rs. 6,000.

Upper Burma.—The total amount of revenue remitted in Upper Burma was Rs. 29,078 of which Rs. 21,000 was on account of damage to crops by floods and other calamities; the principle items being Minbu (Rs. 7,307) on account of the depredations of rats, Mandalay Rs. 6,647 partly on account of floods and partly of shortage of rain in the upland tracts, Katha Rs. 4,543 on account of damage done by hail and Shwebo Rs. 688 on account of shortage of rain. Practically all the balance of the remissions was the result of erroneous assessments.

The total area on which the crop failed to mature in Upper Burma was 468,000 acres.

1914-15.—The total amount of current land revenue remitted was Rs. 7,84,974. The principal reason for these heavy remissions was the destruction of crops by floods in various districts of Lower Burma. Destruction was most serious in Ma-ubin where Rs. 2,68,755 had to be remitted. In Insein applications for remissions induced by the prospect of a poor market for the harvest were made wherever any hope of success existed the ground advanced was most commonly the failure of the late rains but some damage had also been done by floods. In many cases remission was not found to be justified under the rules, but Rs. 86,038 was finally remitted. Remissions on account of destruction by floods were made in Hanthawaddy (Rs. 75,641) and in Pegu (Rs. 25,030); and on account of floods in the middle of rains and drought at the end, in Bassein (Rs. 31,692), Henzada (Rs. 27,993), Toungoo (Rs. 28,689), Thatôn (Rs. 42,386) and Amherst (Rs. 54,069).

The area on which crops failed to mature in Lower Burma was 314,940 acres.

The amount remitted as irrecoverable was Rs. 63,158. The economic conditions following the outbreak of war put serious difficulties in the way of payment; and the poorness of the season led frequently to the abandonment of land. The amount remitted on account of erroneous assessment was Rs. 25,339.

Upper Burma.—The total amount remitted in Upper Burma was Rs. 3,43,370 chiefly from Yamèthin (Rs. 15,300), Minbu (Rs. 7,179) and Shwebo (Rs. 3,156).

The total area on which crops failed to mature was 723,800 acres and was ascribed to destruction of crops by floods and the failure of the late rains.

1915-16.—The total amount of current land revenue remitted was Rs. 5,00,263 and of which the greater portion was due to destruction of crops by floods chiefly from Hanthawaddy (Rs. 1,01,896), Insein

(Rs. 1,03,463), Ma-ubin (Rs. 1,23,038), Toungoo (Rs. 30,074), Bassein (Rs. 22,176), Myaungmya (Rs. 10,786) and Mergui (Rs. 14,018).

The amount remitted as irrecoverable was Rs. 72,162 and that on account of erroneous assessments Rs. 19,097.

The total area on which the crops failed to mature in Lower Burma was 204,859 acres.

Upper Burma.—The total remissions in Upper Burma amounted to Rs. 43,254. With the exception of Rs. 28,647 remitted in Yamèthin owing to failure of crops from deficient or untimely rainfall, agricultural calamities accounted for no large remissions of revenue and was chiefly from Thayetmyo (Rs. 2,156), Mandalay (Rs. 3,504), Shwebo (Rs. 1,018) and Kyauksè (Rs. 4,026). The failure of harvests in Meiktila and other dry zone districts was dealt with by non-assessment or by general reduction of assessments. The total area on which crops failed to mature in Upper Burma was 690,671 acres.

1916-17.—The total remissions amounted to Rs. 2,17,224 of which Rs. 1,40,974 was on account of the destruction of crops by floods chiefly from Bassein (Rs. 41,966), Ma-ubin (Rs. 39,000), Hanthawaddy (Rs. 12,869), Toungoo (Rs. 9,305) and Yamèthin (Rs. 20,994). In Lower Burma Rs. 39,794 was remitted as irrecoverable and Rs. 14,327 were erroneous assessments. The total non-matured area in Lower Burma was 117,404 acres.

Upper Burma.—The total remissions in Upper Burma amounted to Rs. 14,054 chiefly from Yamèthin (Rs. 21,615), Meiktila (Rs. 1,740), Kyauksè (Rs. 3,391), Mandalay (Rs. 10,742) and Minbu (Rs. 4,008).

The greater part of the remissions in Yamèthin were due to floods in the Lewe Township. In the other districts the season was generally favourable, but scattered areas were affected in different ways, some from too much rain and in others untimely rainfall or drought.

The total area on which the crops failed to mature was 572,156 acres.

1917-18.—The total amount of current land revenue remitted was Rs. 3,05,330 of which destruction by floods accounted for Rs. 2,41,388 chiefly in Ma-ubin (Rs. 78,594), Toungoo (Rs. 48,493), Thatôn (Rs. 33,558), Hanthawaddy (Rs. 17,991) and Yamèthin (Rs. 37,484).

In Lower Burma Rs. 79,000 was remitted as irrecoverable and Rs. 17,770 were erroneous assessments. The total area on which crops failed to mature in Lower Burma was 125,684 acres.

Upper Burma.—The total remissions in Upper Burma for the year amounted to Rs. 48,045 chiefly from Yamèthin (Rs. 38,157), Kyauksè (Rs. 2,525) and Sagaing (Rs. 2,856). The total areas on which crops failed to mature was 619,761 acres. Untimely and badly distributed rainfall with periods of drought was responsible for the failure of crops. The major part of the remissions in Yamèthin is due to flooding in the Pyinmana Subdivision due to the Paunglaung and its tributaries overtopping their banks.

1918-19.—Total remissions amounted to Rs. 13,15,386 (*against a ten-year average of Rs. 4,95,000*) of which floods accounted for Rs. 11,05,299, chiefly in Hanthawaddy (Rs. 78,500), Insein (Rs. 4,16,747), Tharrawaddy (Rs. 42,765), Bassein (Rs. 25,554), Henzada (Rs. 9,777), Myaungmya (Rs. 13,182), Ma-ubin (Rs. 4,21,581), Thatôn (Rs. 99,249) and Amherst (Rs. 23,786).

Special remissions Myoðks were required in Hanthawaddy (1), Insein (2), Myaungmya (1) and Ma-ubin (2).

Rupees 73,822 proved irrecoverable and Rs. 24,393 was due to erroneous assessments. The total non-matured area in Lower Burma was 409,943 acres.

Upper Burma.—The total remissions amounted to Rs. 35,640 chiefly in Yamethin (Rs. 21,758), Kyaukse (Rs. 3,528), Mandalay (Rs. 4,065), Minbu (Rs. 2,685) and Thayetmyo (Rs. 1,060) and is attributed to failure of crops owing to deficient and untimely rainfall. Of the Rs. 2,685 remitted in the Minbu District, Rs. 2,278 were due to damage to crops caused by rats.

The total area on which crops failed to mature in Upper Burma was 688,054 acres.

Year.	Lower Burma.		Upper Burma.		Total for Province.	
	Total land revenue remitted.	Total area on which crops failed.	Total land revenue remitted.	Total area on which crops failed.	Total land revenue remitted.	Total area on which crops failed.
	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.
1911-12	(a) } 6,71,440 (b)	337,454	(a) 39,531	727,151	7,10,971	1,064,005
1912-13	(a) 1,22,285 (b) 44,000	75,782	(a) 14,630	484,661	1,80,915	560,443
1913-14	(a) 1,55,055 (b) 21,000	68,368	(a) 23,078	468,000	2,05,133	536,368
1914-15	(a) 6,62,107 (b) 88,497	314,940	(a) 34,370	723,800	7,84,974	1,038,740
1915-16	(a) 3,65,750 (b) 54,121	204,859	(a) 43,254	690,671	5,00,263	895,530
1916-17	(a) 1,19,049 (b) 54,121	117,404	(a) 44,054	572,156	2,17,224	689,560
1917-18	(a) 1,60,515 (b) 96,770	125,684	(a) 48,045	619,761	3,05,330	745,445
1918-19	(a) 1,80,531 (b) 98,215	409,943	(a) 36,640	688,054	13,15,386	1,097,997

REFERENCES—

- (a) Remissions due to destruction of crops by floods or other calamities.
(b) Irrecoverable revenue and erroneous assessments remitted.

PART IV.

Notes on Settlement and Land Records in India.

Memorandum of Explanation by Mr. E. Couchman, I.C.S.,
Member of the Board of Revenue, Madras, of the
Procedure followed in the Settlement of South Canara,
the last original Settlement in Madras.

I took over charge of the Settlement Party after the crop experiments had been completed, the soils classified and arranged in *tarams*, and the Scheme Report submitted. I was only concerned with the introduction of the settlement. The Scheme Report was submitted in 1898 and orders did not pass on it until 1902; we therefore had ample time to examine the classification in detail. Our enquiries did not encourage us to attach much importance to the results of crop measurement as a basis for assessments and showed clearly that the rates had been framed and the calculations on which the rates were based adjusted with a view to producing a suitable revenue rather than to the determination of rates scientifically calculated on the basis of experiment. When we were working we knew the rates which were to be imposed; tested by these the arrangement of soils in *tarams* was frequently found unsuitable or incorrect. In such cases we remedied the error either by grouping or by changing the classification. There were only four groups (except in one *taluk* a specially feverish and backward part of which was placed in a fifth group) and it was often impossible to remedy the mistaken classification by grouping; in such cases we changed the classification. In making a change we considered the *taram* rather than the actual nature of the soil. Even if a soil had been, not incorrectly, classed as good red loam, VII-2, and placed in the second *taram* we might, if we considered the rate unsuitable, reduce it to ordinary red loam, VII-3, and place it in the third *taram*, or to inferior red loam, VII-4, and place it in the fourth *taram*; we considered the rate it would have to pay rather than its intrinsic quality. Everyone had an opportunity of objecting against any item in the registers concerning his land. "33,951 rough *pattas* were issued and no less than 58,648 objection-petitions were received, and more than 70 per cent. of the 712,900 subdivisions into which the occupied land has been divided, was objected to. In general it must be said that the objections were of a frivolous nature. . . All definite complaints which were not evidently frivolous were given for enquiry. Where the classification appeared too high it was reduced. . . relief was granted on 109,508 subdivisions. . . the total amount of relief granted was Rs. 1,08,173, representing a decrease of 4.4 per cent. on the rough *patta* assessment." This was the *net decrease*. Many lands were *raised* during final inspection when the assessment was clearly wrong. Objections were only allowed on definite grounds, capable of proof or disproof; thus a man would be allowed to appeal against the classification of his land as clay instead of sand, but not against the classification of his land as good red loam, VII-3. But where such objections were disallowed we ordinarily examined the classification records and if the classification of that particular field had not yet been checked by a superior officer we would ordinarily during field work take an opportunity of looking at the land and amending the classification if necessary. No fetters were imposed

on the Settlement Officer, he was in no way bound by the original estimate of the Scheme Report, but could reduce the classification according to his discretion. The then Commissioner of Revision Settlement's motto was *solvitur ambulando*. Inspection on the ground was the real means relied upon for rectifying inequalities and the Board of Revenue *never* revised an assessment based on personal inspection by a gazetted officer. That has consistently been the policy of the Madras Government and it has never been found to occasion difficulty.

The classification of wet lands suggested in the Scheme Report was not accepted. It was proposed to classify them by sources on the ordinary lines but the Settlement Commissioner disapproved and we had to re-classify them by level. The result was that five years were wasted.

First class lands comprised those yielding two wet crops by direct flow; second class lands those yielding a second crop only by baling; and third class lands all those growing only a single crop. These were all rain fed, or received private irrigation by dams across hill streams. All the land classed single crop would receive a full supply of water for this crop. The assessment was absolutely fixed. Any one whose land was classed dry was left at liberty to grow a wet crop without any extra charge. This concession is justified by the fact that the improvement of land from single crop to double crop or dry to wet involves heavy expenditure. Except in the Coast group the highest wet rate is Rs. 8-12-0 per acre, *viz.*, Rs. 7 plus Rs. 1-12-0, the latter being a consolidated wet charge of one-fourth the wet assessment payable in all seasons. In the Coast group the rate is Rs. 10, *i.e.*, Rs. 8 plus Rs. 2. An occasional second crop on land registered as single crop wet or a third wet crop on first class land pays nothing at all.

Garden lands were classed according to the number of trees contained; cocoanut was taken as the basis and areca and jack and mango reckoned in terms of cocoanut.

Dry lands are little cultivated, but used for grazing or leaf manure; these were all classed in the usual way and regularly pay the rate fixed whether cultivated or no.

There were no special rates for special crops, not even, for example, on sugar cane which would now be giving a profit of Rs. 700 an acre but only paying at most Rs. 10.

Only in one very bad year since the settlement have any postponements of collections been made. Speaking generally, in South Canara, there are no remissions and no extra charges.

I would refrain from any reclassification at re-settlement, certainly in the case of wet and dry lands and perhaps with some hesitation as regards gardens. Our elaborate classification was introduced as a relief and protection against high rates; now the rents are six to ten times the assessment, and any mistakes are remedied by the rise of prices. For reasons which I have stated in the collection of printed papers dealing with this subject I follow Munro in advocating a fixed assessment and as little interference at re-settlement as possible. The extent of land converted from single crop to double crop wet in the course of the settlement period is altogether infinitesimal

compared with the total area of the district. The case of gardens is more doubtful as there is no question but that they were much under-assessed at settlement but on the whole I would leave them alone. The productiveness of a garden is not easy to estimate at a casual glance and the classification of gardens is work beyond the capacity of the ordinary classifier.

Speaking without any detailed knowledge of the Burma system, I should be inclined to think that the present relative valuation of land might be made permanent without classification of soils. A rough and ready system should work alright in these days when assessments bear so small proportion to rents.

The average wet rate in Madras is a little less than Rs. 6 per acre.

Memorandum of Conference with Messrs. Moir, Stuart and Boag, ex-Settlement Officers, Madras, to discuss certain points in the Madras, Land Revenue System.

1. *Soil Classification.*—In soil classification, ordinarily the first step taken is to divide each village into large blocks according as the land is black or red clay, loam or sand, etc. The classifier then uses as many sorts of each series as he may think necessary up to the five sorts. In doing this he is very largely guided by the opinion of the villagers. It might and frequently did happen that in the first village in which the classifier started work, he took, *e.g.*, the best black clay as III-1, and so on, throughout the series although the best black clay in the village was inferior to that in other villages in the settlement area. This would be rectified by the Head Classifier, Supervisor or Settlement Officer in the course of their inspections in the light of their wider knowledge of the tract and the line was kept as uniform as possible from village to village. When all the villages of, say, a *taluk* have been completed the Settlement Officer has rates worked out uniformly throughout the area for each soil class and compares the assessment on the village resulting from these rates with the former assessment. If he finds that in any particular village the resulting assessment is abnormally high or low by comparison with former assessment he scrutinises the classification of such a village with special care. He might find that the classification was quite uniform between this and the adjacent villages and that the discrepancy between the former and present assessment was due to gross under assessment prior to classification. In such a case he might and probably would leave the classification unchanged; if the enhancement were low it would be realised in progressive increments. He might decide however that the classification in that village was unduly severe on the black or red soils or both. In such a case he would reduce the classification of the best soils from III-1 to III-2 and this would have the effect of lowering the whole series throughout the village, or he might deal with the discrepancies by grouping, *i.e.*, by placing the village in a more leniently assessed group so that although the soil classification remained unchanged the rates on each sort in the series

to be corrected would drop by one or two *tarams*. The essential characteristic is that the classification is done in detail before the Settlement Officer decides the relative valuation from village to village and thus in determining the relative valuation from village to village he has the soil classification to assist him. This description of the classification relates to what used to be done when classification was an ordinary part of settlement. At present for the reasons given elsewhere in separate notes the classification is regarded as permanent and ordinarily remains unchanged. At the outset the classifications seem to have followed very closely the actual nature of the soil, but it was subsequently accepted that the distance from the village, and, with wet land, distance from the source, should be taken into account in fixing soil classes. Thus if the land in a village is red loam, VII, the land immediately round the village might be VII-1; land a little further away might be VII-2; and land still further off might be VII-3. Similarly with land under a tank, the soil near the source would be VII-1, soil less plentifully watered would be VII-2, and remote lands VII-3. This difference of the soil values has some correspondence with actual facts; thus land near the village is naturally manured, and land remote from the village would be exposed to wild beasts and heavy expenses of cultivation and carting. Similarly under tanks, land near the source is probably composed of better soil as it will receive the silt but the classification conventionalizes and exaggerates these natural differences so that distance from the village or the source is considered sufficient reason for reducing the classification even although the soil may remain unaltered. The determination of the outturn was effected by crop measurements and by enquiries from cultivators, and by experiment and enquiry conducted in various settlements over a long period it was found that as regards fertility under food crops certain of the "sorts" might be grouped together in the same *taram*. The grouping of sorts in *tarams* is now fairly uniform from district to district although in certain districts red soils may be one *taram* and others two *tarams* below the black. The relative valuation is generally standardised but the standard of relative values is not absolutely fixed or rigid.

2. *Water Rate*.—Land definitely classed as "wet" pays a combined rate determined by the nature of the soil and the source of irrigation. This is the ordinary method of assessing wet lands. The distribution of the revenue between irrigation and land revenue is determined as an accounts process in the office of the Board of Revenue. Land classed as "dry" may pay either a uniform water rate or a differential water rate. The uniform water rate is fixed according to the character of the source from which water is taken and has nothing to do with the dry assessment. It is, generally speaking, Rs. 5 in the case of first and second class sources and Rs. 4 for other sources. Where the differential water rate system is in force the water rate is the theoretical wet minus the actual dry rate. Thus any soil classed as ordinary red loam, VII-3, would pay under a wet crop the rate which VII-3 would pay in the wet scale. But the relative value of soil may differ according as it is irrigated or unirrigated. To get round this difficulty soil may be classed in its two aspects as wet and dry: thus a soil classed VII-3 as dry might receive

a classification of VII-1 as wet or *vice versa*, the wet classification only to be utilised when it receives Government water. Thus the differential water rate differs for each field and leads to complexity in the rates, an argument which is always adduced when there are any proposals to extend it. Unless this system be adopted it is necessary to fix the water rate at a low figure so as not to deter land from taking water. It has to be fixed with regard to the inferior soils, and the rate is therefore too low on the better soils. The object of the differential system is to surmount this difficulty. Another difficulty in connection with the assessment of water rate is the difficulty of distinguishing between wet and dry crops. A wet crop on dry land pays as the water rate the full theoretical wet minus the actual dry. A dry crop grown with Government water pays only a fraction of the wet rate, which is either one-third or one-half. This system makes it necessary to distinguish between wet and dry crops, and the only distinction which can be found consists in regarding a crop as wet if it is scheduled as such by the Board of Revenue on the advice of the Collector. Ordinarily paddy, betel, sugar-cane and plantains would be scheduled as wet, and millet, etc., as dry. Ragi and chillies are examples of crops, the classification of which as wet or dry varies in different districts.

3. *Determination of Net Produce.*—On the Madras system the soils are valued relatively to the food crops only. Under the Burma system commercial crops are also taken into account. It was the general opinion of all the three officers that in Madras they were finally committed to the system of basing the assessment on food crops. But Mr. Stuart and Mr. Boag were of opinion that this convention was due to the soil classification having been done in days when industrial crops were of comparatively small importance and considered that if they were starting with a free hand it would be preferable to take into consideration all such crops as the lands habitually produce including industrial crops, and not to restrict the determination of the net produce to the net produce under food crops. There was some difference of opinion as to whether the best millet land would also be the best for other crops, such as nut, but on the whole they were inclined to the view that the rich black cotton soil which gave the best yields under cotton would also give the largest outturn under millet or nut, and in the case of nut would give so large an outturn as to counterbalance the extra expenses of harvesting. Mr. Moir, however, was doubtful whether it would be possible to base the net produce on commercial crops owing to the large fluctuation of prices and the fact that such crops ordinarily exhausted the land. He pointed out that the cultivation of a commercial crop enabled the ryot to concentrate more capital on the same area and deprecated also any attempt to influence by the rate of assessment the crop which should be grown.

4. *Economic Statistics.*—In Madras there are no figures to show the rented area over the whole province, and beyond the information collected by the Settlement Officers incidentally and *ad hoc* enquiries conducted from time to time by special officers there is nothing to show the pitch of rents. Mr. Moir's enquiries into the pitch of rents showed that the rent might be taken on an average as five or six

times the assessment. This average refers only to land ordinarily rented; the poorer lands are not as a rule rented and investors only buy good land. On the best land the rent is often above this average. Papers read before the Madras Economic Society showed that the cultivators' net income might be taken as six times his assessment. Mr. Moir thought that 80 or 90 per cent. of the land in the Presidency was cultivated by the actual holders. Messrs. Stuart and Boag thought this too high a figure in view of the large amount of rented land in the delta tracts. There is no information regarding the proportion of resident and non-resident occupants of agricultural *ryotwari* land nor how many of the people registered as *pattadars* are agriculturists or non-agriculturists except the census figures which show the number of people who own land. As regards land transfers there is no information beyond that given by the Registration Department, which annually compile figures to show the area of land transferred by registered documents.

Note on the Assessment on Trees, more especially Palmyra Trees in Madras by Mr. F. Noyce, C.B.E., I.C.S., Madras.

As a general rule, no assessment is levied on trees on *occupied lands* in Madras. The ryots possess full rights in such trees both to produce and timber. This was not always the case and when the Board's Standing Orders were first compiled in 1878 "tree pattas" for trees on occupied lands were still in existence. Under Standing Order 18 these were all cancelled and the tree pattadar was left to make his own arrangements with the land pattadar where the two were different persons. The only important exceptions to the general rule are the garden lands of Malabar and South Canara which, as explained by Mr. Couchman, are classified according to the number of trees they contain and the palmyra trees of Tinnevely, the system adopted in regard to which is explained below.

As for trees on unoccupied lands, if the assignment of the land is unobjectionable, it is disposed of under the usual rules, the heirs of the original planters of the trees being given preference over other applicants. Except in Tanjore the value of the trees is recovered from the successful applicant. It was found that this provision frequently prevented land being taken up and its stringency has recently greatly been relaxed. If the value of the trees does not exceed Rs. 50 and the tahsildar or other superior officer is satisfied that the applicant is too poor to pay it, the trees may be assigned free of charge. If it exceeds Rs. 50 and the assignee is unwilling to pay the amount, the trees may be sold by auction.

As for trees on poramboke, *i.e.*, trees on land which cannot be assigned on patta, these may either be given on patta or their produce may be sold annually by auction. Where the trees are given on patta, the pattadar is only entitled to the usufruct. A register of the trees is maintained by the Karnam—the village 2-C Account. My own experience is that this register is carefully maintained and inspected and I have in my own time dealt with numerous cases in

which village officers have got into trouble because trees entered in the 2-A Account have disappeared.

2. The procedure in the Tinnevely District is of interest in connection with the problem of assessing palm trees in Upper Burma. Tinnevely District was settled between 1866-78 by Mr. Puckle, one of the most celebrated of Madras Settlement Officers who was, it is worthy of mention, the only Collector who successfully carried out the settlement of his district. It is unnecessary to summarise the history of tree assessments previous to the settlement or the discussions regarding them which took place at the settlement. It will suffice to say that the rates adopted at the settlement were merely notifications of existing rates; they were not based on any estimates of yield, expenses or prices, at the settlement; all the palmyras, over 12 millions in all, were counted and were divided into four classes—

- (1) Vedali, a seedling,
- (2) Olaivattu, a tree yielding leaves only,
- (3) Kay, a female tree yielding fruit only, and Kattu a male tree yielding juice, and
- (4) Paruvam, a female tree yielding juice.

Where all the trees in a field were in the patta of the land pattadar, the rates adopted for the various classes were those prevailing in the village before the settlement. The total assessment on the trees in the field calculated at these rates was added to the land assessment on the field and charged in the patta of the land pattadar and the charge was to remain unaltered during the period of settlement. Nearly six million trees were dealt with on this principle. How it worked may be seen from the following example—

Survey No.	Pattadar.	Area (acres).	Land assessment.	Number of taxable trees.	Number of Vedalis (seedlings).	Present tree tax on field.	Proposed tree tax.
50	Kumarasamy Naidu	1.50	As. 12	50	25	As. P. 14 6	Re. 1

A "trifle" was added to the existing tax on account of growing seedlings, the trifle being one anna for every 25 or fraction of 25 seedlings. In the above example, the total assessment paid by the pattadar was Rs. 1-12-0. The Government made no claim to the timber of the trees in this class of cases. Where the trees on land held on patta were in the patta of a person other than the land pattadar, the assessment was calculated at the rate of one anna for a female tree yielding juice, six pies for a female tree yielding fruit only, or a male tree yielding juice and three pies for a tree yielding fruit only. This was also the rate for trees on poramboke and assessed waste. The trees were counted every three years when the value of the timber of any trees which had disappeared was collected. Over six million trees were dealt with in this fashion. It was this part of the settlement which proved unsatisfactory. The triennial recounting proved a very heavy burden on the village officers. In

one village alone there were nearly $1\frac{1}{2}$ lakhs of trees. In addition to the labour involved in counting there was the difficulty of identification, *i.e.*, in finding out which trees recorded in the village 2C Account belonged to which man for, as a rule, a man's trees were not in one clump. Other problems arose, *e.g.* as to the penalty to be imposed on missing trees, whether compensation could be allowed where trees and land became the property of the same man, and what exactly was intended by a patta for trees standing on poramboke. The orders passed on these points were not always consistent, but it is unnecessary to summarize the discussions. The main problem before the settlement officer (Mr. Chadwick) at the resettlement of the district, about 1908, was to devise some method of doing away with the triennial valuation. The question arose as to whether, in accordance with the practice in other districts the tax on palmyras might not be remitted altogether but this was considered out of the question as a large part of the district was fit only for palmyra cultivation and the total palmyra revenue amounted to very nearly Rs. 2 lakhs.

Mr. Chadwick's proposals for dealing with palmyra trees were—

(1) *Trees on patta lands* whether both trees and land were in the patta of the same person or held by different persons. The system of periodical enumeration and classification should be abandoned and a system of garden rates similar to those prevailing in Malabar and South Canara should be introduced. Only one patta should be issued for both land and trees. This should be issued to the land pattadar and he should be left to make his own arrangements with the tree pattadar.

(2) *Trees on assessed waste.*—The land should be subdivided if necessary and should be made over to the tree pattadar and the assessment be fixed for 30 years.

(3) *Trees on poramboke.*—There was no alternative but to count these triennially or quinquennially and to fix a rate per tree. The average number of trees standing on poramboke only worked out at 7,000 per village. Mr. Chadwick's proposals for classification were that only three classes should be recognized, seedlings, young trees and full grown trees. The distinction between the first two was to depend upon whether the surface of the tree was still rough or had been smoothed to give access to the climber.

The Government held that it was not possible to work out satisfactorily a series of garden rates for palmyra trees and that the trees must again be counted. As regards classification, they held that seedlings need not be counted and approved the proposed distinction between young trees and full grown trees. The Settlement Officer was directed to prepare rates for each class of trees after the enumeration had been completed, the rates to be so framed that the existing total palmyra assessment was not greatly altered. They agreed that tree pattas for trees on occupied lands should cease to exist and that only one patta should be issued to the land pattadar. A Deputy Collector was placed on special duty to bring about an equitable settlement between tree pattadars and land pattadars. Similar methods were to be employed in dealing with trees on assessed waste. A patta was to be given to the tree pattadar both for the trees and the land on which they stood, a joint patta being

issued where subdivision of the separate interests proved impossible. Tree pattas were to continue for trees on poramboke lands and the trees were to be enumerated triennially as heretofore. All claim to the timber of trees standing on lands held on patta was waived.

The papers sent are incomplete. I find a reference to second group villages in which the rates fixed were 6 pies for full grown trees and 3 pies for young trees and third group villages in which the rates were 4 pies and 2 pies respectively. It looks as if there were first group villages with rates of 8 and 4 pies respectively, but I cannot be sure of this. The assessment on all the trees standing on each field was calculated at these rates, totalled, rounded off to the nearest anna and entered in the patta of the land pattadar, *i.e.*, added to the assessment on the land fixed in the ordinary way, which was probably 3, 4 or 6 annas, the dry rates on the three lowest classes of land. These rates were adopted for trees on poramboke and also for trees on assessed waste where the different tree holdings were so intermingled that they could not be separated and the tree pattadar refused to accept a joint patta for the trees and the land. In these classes of cases the trees were to be recounted triennially.

There is nothing in the papers about the work of the Special Deputy Collector but to the best of my recollection this was most successful and at the end of the settlement, there were very few instances in which a satisfactory arrangement had not been arrived at, usually by inducing the land pattadar to take over the trees from the tree pattadar or *vice versa*.

Trees other than palmyra trees were much less important. Previous to the original settlement a separate tree tax was imposed on individual trees, the rate varying in different villages except that a uniform tax of 2 annas a tree was fixed for cocoanuts about 1858. At the original settlement, the tax on trees standing on land where the pattas for both land and trees stood in the name of the same individual was abolished. For trees on poramboke land and land for which the tree pattas stood in the name of persons other than the land pattadars it was fixed at four annas for mango, tamarind and illupai and two annas for cocoanut. At the resettlement the tax on all trees on occupied land was abolished. Tree pattas for such trees were cancelled and tree pattadars were left to make their own arrangements with the land pattadars with the assistance, if they cared to avail themselves of it, of the Special Deputy Collector. In other words, the procedure in Tinnevely was brought into line with that in other districts. For trees on poramboke and assessed waste the existing rates were to continue.

Memorandum of Description of Settlement Procedure in Madras given by Mr. C. E. Jones, I.C.S., Special Settlement Officer, Tanjore.

1. Settlement work in Madras comprises two branches—
 - (a) Survey and Registration.
 - (b) Settlement proper.

The following paragraphs deal with Survey and Registration.

2. Before the Settlement Party enters the district the Karnam supplies—

- (a) a blank skeleton of all fields bound up by *kandams*, subdivision boundaries being omitted to ensure accuracy in remarking and
 (b) an Adungal Abstract in the following form:—

Adungal Abstract.

Field.	Sub-division.	Ex-tent.	Registered Pattadar.		Actual enjoyer.	Father of actual enjoyer.	Result of enquiry.	Proposed Patta-dar.	Survey No. (new) and signature of D.T.S.
			No.	Name.					
(1)	(2)	(3)	(4a)	(4b)	(5)	(6)	(7)	(8)	(9)

The Karnam enters columns 1 to 6 in this abstract with reference to the latest Adungal.

3. The special staff for a township would normally consist of one Special Assistant Settlement Officer, 4 Special Deputy Tahsildars and 24 Special Revenue Inspectors. The Special Assistant Settlement Officer is also gazetted as Special Assistant to the Collector, for the purpose of giving him authority over village officers.

The first stage of the special staff work comprises the following duties:—

(a) The Special Revenue Inspector draws in the *Blank Sketch* prepared by the Karnam the limits of the several individual holdings, writing in each the name of the actual enjoyer. If this name differs from that of the pattadar as shown in the Adungal Abstract he enquires from the village officers and the parties concerned and, if necessary, other ryots, in the Chavadi (village office) the relation between the pattadar and the actual enjoyer, and proposes registry after making the summary enquiries, verifying registered deeds, kist receipts, etc. These entries are made in the remaining columns of the *Adungal Abstract*. In undisputed cases final orders are passed by the Special Revenue Inspector who signs the Adungal Abstracts at the end. In disputed cases final orders are passed by the Special Deputy Tahsildar who signs in the last column, which also shows the new survey numbers. In respect of each change of registry ordered notice is given to the registered pattadar or his heirs. An appeal against the orders of the Special Deputy Tahsildar lies to the Special Assistant Settlement Officer in charge of the special staff, then an appeal against his orders on revision may go to the Special Settlement Officer and Board of Revenue.

(b) The Special Revenue Inspector then prepares a *Fair Sketch*, forming new fields where necessary, showing the relation of old and new fields and subdivisions by conventional signs, and writes up certain columns in the *Re-Settlement Register*.

Re-Settlement Register.

Resurvey.		Old Survey.		Particulars as per Revenue Register.	Former Pattadar.	Particulars as per Re-settle- ment.	Proposed Pattadar.
No.	Sub- division.	No.	Sub- division.				
(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)

The columns filled in at this stage are columns 1, 2, showing the re-survey number and subdivision and the old survey number and subdivision, and column (4b) the proposed pattadar in the columns relating to particulars as per re-settlement. The remaining columns of the Re-settlement Register (3a), (3b) and (4a), showing the particulars of land as per Revenue Account (including the names of pattadars as per Revenue Account and the particulars as per re-settlement) are written up in office.

(c) The Special Staff is also required to attend to transfer of land from dry to wet, and *vice versa*, investigation of poramboke, and the investigation of assessed waste, whether this should be classed as poramboke. To aid the Special Revenue Inspector in the transfer of land from dry to wet the office staff prepares an abstract of water rates for the last five years which the Special Revenue Inspector takes with him in the field. This abstract shows him which fields classed as dry have been cultivated and assessed under wet crops during the past five years.

(d) The Fair Sketches and Re-Settlement Register are then handed over to Survey for re-survey work.

5. The next stage is *Survey*. This is carried on by a staff under the Survey Department which has no connection with the Special Assistant Settlement Officer. The survey is made according to the instructions given by the Special Staff in their fair sketches; the Survey Department prepare a list of discrepancies and encroachments on poramboke detected during re-survey. *Kandam* boundaries are rarely changed and *kandam* survey marks practically never changed. Other survey marks will be planted anew if required. Survey and demarcation follow enjoyment. Land belonging to A according to former survey may be re-surveyed as belonging to B or to Government; anyone prejudiced can object on receiving his XII.(1) Notice. On the conclusion of survey the Survey Department send back to the Settlement Department the Re-Settlement Register and Field Measurement books showing the Rough Areas.

6. These are taken in hand by the *Final Check Staff* consisting of a Special Assistant Settlement Officer and 6 Field hands for a taluk. In the first place there is a field to field verification *in the office* of the Plotted Field Measurement Book Sketch with the Special Staff Fair Sketch—

(a) all discrepancies are brought to a Final Check Memo. (F.C.M.);

(b) all porambokes are listed in a Special Statement in a Poramboke list;

(c) All matters reserved for orders subsequent to Special Staff work are brought to the F.C.M.

(ii) The Classifier (*i.e.*, Settlement field hand) takes to the village the discrepancy and Poramboke list, makes his inspection, enquires into other matters reserved, and writes notes; the guiding principle as regards porambokes being a verification by examining the demarcation, stone by stone, that it is not prejudicial to communal interests. After checking by the Supervisor all cases come to the Special Assistant Settlement Officer for orders. He inspects such cases as he thinks necessary, and then passes orders on each case, either accepting survey demarcation or revising it where necessary. Alteration of the position of a tri-junction stone is seldom ordered without personal inspection of the Special Assistant Settlement Officer.

7. Cases requiring re-demarcation or re-survey are sent back to the Survey Department. This work takes about six months, and before returning them the Survey Department prepares Village Maps to be sent up for printing. The Settlement records are returned by the Survey Department including a *fair area list* (finally computed area of each subdivision). The cases ordered for supplementary survey are checked in the Settlement Office to see that this work has been carried out as directed.

8. The next stage is the preparation of *Rough Accounts*.—The Re-Settlement Register is brought up to date by comparison with reports received from Registration Department. The Karnam is called into office (and given daily allowance while he remains there) to prepare from the Re-Settlement Register, a nominal list showing each Pottadar with the subdivisions held by each. After this original list has been prepared by the Karnam it is checked in the branch office and formal *Rough Chitta* is prepared. The Re-Settlement Register itself serves as *Rough Adungal*. If the Settlement Scheme has been approved by Government the revised rates will be entered up in this *Rough Accounts, i.e.*, Chitta and Pottas. Notices known as XII. (1) Notice and *Rough Patta* are issued. The *Rough Patta* which is an individual extract from the *Rough Chitta* shows the re-survey numbers proposed for registration in the name of the pattadar, and in respect of each the resurveyed area with its description, wet or dry, double or single crop land, *etc.*, and correlated against it the old Serial Number with its extent, classification, *etc.* The XII. (1) Notice is an extract from this containing survey particulars only with the old and new survey numbers and areas. The *rough patta* invites objections to a Special Assistant Settlement Officer at a stated camp and time and with it a slip stating that no further opportunities for objections in respect of these particulars will be given. (If orders of Government on the Scheme had not yet issued a further opportunity for objection would be given against any changes made at introduction in consequence of such orders.) The XII. (1) Notice invites objections to the Assistant Director of Surveys within three months of conclusion of survey in village regarding any loss of area or incorrect demarcation, the conclusion of survey being taken as the date of publication of the XI. (4) notification

for that village in the District Gazette. This follows shortly after issue of rough pattas. XII.(1) Notices regarding porambokes are sent to the Tahsildar. The objections are then heard by the Special Assistant Settlement Officer on revenue points and by the Survey Department on survey points. The papers are sent to the classifier where necessary, for report and on receipt of these reports and taking such action as may be necessary, the Special Assistant Settlement Officer passes final orders. These are subject to the orders of the Survey Department on survey objections.

9. *Fair Accounts* are then prepared and handed over to the Revenue Department for maintenance. The fair accounts comprise a fair Adungal, fair Chitta, Quit Rent Apportion Statement (this relates to Inams), survey records, comprising field measurement books and village plans; this is the finally printed village plan (which should be received in the Settlement Department before accounts are made over). The increment remission statement is furnished at introduction. The fair Pattas are distributed at the first Jamabandi held after accounts have been made over.

11. *Settlement*.—Settlement work proper consists of the preliminary enquiries by the Settlement Officer with a view to preparing his scheme. He tours the district taluk by taluk for a year to eighteen months, visiting probably fifteen villages in each taluk and enquiring into classification, irrigation, cost of cultivation, outturns, indebtedness and general economic conditions. The classification is checked by tabulating sale prices and rental values, and personal enquiries and examination of the soil but probably not by crop experiment. (This was conducted in Coimbatore but apparently not approved.) As the result of his enquiries he may come to the conclusion that in certain respects in certain areas re-classification would be justifiable but this is avoided unless it appears very desirable and seriously affects a large area. During this tour he presumably absorbs the local knowledge required as a foundation for his proposed enhancement which is largely based on the enhancement taken by Government in recent settlements. He considers whether the former outturns can still be assumed and the increase in the cost of cultivation. He distributes the enhanced cost of cultivation over the tarams, almost conventionally, according to the former distribution and shows that on his assumptions for outturn, price and cost of cultivation, the proposed assessment is well within the half net limit.

Memorandum of Explanation by Mr. C. E. Jones, I.C.S., Special Settlement Officer, Tanjore, regarding the Procedure in Tanjore District, Madras, on points raised by the Questionnaire issued to Revenue Officers in Burma.

L.—The Revenue System in its Fiscal Aspect.

A.—The Basis and Standard of Assessment.

7. In estimating the outturn an allowance is made for uncultivable areas and vicissitudes of seasons. In Tanjore the allowance proposed

by Mr. Jackson was 15 per cent. in the delta area and 20 per cent. in the upland area. The proportion varies from district to district. In the Settlement Manual it is laid down that the limits of the allowance shall ordinarily be 15 to 25 per cent., but the limits are not rigidly prescribed and the allowance may for good reason be less than 15 or more than 25 per cent. Thus in Madura District under good irrigation the allowance was no larger than 10 per cent.

8. Also, the classification being regarded as permanent, an enhancement exceeding 25 per cent. is not frequently taken. But if the enhancement should exceed this margin only 25 per cent. is taken the first year and $12\frac{1}{2}$ per cent. increase annually thereafter until the full assessment is reached. Thus with a general enhancement of 25 per cent. and reclassification of sources an enhancement of 30 to 50 per cent. might be taken. The enhancement of 30 per cent. would be reached in two years, in the first year 25 per cent. and in the following year the remaining 5 per cent. The enhancement of 50 per cent. would be reached in three years, in the first year 25 per cent., in the next year $37\frac{1}{2}$ per cent. and the full assessment in the third year. No rebate is made where the enhancement is due to the transfer of land from dry to wet or from single crop to double crop because the increased charge is not of the nature of an enhancement but merely a consolidation of charges previously paid.

10. The proportion of the assessment on land irrigated by Government which goes to the Public Works Department is laid down in the rules which are applied, I believe, in the Board of Revenue, but I have no personal acquaintance with the procedure. Land is not classed as wet (*i.e.*, as entitled to receive water from a Government source) unless it is considered that in normal years sufficient water will be available for the production of a normal crop without prejudice to the existing ayacut. Thus, if in the course of settlement it was found that certain land had grown a wet crop with Government water say four years out of five, an enquiry would be made first whether the existing ayacutdars object to the classification of this land as wet and (if the land were of fairly large extent, say more than half an acre) also of the Public Works Department who might refuse on the ground that the source was already irrigating land up to the limit of the water ordinarily available. If the tank were under minor irrigation no reference would be made because they would not ordinarily be able to furnish useful information. When land is once classed as wet it pays the wet revenue so long as there is water available for irrigation whether paddy is actually grown or not. If water is not available for irrigation the occupant would be entitled to apply for remission. If land is not classified as wet it pays a crop rate whenever it grows a crop with Government water.

11. Except where a cultivator by improving his land takes Government water there is in practice no enhancement for the embankment of land during the currency of a settlement; even if the cultivator builds a tank, the land would continue to be assessed as dry land. If at settlement land assessed as dry is found permanently embanked it would be classed as manavari. The land would not be classed in its wet aspect but it would be assessed one *taram* above the previous assessment. The land irrigated from a private tank however would not be classed as manavari even at settlement. The

tank would be regarded as an improvement and therefore not assessable. Permission is required for digging tanks, but once permission has been accorded no enhancement is made for the resulting improvement. The enhancements of assessment at Resettlements is entirely irrespective of the increased value resulting from the construction of a tank or the sinking of a well.

12. The rough patta shows the cultivator the rate, area and assessment of his land old and new. No map is supplied to the cultivator by the Settlement Department, but he can obtain a map of his land from the Survey Department, during the Survey preceding for four annas and after completion of Survey from the Township Office for one anna.

B.—Settlement Department.

15. Every pattadar receives individual notice of all matters affecting the registration area and assesment of his land in his rough patta and in Notice XII (1) and a full opportunity to object to any change which he may consider prejudicial.

16. At re-settlement rents, land values and general economic conditions are considered for the purpose of testing how far the existing classification is satisfactory, and they form the basis of the argument on which the proposed enhancement is justified. The procedure adopted in Tanjore was to take convenient Registration Offices as representative of the district; the Special Settlement Officer tabulated the documents relating to transfers and leases of land and after rejecting documents relating to more than one kind or class of land he compiled statistics illustrating former and current values. But there is no attempt to ascertain such particulars by systematic enquiry from the whole body of cultivators throughout the district by the settlement establishment. Thus Mr. Jackson examined 1,500 documents of leases for recent years and compared them with 700 documents for earlier years. He treated land transfers similarly, and by this means established that there was no sufficient ground for reclassification because values descend with assessment rates and also showed by a comparison of former and present values that the enhancement which he was proposing was considerably less than an enhancement corresponding to the rise of prices.

17. The grouping of villages and the classification of soils when once completed on a scientific basis is regarded as permanent, and the classification of sources will be left unchanged unless the Special Settlement Officer is satisfied that good reason for a change exists. During the preliminary examination of the district the Settlement Officer considers what changes may be necessary and makes recommendations on these points in his Scheme Report. Except for changes made by the Settlement Officer in exercise of the discretionary powers conferred on him by Government in the orders on the Scheme Report no change is made either in classification or in grouping. The description of the land is changed however as one of the ordinary processes of settlement; thus land will be changed from wet to dry, single crop to double crop, dry to manavari and assessed waste to poramboke and *vice versa* without any special orders from Government.

18. The procedure in Madras is that a scheme report is framed by the Settlement Officer and after the scheme report has been approved by Government settlement is introduced. Ordinarily, a separate subsequent report is framed on the introduction in each taluk. In Tanjore the Special Staff started work in November 1913 and were followed by survey in February 1915 with a view to the introduction of a revised settlement in 1923-24. It would not ordinarily be necessary to start work so long beforehand but in this district 11 taluks were due for re-settlement in 1923-24 and an early start was therefore necessary if only to allow the re-survey of all taluks to be got through in time. Ordinarily, the taluks of a district would fall due for re-settlement in groups of 2 or 3 so that by the time that orders have passed on the Settlement Officer's scheme report the work in one batch of taluks would consist of the preparation of rough accounts and the hearing of objections. In another batch of taluks the work will consist of final check and in another batch of taluks the work would consist of survey.

II.—The Register of Holdings as a Legal Document.

29. Settlement is regarded as the occasion for a general overhaul of the revenue records and a clearing up of all outstanding questions relating to land revenue. The Register of pattadars is therefore revised. The karnam writes up the preliminary entries in the Adungal Abstract as previously described. The S.R.I. makes enquiries and after the work has been passed by the S.D.T. the entries are recorded in the Re-settlement Register. Every subsequent change in the Re-settlement Register is initialled by the clerk or other responsible person who makes it. A notice issues with regard to every change unless made with the consent of the party. If a man other than the revenue pattadar is in occupation the S.R.I. ascertains so far as possible whether he is entitled to occupy the land by possession for twelve years, and if, on enquiry in the village he is satisfied of this fact he registers him or proposes him as a pattadar without legal proof of transfer of interest from the revenue pattadar to the man whom he proposes. The revenue pattadar or anyone objecting would be referred to a Civil Court.

III.—Settlement and Land Records Statistics as Material for Economic Enquiries.

35. The Settlement Officer enquires into general economic conditions during the course of settlement but he does not profess to make an exhaustive enquiry relating to the whole settlement area. During the currency of a settlement there is no machinery for recording areas, rents, pitch of rents, nor the status or residence of landholders.

V.—Organization.

45. The Settlement Officer in Madras is gazetted as an assistant to the Collector for the purpose of giving him authority over karnams. Both the Settlement Officer and the Land Records Tahsildar have authority over them, but this joint control is exercised with a view to

mutual convenience and during the current season and at jamabundi the Settlement Officer would refrain so far as conveniently possible from making demand on the karnams.

49. It is the general opinion that one serious handicap in maintaining an accurate record of occupation is the interest which the karnam has in keeping it inaccurate. My own experience is to the same effect. In addition to the record of occupation the karnam is responsible for reporting all dry land receiving water from Government sources and therefore liable to water rate. He also surveys this land. The Firka Revenue Inspector has to check his work and the Tabsildar is also supposed to check a certain proportion. From the scheme report it appears that about 30,000 acres of dry land pay water rate. For the assessment of this land as wet the karnam is primarily responsible.

Memorandum of Explanation by Mr. Venkatanarayana Naidu, Special Settlement Officer, Bellary, of the Settlement Procedure in Bellary.

1. The Settlement Officer explained his procedure in preparing the scheme report. He visited about 20 per cent. of the villages and conducted local enquiries into indebtedness, etc. In about 20 villages he held intensive enquiries giving a minute analysis of the economic conditions with regard to the areas of holdings, amount alienated, proportion rented, rates of rent, classes of cultivators, etc. The result of these enquiries he summarised in the scheme report and taking these villages as representative of the district based his proposed enhancement on the general economic conditions. During these enquiries he also examined the cost of cultivation. He did not do this by calling the cultivators into the village and examining them in detail in the presence of the villagers because they would obviously have given false replies, but in the field in the course of his ordinary field work he repeatedly enquired the cost of this process and that, and was thus enabled to arrive at a representative figure. He has made no allowance for the cost of the cultivator's own labour. The cost of cultivation relates solely to out-of-pocket expenditure. It is uncertain what was the practice at the original settlement as the figures were then based on those obtained in a district recently settled, which, in turn, were based on those obtained in another district. During field work he has checked the classification of several fields in each village visited, noting down the class as given in the diglott and comparing it with the classification which he would assign. For example, in one village he found the soils generally a class or two lower than he considered they should be placed, IV-3 for IV-2 and IV-5 for IV-4, but in this village the Settlement Officer at the original settlement deliberately lowered the classification because a correct classification would have given too great an enhancement. If he found several errors on a large scale affecting a considerable area he would recommend re-classification and he thinks that this may be necessary in some of the red soil areas, which he will be taking up when his present area comprising only black soil tracts is finished.

2. (a) The particular feature of this settlement is that the survey is done, where necessary, by a staff subordinate to the Settlement Officer. Any survey that he finds necessary is made over to surveyors under a Deputy Collector who is the head of the survey branch of this settlement party. The first operation is to prepare the Change Register (corresponding with the Adungal abstract of Tanjore but prepared Pattawar and not Holdingwar). The registration according to the existing adungal is entered in the first set of columns, the karnams bring this up to date according to their private knowledge in the second column, and the Special Revenue Officer after holding such enquiries as may be necessary proposes a pattadar for registration in the third column. Some of these enquiries are rather elaborate, and for such cases a Statement Book is necessary to contain summaries of the depositions made. The Special Revenue Inspector when compiling the register also prepares a rough sketch to be made over to the Surveyor and issues the required notification for re-survey.

(b) The records are then handed over to the surveyor. There are 68 surveyors supervised by about 20 Special Revenue Inspectors, and two Land Records Tahsildars. These are under the Special Deputy Collector who also has a staff of 24 draughtsmen for office work in this connection. The surveyors prepare plotted sketches of the area given them to survey; 25 per cent. of these are checked by the Special Revenue Inspectors, and 5 to 10 per cent. by the Land Record Tahsildars. The Special Deputy Collector incorporates the results in his field Measurement Book and prepares the Revenue Settlement Register and sends the papers back to the Settlement Department.

(c) The Settlement Department proper consists of 9 Deputy Tahsildars and about 40 Special Revenue Inspectors. In all there are 68 Special Revenue Inspectors, 20 or more are attached to the survey branch.

3. (a) Miscellaneous points of interest are as follows. The Settlement officer departed from precedent in recommending a three-anna increase for black soils and a two-anna increase for red soils. The figures in Appendix XVI-1, suggest that the red soils, class for class, are now superior to the black soils so far as sale values are concerned. He had considered these cases but did not think them of sufficient importance to discuss in his report nor to nullify the general argument in favour of a higher assessment on black soils because of their greater security.

(b) The price of paddy assumed was Rs. 240 for 3,200 Madras measures, which are given here as 3 lbs. and not $2\frac{1}{2}$ lbs. as in Madras. This price would be equivalent to a price of Rs. 125 per 100 baskets. The price now obtaining is said to be 7 measures a rupee which is rather less than Rs. 250 per 100 baskets.

(c) The tanks in this district only contain a full supply every other year. Thus in every alternate year some of the lands classed wet fail, some are grown with dry crops, and some are fallow. If the tank does not fill the revenue is reduced to dry rate or remitted, but so long as the tank fills there is no remission even although the land remains uncultivated. Remissions have to be applied for. They are inspected by the F.R.A. who draw pay of Rs. 35 and 40 in two grades with grain allowance of Rs. 10-8 and Rs. 12 per mensem.

Note by Mr. E. Vincent Gompertz, recently Officiating as Director, Madras Surveys.

The Madras Survey Department was constituted in 1858 chiefly for cadastral survey work, but it conducted topo surveys also up to 1886 when it was relieved of these by the Survey of India.

The first initial survey of Government land in the Presidency was completed in 1896 but malarial localities had not been dealt with and it was found that extensive resurveys were needed before a resettlement was possible as maintenance had been defective. The first resurveys were not done on professional lines and cannot be maintained.

The areas in which initial surveys or resurveys are required will occupy six full Survey Parties for 25 years without taking into consideration some 20,000 square miles of unsurveyed area in the Agency tracts.

The methods described below are those now employed in initial surveys or in resurveys where initial theodolite survey is necessary. When the initial theodolite work has been maintained, no more theodolite survey is done than to replace missing theodolite stations.

Theodolite Survey.—The *taluk* is divided into two or more main circuits, observations for azimuth taken at every 40 stations and connections made to G.T. stations.

The correctness of the main circuit traverses having been proved—the maximum error passable is 6 feet a mile—the survey of village boundaries and of *kandams* is proceeded with. The latter are purely survey units of from 100 to 200 acres.

Theodolite Survey Demarcation.—Each theodolite station whether on main circuit, village or *kandam* boundaries is marked by a granite stone 3' x 9" x 9" with plummet hole cut on the top and the broad arrow on the side.

Field Survey and Demarcation.—A preliminary land register—columns 1—4 of the form enclosed—is then written and a demarcation sketch prepared for each *kandam*. Holdings hereafter called subdivisions are grouped into survey fields of 5 acres in wet and 10 acres in dry land subject to the proviso that no survey field whose area is more than 2 acres in wet and 10 acres in dry land should contain more than 20 subdivisions, a single holding of one class of land however large is surveyed as one field.

Field trijunctions and bends on boundaries of communal *poramboles* and subdivisions are marked with granite stones 2' x 6" x 6" bearing the broad arrow on the side. Fields are measured on what is called the diagonal (really triangle and offset) system, on the single diagonal system popularly called the *Punganur* system as it was first employed during the survey of that estate.

Diagonal and Offset System.—In this the survey field is divided into triangles by lines from one field trijunction to the next and offsets taken to adjacent points on field and subdivision boundaries. The distances between the bends is then chained to provide a check on the offset measurements.

Punganur System.—Except in special cases a single diagonal line is run in each field and offsets measured to bends. Distances between bends on subdivision boundaries *inside* fields are measured. No

diagonal is permitted to be common to any two fields and thus two independent bases are provided for computing the distances between bends on field boundaries. This is done and the *mean* distance adopted provided the difference does not exceed 4 links. For facility of computation, hypotenuse tables are used. A copy is enclosed.

No other system provides such an automatic check on accuracy. The percentage of error on several hundred thousand lines remeasured was 0.46. In both systems of survey topographical details are fixed by measurements. For offsets the cross staff is used and experience shows it can be relied on for correct results up to 7 chains.

Field Maps.—Are plotted in duplicate by field surveyors generally on the scale of $40'' = 1$ mile. They show all measurements and topographical details. A specimen under each of the two systems is enclosed.

Purtal and Kadam Boundary Lines.—On completion of field survey one or two lines called *purtals* are measured across the *kadam* starting from and closing on theodolite stations or points in the straight line between theodolite stations. From these, offsets are taken to all field trijunctions within 5 chains. The distances between these trijunctions are computed and measured if the difference between the calculated and original surveyor's distance exceeds the limit of error. Lines are also measured between theodolite stations on village and *kadam* boundaries and field trijunctions along the boundary offsetted.

Inspection of Field Work.—10 per cent. of the work of first class and 25 per cent. of the work of a second class surveyor is inspected. In lines of 4 chains and under a difference exceeding 4 links is an error.

In lines of 4 chains and over, a difference of more than one link a chain is an error, up to 10 chains, but any difference of over 10 links is an error.

Work is revised at the cost of the surveyor responsible if the percentage of error, either in demarcation or measurement, exceeds 10 per cent.

Check of Registry.—The duplicate field measurement book, demarcation sketch and preliminary land register with a list of field areas taken by the field surveyor are then sent to the Revenue Officer, generally a Special Settlement Officer. He has the registers checked, the transfer of registry effected and informs the Survey Officer of any further measurement needed. The final land register is prepared by the Revenue Officer.

Preparation of Village Maps.—This is done in the Party Head-quarter Office. A traverse plot of the village is prepared on the $16''$ scale. On this are plotted the field trijunctions from the offsets taken on the boundary and *purtal* lines. A series of field trijunctions is then fixed and from this line of bases the remainder of the fields are plotted using the measurements in the field maps. Lines in which errors of measurement are found are remeasured in the field.

Area Computation.—The areas of the plans in the field measurement book are taken by the computing scale and area square paper. The first set of computations is locked up and a second taken. The two are then compared and recomputation done in case of differences. The difference allowed is 5 per cent. in areas up to 5 acres and 1 per cent. for areas over 5 acres.

The areas of the fields in the 16" map are then taken and compared with the field plan areas, a similar margin being allowed. This provides a check on the correctness of the plotting of the fields in the 16" map.

The total of the field areas is then compared with the traverse area of each village. The margin allowed is 1 per cent.

Triplicate Field Measurement Book.—On completion of mapping a third copy of the field measurement book is prepared. One copy is kept in the Central Survey Office, one in the *Taluk* Office and one with the *karnam*.

Copies to the Public.—Formerly five ferro-prussiate copies were prepared. The public could get these at one anna a copy. During the progress of survey, manuscript copies can be got at four annas a copy. In future manuscript copies will be supplied from *Taluk* Offices on demand at the cost of preparation.

Work done in the Central Survey Office.

Preparation of Outline Sheets.—The traverses of each district are harmonized from a district origin and the rectangular co ordinates of G.T. stations and village trijunctions computed. The outline sheets are prepared on the 1" scale in 15' squares. The rectangular co-ordinates of the 4 corners of the square from the selected origin are computed and plotted. The corners are joined and 5' squares formed by subdividing the outer lines. Village trijunctions and G.T. stations are plotted on the sheet. Reductions of the 16" maps to the same scale are superimposed on the trijunction points and topo details traced on the sheet in blue chalk. The sheet is inked, photo enlarged to the 1½" scale and a light blue print prepared. This is inked and printed on the 1" scale.

Traverse Charts.—These are prepared on the same scale and show village boundaries and the values of the rectangular co-ordinates of village trijunctions from the district origin. Copies of both outline sheets and traverse charts are supplied to the Superintendent, Southern Circle, Survey of India, and have greatly facilitated the topo survey of the Presidency.

Taluk Maps.—These are prepared much in the same way as are the outline sheets. The Survey of India standard sheets are used to supply hill contours. The maps show village boundaries and are published on the 1" scale.

District Maps.—Prepared as are *taluk* maps. Published on the scale 1"=4 miles.

Survey Parties.

The present pay of Surveyors is Rs. 22½ and Rs. 30, next come Deputy Surveyors Rs. 35 to Rs. 52. These do theodolite surveys or supervise 8 surveyors. A Head Surveyor, Rs. 78 to Rs. 125, supervises 4 to 5 Deputy Surveyors and a Sub-Assistant Director Rs. 180 to Rs. 290 supervises two Head Surveyors.

In charge of the office with about 100 computer-draftsmen and clerks is another Sub-Assistant. Each party has two cadastral field sections and generally one theodolite section. A Senior Assistant

Director, helped generally by a Junior Assistant Director, controls the Survey Party. The Assistant Directors under the proposals submitted recently will get the same pay as officers in the Police.

Cost of Survey.

The cost of survey is now about Rs. 400 a square mile. In 1912 it was Rs. 246. The increase is due mostly to higher pay now being given to surveyors and to the rise in the cost of stones and labour. The cost of survey includes a proportion of the cost of cooly labour employed during the survey of waste and poramboke lands and the cost of stones planted on poramboke boundaries. Tenants pay their proportion of the cost of cooly labour and of stones used for their lands.

The Survey Department issues a notice to every ryot giving the extent and description of his lands in each village and hears complaints and appeals against survey demarcation. This is included in the cost of survey.

Maintenance.

A scheme was brought into operation towards the end of 1903, whereunder maintenance is supervised by a Land Records Inspector in each *taluk* and a Land Records Tahsildar in each district. Further check and supervision are exercised by an Assistant Director of Land Records in each of the five groups into which the Presidency has been divided, and by a Director of Land Records for the Presidency. The purpose is to carry out preservation of boundary marks and the record of changes in the registers and maps by the ordinary revenue staff, strengthening their numbers and lessening the area of their charges wherever necessary. However, the Survey Department is always asked to lend surveyors whenever any important acquisition of lands is made or when any area of more than a few acres is to be surveyed and the Land Records Department has not been able to keep pace with the measurement of subdivisions consequent on changes of occupation. It is pretty certain therefore that a staff of surveyors will be needed to bring survey records up to date prior to all future re-settlements apart from the present programme of re-surveys.

Special Rules for the Maintenance of Stones.

In districts now resurveyed the maintenance of stones is to be restricted to theodolite stations and stones at trijunctions of fields and at bends on poramboke field and subdivision boundaries. In certain districts or *taluks* additional stones are to be maintained as follows:—

1. Those surveyed under the Punganur system, stones at terminal points of diagonal lines are to be maintained.
2. Those surveyed under the triangle system at the initial survey and not resurveyed. Under this system fields were divided into triangles, no offsets being taken. In some of these areas a revision survey was made, *i.e.*, the initial survey was restored. Here all stones at bends of fields are to be maintained.

Memorandum of the Account given by the Hon'ble Sir George Curtis, Member of Council, Bombay, of the introduction of the record of rights in the Bombay Presidency.

1. Previous to the years of scarcity and famine beginning with 1899 we had in Bombay a "cast-iron" assessment on the person registered as occupant of each survey number, who might be, and ordinarily was, purely fictitious. At the original survey the holding or unit of property was taken as the survey unit. In the course of time by succession and transfer this survey unit was subdivided and alienated, with the result that eventually each survey number had come to represent a group of properties owned by people none of whom need have any immediate connection with the person registered as occupant, and therefore responsible for the revenue assessed on the survey number. It has always been our theory in Bombay that the assessment represented a moderate and fair demand over a long period; in good years the cultivator had an ample margin to provide against poor years. Our demand was certainly moderate compared with the revenue demand in some other provinces and was considered little more than a quit rent. The system worked well enough in practice; if any one or more of the people occupying subdivisions of a survey number would not pay, the others did. The Village Accountant managed to collect the full revenue for each survey number, there were practically no suspensions nor remissions nor arrears, and we had no trouble.

2. But between 1899 and 1901 there was a succession of bad years, and the system broke down. It became necessary to abandon the cast iron assessment and to recognise suspensions and remissions as part of our normal system. With this the old system became unworkable. The revenue assessed on the fictitious holder of the survey number had in practice been distributed over the actual occupants by the village accountant according to his own private knowledge of the circumstances. With suspensions and remissions his private accounts became a tangled mess. In a poor year the Government might suspend half the revenue, next year with, say, a ten-anna crop, it might direct that half of the suspended revenue was to be collected. Then the account books in the village would become a complicated mess of individual credits and debits. The system collapsed under the sheer weight of arithmetic.

3. Again, with all the advantages which the old system offered in normal times for facilitating collection, it was defective in failing to provide any material for the study of agrarian conditions. We had no idea about the actual state of the agricultural economy, we knew nothing about the size of holdings, the area rented or mortgaged, the proportion of land held by money lenders. We compiled statistics but they were based on air, on nothing. They meant nothing.

4. The MacDonnell Commission which enquired into the famine strongly urged therefore the necessity for introducing a Record of Rights, and in 1901 two officers were sent to the Punjab to study the system in that Province. But there appeared insuperable objections:

to using this Record as a basis for the revenue accounts ; it was considered impossible to disregard the demarcated fields as units of assessment without upsetting the whole survey system. Thus in 1903 when the Record of Rights was introduced it was decided to keep it as a purely statistical record, retaining the *Khatedar* system, assessment on authorized occupants of survey numbers, for revenue purposes. But the Record of Rights thus limited proved useless, a statistical incubus, something to get through as soon as possible and then put aside to be forgotten.

5. I decided, therefore, as Commissioner of Settlements and Land Records, that we must get down to the actual occupants. On the basis of the private registers of the village accountants I worked out forms, and became convinced that such a record could be used both to safeguard title and to collect the revenue. Then I found that in Cologne a system similar to that which I proposed had long been in force ; even their forms were essentially the same as mine. With this to back me I convinced Government that my proposals were practicable.

6. The guiding principle of our present system is that Record follows occupation ; the record is a record of possession. We record the facts as we find them in the field. Under the old Act of 1879 the "registered occupant" was defined in section 3 (17) as the sole occupant or eldest or principal of several joint occupants whose name is *authorisedly entered* in the Government records." In Act IV of 1913 we define an occupant as the "holder in actual occupation," occupancy means a portion of land held by an occupant, to occupy land means to possess or to take possession of land, and occupation means possession. [Section 3 (16) to (19).] There can be no mistake about it.

7. We introduced the record by making it useful to the cultivator and by depriving him of alternative methods of proving title. The first thing was to smash the Receipt Book. Previously each cultivator who paid revenue obtained for each payment a receipt in a receipt book referring to the survey number on which the money had been paid. This could be used as evidence of title when raising money or preferring any claim. We abolished this. Now we merely give the cultivator a receipt for so much money paid ; it bears no reference to any survey number, and cannot be used as evidence of title. The cultivator thus has no evidence of any interest in land acknowledged by Government, except the entry in the Record of Rights, which he can inspect and of which he can obtain a copy. Also we made it obligatory for an extract from the Record, with its appropriate plan, to be filed in every revenue, and civil case, and we made this record presumptive evidence of the facts stated on its face. The High Court also has decided that copies of entries in the record of rights have to be produced at every stage in civil cases connected with land. The Village Accountant is assisted in keeping the record up to date by the obligation laid on Registration Officers to communicate to him all transactions affecting land.

We had a small set-back the other day. In Bombay it has always been held that everybody proposing to carry out any transaction connected with land had to go to the Registration Office to see if there were any previous transactions regarding that land. The

Calcutta High Court has taken the opposite view. The Privy Council recently gave a decision which only gave a modified approval of the Bombay idea.

8. The Record cost a great deal of money to introduce but it has been worth the money. The process involved the employment of a large staff of Circle Inspectors. They went through the existing records and the village accounts, and also made independent enquiries. They entered in a special form the name of each *Khatedar*, each authorized occupant according to the old records, and opposite this the name of the person in possession of each subdivision, with a memorandum explaining the manner in which he came into possession. The Record of Rights finally prepared on the basis of this enquiry contained no subsequent reference to the *Khatedar*. It has subsequently been kept up to date by the Village Accountant.

9. There are mistakes, but probably with a good Collector not more than 2 or 3 per cent.; the volume of litigation concerning land has been reduced to insignificant dimensions, we can grant suspensions or remissions without difficulty, and can obtain trustworthy information regarding the agricultural economy.

We have recommended to the ryots that they should have the entries in the record of rights relating to the land made on parchment and should keep them in tin cases.

Memorandum of Explanation of the Bombay Revenue System by Mr. F. G. Anderson, I.C.S., Commissioner of Settlements and Land Records, Bombay.

1. In Bombay, in the early days before there was any considerable area of rental land, it was the practice to refer to the net produce as a standard for assessment; an endeavour was made to ascertain outturns and cost of cultivation. References are still made to crop experiments so far as they exist and the Agricultural Department possesses records for outturns and cost of cultivation in every district and perhaps for most villages, but we make less and less use of the net produce as a basis of assessment, and most officers consider, as I do, that it would only land us in a quagmire of statistics. We tend increasingly to lay stress upon rents. We assess not the cultivator, nor the crop nor any improvement, but the inherent advantages of the land as regards soil, water and situation. (Similarly the sale price of land is its capitalised rent.) The Settlement Officer examines minutely statistics regarding rents in the Record of Rights and also registered documents regarding sales, and thus arrives at a figure for the true rent which affords a sufficient indication what enhancement on the existing demand may be taken. The effect of this is that the persons interested in land *assess themselves*.

2. Practically the whole of the revenue is fixed for the settlement period of 30 years; a fixed assessment based on a permanent classification is the only form of assessment consistent with our theory that land should be assessed on its inherent advantages. Whether the land is worked or not worked the occupant is required to pay for the privilege of holding land which possesses those advantages which at

classification it has been found to enjoy. If there is only a six anna crop half the revenue is suspended, both on dry land and rice land; if there is only a four anna crop all the revenue is suspended. When irrigation water fails the "water share" of the assessment is usually remitted at once, not suspended. We fix our rates on the assumption that there will be bad years. If rice land will only receive water for four years out of ten we fix the rate accordingly and expect the cultivator to save in the good years enough to pay the revenue in bad years. In fact usually he inverts the arrangement (to his own loss in the matter of interest) and borrows in the bad years and pays off his debt in the good years. Apart from such suspensions and remissions, the revenue is fixed and any change of classification, e.g. from wet to dry must go up for the orders of Government. Formerly, Collectors had power to effect such changes but they did not apply the rules with sufficiently rigid observance of the principle that a reduction is only permissible for a change due to natural causes beyond the occupant's control. Thus, if land is damaged by the breach of an embankment, the occupant is not entitled to a remission of the revenue, as he ought to have kept the embankment in good order. The man can relinquish his land if he likes. For reduction of area by acquisition by Government the Collector can alter the assessment.

It is practically never necessary to sell land for default of revenue. An absentee landlord would be served by registered post if service could not be effected through his agents.

3. The enhancement of revenue at re-settlement is limited to 33 per cent. over any *group* of villages, 66 per cent. for any single village, or 100 per cent. on any individual holding. (For the meaning of "group" see below.) Enhancements are taken in biennial instalments of 25 per cent. each on the original assessment.

4. The period of assessment is 30 years. This period was suitable enough when the value of agricultural produce and therefore of agricultural rents changed slowly, but in view of the rapid changes in recent years a shorter period, in my personal opinion, would be preferable. If income-tax is assessed annually it is difficult to justify long period settlements of taxes upon agricultural rent.

5. Land irrigated from canals or tanks or other sources *maintained by Government* pays a water rate in addition to the land revenue and calculated independently of it. The land revenue paid by such land is the ordinary dry rate and is credited as land revenue. The water rate varies with the crop and is collected separately. If the cultivator wants water he must apply to the Public Works Department stating the crop which he wants to grow, and the area for which water is wanted. An order is then passed permitting him to have water for so many acres at the rate prescribed for the crop. The water rate is collected in the same manner as the land revenue but on a receipt form of distinctive colour, etc. The Public Works Department receives the whole of the revenue on improvements due to water. The principles on which water rate should be calculated have never been authoritatively defined but recently Government has accepted the view that the water rate should be proportional to the increased rental value due to the supply of water.

6. A cultivator who improves land is entirely exempted from any future enhancement of the revenue on that account. Formerly there was much debate about this. Some people improved their lands, or inherited lands that had already been improved, before settlement took place. These were assessed on the value of the land as it stood at settlement. People who improved land subsequent to settlement were exempted from enhancement although there might be very little difference, perhaps not more than a few years, between the time when the improvement took place on these two plots of land respectively. It was felt that either the improvements already made deserved consideration or that improvements subsequent to settlement should not permanently go scot free. A system was therefore devised for classing land according to its *capacity* for improvement. Thus on land at a low level, and therefore situated well for growing rice, an additional rate of eight annas per acre might be imposed because it could easily be converted into rice land; five "*position-classes*" were recognised. Similarly, in the flat plains of Gujarat, with very small differences of *level*, land may be favourably situated for obtaining sub-soil water, and its natural advantages in this respect were also considered during the classification. This is in strict accordance with the theory that land should be assessed on the basis of its inherent advantages. If the cultivator does not take the trouble to improve land capable of improvement it is his own look out.

7. Once in five years or at re-settlement the cultivator is provided for one anna with a "Khata" showing every item of his fixed assessment. Ordinarily the land revenue demand of each year remains unchanged unless there are suspensions or remissions. Annually an account is made out showing his assessment for the year including arrears and fluctuating revenue, if any, less remissions and suspensions. The cultivator is verbally informed of the demand and on payment of his dues obtains a receipt form showing the amount and informing him that he is entitled to see the Khata for the year, but he receives no statement showing the details of the *annual demand*. This receipt form has recently been substituted for the receipt book formerly in use.

8. At settlement lands are classified as rice land, garden land and dry land. Dry land is classified according to the depth and composition of the soils. There are three orders, Black Soil, Red Soil and Light Soil. These are distributed in classes, the best soil in each order being 16 annas. The classification is lowered for certain defects; shallow depths, sand or clay, pebbles, water logging or excessive slope, etc., until the poorest soil is classed as practically zero. For garden and rice land classification, water facilities are taken into account. The best water supply is also reckoned as 16 annas. But greater weight is given usually to the water class than to the soil class. The combined effect of say, 7 annas soil into 10 annas water is given in a "Jantri" or ready reckoner: and 7 annas soil into 10 annas water would result in a higher final classification (or proportionate annas of the maximum scale) than 10 annas soil into 7 annas water. In garden classification less proportional weight is generally attached to water than in the classification of rice land,

because garden crops must have good soil as well as good water : rice need not.

9. The Settlement Officer proposes rates. His proposals are published with a summary of the reasons on which they are based. A period of two months is allowed for objections. These are freely submitted but tend to be stereotyped in form and do not ordinarily touch on the questions of rental values, which is the main basis of the enhancement. The settlements are then introduced by the Collector. The new Akarband, Schedule of areas and assessments field by field (*i.e.*, Classified Area Statement) is worked out in the Superintendent's office for Survey Fields and Subdivisions the new assessment on each subdivision is intimated to the village accountant who prepares new khatas.

10. The Register of Holding is now a Record of Rights and contains a column showing the person in actual enjoyment, and a column to show the nature of his title or means by which his title was acquired. Another column contains particulars as to any encumbrances, or other interest in the land on the part of any person not in actual possession. Thus if land be mortgaged with possession the name of the mortgagee will appear in the column showing person in possession and the name of the mortgagor will appear in the column of "Other rights and encumbrances." Similarly if land be mortgaged without possession the name of the mortgagor will be shown in the column for "Person in Possession" and the name of the mortgagee will be shown in the column for encumbrances. At present it is the practice to re-write this Register every five years (but a method has been devised by Mr. R. M. Maxwell, I.C.S., for making the record continuous and permanent; this proposal is now before Government). Mutations are recorded in a separate register. The village accountant is required to ascertain all changes in possession. These should be reported to him and the people who fail to report are liable to a penalty imposed in summary enquiry at the Village by the Mamlatdar (Township Officer). Mutations effected by *Registered* instruments are reported by the Registrar to the village Accountant and Civil Decrees affecting the land are executed through the Collector and thus brought to the notice of the village accountant. Also, no civil or other suit relating to the land can be instituted without attaching the Extract from the record to the plaint, and any change found by the Court to be necessary is certified to the Collector by the Court. If the village accountant notices an unreported transfer he is supposed to enter it in the register, publish the fact that he has done so on the village notice board and enter it in his register for possible penalty. The entries by the village accountant in the Register of Mutations are all supposed to be notified on the village notice board. But this provision of law is carried out strictly in some villages, intermittently in others, and not at all in others. It is rather too laborious for exact compliance, *a less troublesome procedure, e.g.* publish a schedule only of "persons whose rights have been reduced or lost by mutations recorded since 1st August 1921," is necessary. (Details can be seen by interested persons in Mutation Register). Then each mutation involves only one entry at the time of the preparation of the schedule which becomes manageable. All

mutations by succession are first recorded in a separate register for investigation, and when approved transferred to the Mutation Register on similar principles. This Record of Rights is not introduced *at settlement*, but at any time under the supervision of the Collector of the District. Experiments were made in one or two taluks and when the initial difficulties had been smoothed it was introduced taluk by taluk in every district. The record is a record of possession; any complicated question of title would be referred to the Civil Court. If a person registered in the Record as in Possession were to sell his land by registered document but the vendor remained in possession and both parties admitted to the village accountant that by an oral agreement the transaction was in reality a mortgage, the vendor would still remain in the record (as occupant) and a note would be made in the appropriate column of the registered deed of sale and the admission by both parties as to its being in reality a mortgage. But usually the new mortgagee does not allow the vendor to remain except after executing a rent note; the vendor remains as mortgagee-with-possessee's *tenant* only. In either case of course the vendor recovers his land on payment of the debt. (In Districts to which the Deccan Agriculturists' Relief Act applies documents have to be drawn up by the Registration Officer, and must be so drafted as to give effect to the actual intentions of the parties; in other districts the Civil Courts would give effect to the oral agreement if established.) Previous to the preparation of this Record of Rights no official or systematic information was available regarding the occupancy of subdivisions. For each survey field only one occupant was registered, and he frequently had lost all concern in the land. Business could only be carried on by the village accountant maintaining a private register. These private registers were the precursors of the record of rights which was in effect little more than an official recognition and systematic application of the village accountant's procedure.

11. Statistics regarding *tenancy* are not included in the Record of Rights itself, but annually the village accountant enters in Part II of the Mutations Register (V. F. 12) the details regarding tenancies and cropped areas, and the register is preserved for 30 years. The information in the Record of Rights and Mutations Register and the Tenancy Register is of great use in ascertaining the features of the agricultural economy. For example, the statistics show that transfers of title to land take place on a very considerable scale. At settlement the Settlement Officer examines these statistics in detail and excludes from them those which on enquiry in the village are found not to represent business transactions at market value; by excluding these abnormal rents and land values, either too highly valued through including interest, or extorted monopoly prices, or affected by speculation, industrial (building site) value; or too low on account of family connection or "sacrifice" sales by bad men of business in depressed markets; the remaining figures afford a sufficient basis for indicating a suitable assessment. It is now the practice to conduct a re-settlement with no addition to the ordinary district staff beyond one clerk; the Assistant Settlement Officer being the ordinary Subdivisional Officer with an extra settlement allowance for the extra

work. At present no figures are compiled to show the rented area, but it may be estimated as not exceeding 25 per cent. of the occupied area. Only in the Khoti area and in Gujarat are tenancies numerous. Formerly there were statistics purporting to show the area held by agriculturists and non-agriculturists, but the distinction was found so elusive that the attempt was abandoned. Neither are there statistics to show the area sold and mortgaged—re-sales within the year, unreported redemptions and similar difficulties vitiated such statistics. But we hope the Record of Rights will provide material for trustworthy statistics regarding tenancies and the transfer of land.

12. The village maps are prepared on the basis of survey or unitary fields. The original "survey numbers" represented approximately individual holdings, property units, but may also have contained several small holdings (below the recognised minimum of area) "lumped together." In course of time also these were subdivided but the subdivisions were not separately surveyed. Until recently the survey field was demarcated but not the subdivision, and the survey of the subdivisions until recent years was either not attempted or was not accurate. They are now accurately surveyed by the plane table system. A base line of, say, 5 chains is laid down along any level ground free from obstruction, within or without the survey field. Flags are planted to mark the property limits or periphery of the subdivisions, and these are sighted by rays drawn on the plane table map by the sighting rule from each end of the base; the base line on the mapping paper being of course kept at both "stations" or ends of the base line, truly aligned along the base line on the ground. Thus the intersection of a pair of rays exactly fixes the position of each point in the periphery. The measurements are not recorded as no measurements are made or required (except for the base). The law now recognizes the subdivision, or property unit, instead of, as formerly, the artificial survey number only. There is no minimum limit for subdivisions. Until recently it was required by law to keep survey fields permanently distinct but their amalgamation, if owned by the same people, is now permissible. Hitherto it has been regarded as essential to maintain every field demarcation mark, but on the plane table system the number of survey marks can be reduced to a few pivotal "pillars," in villages where at a new survey these have been established. In other villages the multiplicity of marks set up by the old cross-staff survey is being replaced by single marks at field corners only and with the aid of plane table maps of the subdivisions of survey numbers all the smallest bends and curves can be identified, or restored. The cultivators will be at liberty to maintain or remove the remaining superfluous field survey marks as they prefer.

13. Then as regards maps, we have two kinds; the general village map and the atlas of field maps. The general village map (sometimes for large villages it has to be divided into two or even three sheets) is the map for ordinary use showing the whole survey numbers joined together into the village, but not showing any subdivisions of those numbers. These maps are *always printed*. The number of copies printed depends upon the size of the village and the probable demand. A large busy village consumes

maps at the rate of one every two years or so; while small villages with little work buried in the backwoods consume them at the rate of one every seven or ten years. We print accordingly; never less than about 10 per village; never more than about 30 at a time. Next we prepare maps or as we prefer to call them *atlases* in which the subdivisions of survey numbers are shown on a much larger scale: sometimes only one survey number on a page or sheet; sometimes blocks of survey numbers on each page. These maps are pricked off by hand. They are not used quite so often and moreover the number of sheets in a village would perhaps run to fifty, and anyone sheet amongst them would perhaps be referred to only once a year or even less. In these circumstances printing would be too costly. So the Survey Party itself pricks off about two copies by hand, and one copy is given to the village and the other kept in reserve.

14. The Commissioner of Settlements is in charge of Settlement, Land Records and Registration. Subordinate to him are five or six Settlement Officers, when settlements are in progress, which is nearly every year, and four Superintendents of Land Records are posted to the headquarters of Divisional Commissioners. In each district there is a District Inspector subordinate to the Collector. Under the District Inspector is a survey staff comprising a Head Surveyor on Rs. 70—90 and Measuring Circle Inspectors on Rs. 30—80. Also subordinate jointly to the Mamlatdar and to the District Inspector are Circle Inspectors (ordinarily 2 to 4 to a tahsil). Below these Inspectors are the Talatis, stipendiary village accountants in charge usually of three or four villages and sometimes of only one village. When the Talatis are hereditary officers they are termed Kulkarnis. Several of these may hold the office jointly, acting in succession for periods of five years, often reduced to shorter terms by illness, resignations, misconduct, etc., so it is impossible to train them as surveyors. The Talatis until recently received Rs. 14 to Rs. 24. They now draw Rs. 20 to Rs. 30 and have recently gone on strike for a minimum pay of Rs. 30 considering that they should be paid on the same scale as clerks in taluk offices. The strike has now almost everywhere collapsed.

15. The undeveloped area is exceedingly small. There is shifting cultivation on a few of the hill sides, there are temporarily cultivable patches in the driest parts of Sind and there are forest areas where the land is controlled by the Forest Department. Except for these lands the ordinary system is applied. There are some undeveloped hilly tracts with scattered villages and a large area of cultivable waste, but the ordinary system is applied even to them.

16. As regards the cost of Village Accountants and Circle Inspectors I have had estimates prepared as follows for certain typical *talukas*. Let me first take the Khed Taluka of Poona District which may be taken to be fairly typical of the average good part of the Presidency. It is not exceptionally rich and fertile, and it is not exceptionally poor, and the people are all quite settled and steady. The total collections of all kinds are Rs. 1,87,730; the total cost of village and Circle staff, including peons, travelling allowances, and such other miscellaneous items as the accounts exhibit, is Rs. 19,000. Besides there is a District Inspector with a peon, travelling allowance, etc., and a General Duty Surveyor, and these cost altogether

Rs. 3,600, and the taluka ought to bear one-eighth of this, or Rs. 450. Taking all these items together we get the cost, Rs. 19,450, and the incidence upon the total revenue is as nearly as may be 10 per cent.

Turning now to the Talukas of Halol and Dohad in the Panch Mahals, which are largely inhabited by Bhils, very jungly, remote, and perhaps we might say, poverty-stricken. Here we find upon the same computation:

Halol.—Total revenue Rs. 60,568; total cost, village and circle staff Rs. 7,098, and the total of the district staff Rs. 4,347, and there are only five talukas over which to divide it, so that the taluka share is about Rs. 870. But the figures of pay, etc., given above are the substantive *unrevised* pay, in addition to which we are now actually paying them temporary and provisional allowances, which add at least 25 per cent. to the gross cost. Hence we may say broadly that the total cost in Halol is about Rs. 10,000, and hence we deduce that the total incidence upon the revenue is 16.6 per cent.

Dohad.—Here the gross revenue is Rs. 1,11,884; the cost of the village and circle staff Rs. 16,569, and the district staff Rs. 870 as before, and adding 25 per cent. to the gross cost on account of allowances we get Rs. 22,000 as the aggregate cost. This, it will be seen, is approximately 20 per cent. The cost in Dohad is certainly extraordinarily high, and perhaps you will remember that when I said that I would select that taluka it was because I suspected it would be very high, and we wanted to know approximately what was the limit to which our expenditure actually reached. We may therefore take it that in ordinary conditions the cost is 10 per cent.; in the most unfavourable conditions it rises to 17 and even 20 per cent. and of course there are other talukas rather richer than Khed where I think we might easily have a 6 to 7 per cent. incidence.

The cost of the Taluka Mamlatdar and his staff is not included in these figures. That would probably be another Rs. 10,000 a year roughly, but then we must remember that these officers with their staff do much other work besides Land Revenue. They do magisterial, income-tax, and various other kinds of work connected with all departments, and this further item of Rs. 10,000 should by no means wholly be debited against the land revenue though probably very nearly half of it could properly be so charged. Again you will remember that the village circle staff does not simply collect the land revenue but they prepare our agricultural statistics, they maintain the Record of Rights, and they generally represent the administration in a number of matters in places where higher officers rarely penetrate.

**Memorandum of Account of Soil-classification in Bombay,
given by Mr. F. G. Anderson, I.C.S., Commissioner of
Settlements and Land Records, Bombay.**

1. The primary object of soil classification is to determine the relative values of different soils and not the absolute value of any given soil.
2. The soil is divided into three Orders, Black, Red and Light. In each of the two former orders there are 7 classes, in the third order

there are 5 classes; the Black Order comprises classes 1 to 7, the Red Order, classes 2 to 8 and the Light Order, Classes 6 to 10.

3. The depth of the soil is regarded as the most important consideration. The first class contains black soil $1\frac{1}{2}$ cubits deep, for any diminution of the depth by $\frac{1}{2}$ cubit the soil is reduced a class. The relative value of the top class is reckoned as 16 annas, of the second class as 14 annas, and so on. The classification is reduced for defects and enhanced for advantages. Thus black soil $1\frac{1}{2}$ cubits deep would be reduced one or more classes if the surface were uneven or the soil alkaline; say, 14, 12 or 10 annas. Limestone nodules, sand, clay, excessive slope, scouring by water courses were all "faults" and one two or even three such "faults" could be assigned when the fault was exaggerated. First class black soil in a good position as regards level, or sub-soil water would be raised above the 16 anna class to 18, 20 or 22 annas.

4. Each survey field is divided into compartments ordinarily of about 1 acre each, which are separately classified and the average classification of the compartment represents the classification of the field. Thus a survey field of 6 acres might contain 1 acre of first class (16 annas), 1 of 2nd class (14 annas), 2 of fourth class (10 annas) and 2 of fifth class (8 annas). The classification of the whole field would then be obtained as follows:—

1	compartment of 16 annas	=	16
1	" " 14 "	=	14
2	compartments of 10 annas	=	20
2	" " 8 "	=	16
6			66
	Average 11 annas.		—

5. This field might be in a good position as regards level or sub-soil water and receive an additional 2 annas (or more). The position class and sub-soil water class are not applied in the same tracts; they are alternative or additive. "Position" (in Deccan and Karnatic). Sub-soil water (in Gujarat plains).

6. The classifications would further depend upon its distance from the village, and on the size of the village; one anna might be added because it was within quarter of a mile of a small village, 2 annas if within quarter of a mile of a medium sized village.

7. Thus a field with a soil classification of 11 annas enjoying moderate facilities for sub-soil water might receive an extra 2 annas on that account, and lying within a quarter of a mile of a small village might receive an extra anna making 14 annas in all.

8. The Settlement Officer would then determine with reference to general conditions (particularly the existing assessment) what the village as a whole could pay, say Rs. 250. He would also estimate what the soil could stand, say Rs. 1.50 for the best or 16 anna soil and proportionally for the soils classed above or below 16 annas. The assessment arrived at in this way might be Rs. 210. He would then revise his estimate of what the village could stand, and might decide on Rs. 230 which would be given by a rate of Re. 1.50 for the best soil, which he would call the *maximum* rate.

9. In the old settlements (1850-1880) the survey, the classification and then the settlement, were all carried out by one department

under one officer. After the survey and classification he did the settlement, and then if he thought the assessment on some fields worked out a bit high he reconverted himself into his capacity of classifying Officer and tinkered the classification. Thus Mr. James remarks "I have known that distinguished Survey Officer, General Anderson, go over the lists of fields in villages and actually reduce the assessment on individual fields, where he found that his rules of classification and the rates he had imposed brought out results higher than he deemed prudent." This was rather arbitrary and questionable but after all we must remember that in those days they were sailing uncharted seas and could not pretend to the data and knowledge we now have. It was a work of art rather than of science, and where much was uncertain it would have been folly to adhere stringently to any rule of thumb. But now-a-days the Settlement Officer has nothing to do with classification. In the old days General Anderson tinkered the classification as he thought fit, but now-a-days a Settlement Officer would not think of doing such a thing.

10. Similar villages similarly situated could probably pay about the same rate and the maximum rate would be adjusted so as to be approximately suitable for every such village. These villages would then be grouped together as a group with the maximum (dry crop) rate of Re. 1'60.

11. This system permits of a very minute adjustment of the classification to the circumstances of individual villages and holdings. Thus in a group of 10 villages the maximum rate may be Re. 1'60. But the group may contain large villages and small. First class land with no advantages or defects will pay rather more near the largest villages, say 18 annas, or $\text{Re. } 1.60 \times \frac{18}{16}$, and rather less near the smallest village say 14 annas or $\text{Re. } 1.60 \times \frac{14}{16}$, near a medium sized village it will pay exactly the maximum rate $\text{Re. } 1.60 \times \frac{16}{16}$. But at same distance from the medium sized village it may pay only 14 annas or $\text{Re. } 1.60 \times \frac{14}{16}$ at some distance from the largest village it may pay only 16 annas or $\text{Re. } 1.60 \times \frac{16}{16}$. Similarly the rate on land with natural advantages raising the relative valuation to 18 annas will differ according to its situation and so on throughout all the series and classes. Thus in one small village taken at random, paying only Rs. 177-10 on wet and dry land combined, there were no less than eight rates on dry land alone and none of the land in the village had been classed higher than 6 annas.

12. For garden and rice land cultivation a similar anna valuation is assigned to water. In the South Maratha scale (now generally adopted) there are five classes.—

- | | | |
|-------|-------------------------------------|---------------------------------|
| 1. | Source lasting till March or April, | Low lands. |
| 2. | Do. | Do. Medium lands. |
| 3.(a) | Do. | Do. High or Distant lands. |
| (b) | Do. | November or December, Low land. |
| 4. | Do. | Do. High or Distant land. |
| 5.(a) | Do. | Do. Very High or Distant land. |
| (b) | Tanks, | land. |

Distance is as important as level; level land might be so far down the channel that water rarely sufficed for it.

The capacity for growing sugar and second crops is another test; the first class gives a secure crop of good sugar, the second class a

secure crop of inferior sugar, the third a precarious crop, the fourth no sugar but a second crop, the fifth no second crop. It should also be noted that the reliability of the stream is an important element of the class; both as to volume of water, and its annual appearance. Some streams irrigate only in 9, 8, 7, or even 5 years out of ten.

13. These water rates are combined with the soil rates. Thus Rs. 9 may be taken as the maximum rate then the best soil with the best water supply pays Rs. 9, the best soil with the poorest water supply pays Rs. 3.5, the poorest soil with the best water supply pays Rs. 3. These various sliding scales are fixed by the Settlement Officer separately for each group or perhaps for each village so as to produce an equitable result, but were therefore not always adjusted quite in mathematical uniformity.

14. After one re-settlement the classification becomes permanent and has become so for practically the whole Presidency. The Settlement Officer has nothing to do with classification. If he comes to the conclusion that over a whole tract some error or misapprehension has occurred he sends a report and somebody else goes and verifies his opinion, and perhaps finally Government authorises re-classification directed to a particular point for a particular tract. Actually we have had two or three such cases, for example, if the old classifiers assumed that the water in the wells of a particular tract was not brackish and lasted on to the hot weather and it was now established that the water was brackish and failed in January, there would be a good case for re-classification. Rivers and tidal action may also justify re-classification.

15. Now the Settlement Officer can only revise the relative assessment of two villages by changing the grouping. The new assessment on the group must not exceed the former assessment by more than 33 per cent. By taking two villages from a high group say Rs. 3.4 and including them with 8 villages of a lower group say Rs. 2.8 he can enhance the revenue on the new group as a whole by 33 per cent. If he leaves the two Rs. 3.4 villages unchanged he can raise the other villages more than 33 per cent. without raising the whole revenue of the group above that figure. And of course, *vice versa*, by taking up several villages from a lower group he might prevent himself from raising the main block of the group by so much as 33 per cent.

Though the law makes the classification permanent, Government do not consider themselves debarred from revising it in limited blocks of land, and for particular classes with a view to *lowering* it, and giving relief when it seems that any soil or village generally has been rather over-rated. But it never *raises*.

Note on Survey and Land Records in the Punjab by
Mr. Rahim Baksh, Director of Land Records, Punjab.

Maps.

1. Survey number is defined in paragraph 15 of the Financial Commissioner's Standing Order No. 15. Briefly speaking it is a parcel of land—

- (1) lying at one spot,
- (2) owned by a single individual or a number of individuals jointly,
- (3) occupied by a single individual or a number of individuals jointly,
- (4) having its boundaries defined on the ground by ridges,
- (5) not too large for harvest inspection purposes, and
- (6) not unnecessarily small.

In connection with this definition, it is necessary to point out that the boundaries of every survey number have to be separately shown in the map, that as regards each survey number it has to be shown in other documents which will be subsequently described by whom it is owned, by whom it is occupied, what crops, if any, are grown on it in each harvest and what is the area under each crop and that in defining a survey number it is necessary to see that it may be possible to do all this without any difficulty. It is also necessary to mention that the number of survey numbers should not be unnecessarily multiplied, for every increase in their number adds to the amount of work involved in the preparation and maintenance of records. No definite limit as to size has been prescribed, but in irrigated areas survey numbers are not generally larger than one acre in size.

2. A new map is prepared for each village at each settlement. It is not however necessary to completely re-measure each village at each settlement. Where the changes which have occurred since the preceding settlement are not sufficiently numerous to necessitate the complete re-measurement of a village, a tracing of the map of that settlement is taken and the subsequent changes are incorporated in it.

3. Three copies of the village map are prepared—

- one (on cloth) for the use of the *patwari* in crop inspection,
- one for the tahsil office and one for the district office.

A fourth copy is also prepared for the Irrigation Department in Canal areas.

4. Supplementary maps are prepared for all changes occurring in the interval between two settlements and all new lines are shown in them in red ink. At his harvest inspections, the *patwari* puts a red cross against every survey number for which a supplementary map has to be prepared. Where the change necessitating the preparation of such map is due to sale, mortgage or any other transaction which has to be entered in the mutation register (paragraph 39 of Standing Order No. 16), the map is prepared on the back of the mutation sheet as soon as the mutation is written up. In all other cases, it is prepared on a separate sheet at the end of the fourth year when the quadrennial jamabandi (paragraph 40 of Standing Order No. 16), is prepared. In the recently settled districts, all supplementary maps are incorporated in the tahsil copy of the settlement map. The sub-numbers shown in supplementary maps are numbered in accordance with the system described in paragraph 39 of Standing Order No. 16.

5. The procedure described in the preceding paragraph does not apply in its entirety to changes due to alluvion and diluvion. For all such changes supplementary maps are prepared every year and incorporated in the *patwari's* copy of the settlement map. At the end of the fourth year, this copy is filed in the tahsil along with the *jamabandi* and a tracing of it is given to the *patwari* for use during the next four years.

Field Book.

6. Two field books are maintained. One is prepared in connection with the settlement map. It shows the area calculation and the area of each survey number along with the former number, the present classification and the holding in which it is entered. In the other field book similar details are given for all sub-numbers for which supplementary maps are prepared. In the case of the former field book, the former number is the old settlement number and in the case of the latter, the survey number of the present settlement from which the sub-number has arisen.

Documents showing Rights, etc.

7. For each village the following documents are maintained in order to show the rights and liabilities of its owners, tenants, etc.:—

(1) Genealogical tree of all owners. At the first settlement it goes back to the common ancestor of the existing owners or at least for three generations. At subsequent revisions, it is carried back to those ancestors of the existing owners who were alive at the previous settlement. A new proprietor's name is not entered in the genealogical tree until the mutation relating to his acquisition of proprietary right has been duly attested. Conventional symbols are used in it to distinguish the Lambardar, absentees, females and the owners who have died without leaving any male lineal descendants. Where a son holds a share separately from his father's share, the name of the son is entered in red ink. A note is given below the name of owner by purchase showing from whom he has purchased.

(2) *Jamabandi* or register of the holdings of the owners and tenants showing the fields comprised in each holding, the revenue for which each owner is responsible and the rent payable by each tenant.

(3) A list of revenue assignments and pensions.

(4) A statement of rights in wells and other sources of irrigation.

(5) A statement of customs respecting rights and liabilities in the estate (*wajib-ul-arz*).

All these documents are prepared in duplicate. One copy remains with the *patwari* and the other copy is filed in the district office. The first three are revised at the end of every four years and last two at each settlement.

8. Besides the documents mentioned in the preceding paragraph the following documents have also to be maintained for each village—

(1) A harvest inspection register in which survey numbers are shown in the order of the settlement map and in which columns are provided for the entry of crops, changes of rights and rent. These details are ascertained by the *patwari* at each harvest by field to field inspection.

(2) *Mutation Register*.—This is a register in which orders of revenue officers have to be obtained in regard to all those changes which cannot be given effect to in the next *jamabandi* in the absence of their orders, that is to say, a register in which orders of such officers have to be obtained in regard to all changes relating to the rights of land-owners, assignees of land revenue and occupancy tenants and in regard to all disputed changes of tenants-at-will. It is a counterfoil register. The revenue officer enters his orders in full in one of the foils which is subsequently sent to the *tahsil* and in brief in the other which is kept by the *patwari*. At the end of the fourth year, the foils sent to the *tahsil* are attached to the next *jamabandi* in which effect is given to the changes to which they relate.

Quadrennial Revision.

9. Revised copies of the first three documents are prepared. The names of the descendants of all the owners who have died since the preceding revision as well as the names of all the persons who have since then acquired land by purchase are included in the geneological tree. All the mutations attested since the preceding revision are given effect to in the *jamabandi* and in regard to tenants-at-will whose changes are not entered in the mutation register in the *jamabandi*, entries are brought into accord with the latest entries in the harvest inspection register. All changes regarding assignees and pensioners are given effect to in the list of assignments and pensioners. All the entries of the revised *jamabandi* are attested on the spot by the field *kanungo* and 25 per cent. of them are re-attested by the *Tahsildar* or *Naib-Tahsildar*. For purposes of quadrennial revision the villages of each *tahsil* are divided into four groups and the records of the first group are revised in the first year, those of the second group in the second year and so on.

Special Revision at Settlement.

10. At each settlement all the five documents mentioned in paragraph 7 are specially revised. The geneological tree and list of assignments are revised in the same manner as a quadrennial revision but with greater care. Fresh enquiry is made regarding rights in wells and other sources of irrigation and all new wells and other sources of irrigation that have come into existence since the preceding settlement are brought to record. Fresh enquiry is also made regarding the customs respecting rights and liabilities in the village and all changes discovered are duly incorporated. As survey numbers are re-numbered at each settlement the *jamabandi* cannot be conveniently revised at settlement in the ordinary way and the following special procedure is consequently adopted. For each separate occupancy a *khatauni* slip is prepared showing its number in the previous *jamabandi*, the names of the owner and the tenant and all the mutations affecting it which have occurred since the previous *jamabandi* was prepared and containing columns for showing the present number, former number, name (if any), source of irrigation, area, classification, and rent of every one of the survey numbers to be subsequently entered in it. Copies of the *khatauni* slips are distributed to owners, mortgagees and tenants. When all the *khatauni* slips are ready, the *patwari* proceeds to measure and plot the fields. As each field is measured, it is numbered in the map, and the area is worked

out and classification is determined. The owner and the cultivator of the field are informed of the result and their objections considered. The field is then entered with all the necessary details in the field book and the appropriate *khatauni* slip and in the *parchas* given to owners, etc. Village sites and roads are also measured. Where any road has no distinct bound, it may be taken as three *karams* (about 16 feet) wide. If it shifts from year to year, a note as to this is made in the *khatauni* against each field crossed by it. When the measurements are completed all the entries of the *khatauni* slips are first attested by the field *kanungo* and then by the *Naib-Tahsildar*. Twenty-five per cent. of them are further attested by the *Tahsildar*. Subsequently the *khatauni* slips are copied in *jama bandi* forms in which a column is added for the former number. The above documents together with the map and the orders of the Settlement Officer determining and distributing the assessment constitute the Standing Record of Rights. They are indexed in a preliminary proceeding, the opening paper of the records. A similar procedure is followed in regard to a village for which a record of rights is for the first time prepared. In this case there can be of course no former *jama bandi* or field number.

Memorandum of Account of Settlement Procedure in the Central Provinces, given by Mr. J. F. Dyer, I.C.S., Revenue Secretary to Government, Central Provinces.

1. For re-settlement an accurate survey is necessary. If the maps are not accurate, revision of the survey is an essential preliminary. At present our maps are supposed to be brought up to date every year, but in practice we have not been able to ensure that the work of annual correction is satisfactorily carried out; even in the most settled districts between one settlement and another there are large changes and we find that before re-settlement not only is extensive revision of the cadastral survey still necessary, but as a rule extension of cultivation renders some sub-traverse survey work advisable. This preliminary work is placed under a special Survey Officer known as the Assistant Settlement Officer, Map Correction (A.S.O.M.C.) who is usually a member of the revenue staff specially trained in surveying by the Survey Officer and is eligible for promotion to the post of Deputy Director of Land Records in charge of the Land Records work of a division. With this preliminary stage the Settlement Officer has no connection except that when he is posted to the district as Officer on Special Duty to prepare the forecast report, he keeps in touch with the Assistant Settlement Officer and sees that there shall be no hitch nor delay in the supply of maps as required by him for purposes of settlement.

2. A settlement roster is maintained and as the period of each settlement draws to a close, the Commissioner of Settlements in consultation with the Commissioner and the Deputy Commissioner is required as a preliminary to submit a short report discussing whether the existing settlement should be extended (as has been done in two districts). If it is decided to revise the settlement, the first step is the preparation of the Forecast Report by an Officer placed on special duty for that purpose; this is an innovation dating

only from about ten years back. The nominal duty of this Special Officer is to prepare the Forecast Report, but the most important part of his duty and "the real object of his early posting is that he should have a full opportunity of studying the district in all its aspects and making himself acquainted with all settlement literature and of setting things in train so that field operations may be started promptly in the first working year of the settlement." (Paragraph 7, Settlement Instruction No. II.) Thus the Settlement Officer during this preliminary year has three duties—

- (a) to acquaint himself with the district.
- (b) to arrange for office accommodation and the organization of work, and
- (c) to prepare the Forecast Report.

Before this procedure was introduced, it was found that much of the first season was wasted in preliminary work and the Settlement Officer had no "standards" in his head to guide him. The Settlement Officer usually has no experience as Assistant Settlement Officer. Assistant Settlement Officers are either Tahsildars or Naib-Tahsildars and not of the type of man who could develop into a Settlement Officer. Assistant Settlement Officers work for two settlements and then go back to the ordinary line. They are, therefore not available as Settlement Officers and these are usually, hitherto almost invariably, drawn from the Commission; but partly as a result of the war officers of the Provincial Service are now being appointed. It is difficult to get Indian officers to grasp the soil unit system as they are misled by its apparent facility and tend to place too much reliance on figures without sufficiently critical consideration of the facts which the figure represents. All officers of the Commission should receive two months' training in Settlement work after three or four years' service, but in recent years war conditions have interfered with this training. This training is a part of their general training in revenue business, but people who, during this training, evince a special aptitude for revenue work and settlement tend later on to be allotted settlement work. At the conclusion of this preliminary season the Officer on special duty, in consultation with the local officers, draws up and submits a Forecast Report, which is published for objection and considered by the Settlement Commissioner and Government (*vide* Section 37, C.P. Land Revenue Act, 1917).

3. Settlement proper comprises two main heads; the preparation or revision of the Record of Rights, and the assessment of the land: The survey staff supply a *Khasra* in the usual Land Records form showing the field numbers, areas, ownership and occupation and the cropped areas. The important village papers by at testation at settlement form the Record of Rights. The process is as follows:—an additional Revenue Inspector goes through the annual papers of the *patwari* to ascertain that they are accurate. These are checked thoroughly by the Assistant Settlement Officer in charge of a party of 10 to 12 additional Revenue Inspectors, and subsequently examined by the Settlement Officer who satisfies himself that they are generally accurate. The papers which become the Revised Record of Rights are:—

- (a) the *Khewat* or Statement of Proprietors including lessees or mortgagees in possession with the nature and extent of their

interest. All *Malguzars* are shown in detail, but plot-proprietors' (*Malik Makbusas*) names are not shown, but only the total area held by them ;

(b) the *Khasra* or field-book showing in serial order of field numbers, the names of all persons cultivating or occupying land, the rights and the rent; if the field is "unoccupied" details are also given, e.g. No. 16, area 4.80 acres, nalla ;

(c) the *Jamabandi* or list of persons cultivating or occupying land ;

(d) the field map ; and

(e) the village administration papers.

While the revision of the record is being carried out the additional revenue inspector is also classifying the soils according to the directions of the Settlement Officer, and prepares a Soil Classification Trace and a Classified Area Statement or *Fard Zamin*. This classification work is checked in detail by an Assistant Settlement Officer.

5. When the Settlement Officer inspects the village he has available the Record of Rights and the Classification Trace and Statement. By examining the trace showing the distribution of the soils he is able knowing his men and the circumstances under which they are likely to go wrong, to obtain a shrewd idea in what part, if any, mistakes are likely to have occurred, and further assistance in this respect is obtained by studying the soil map in relation with the rents, etc., recorded in the register. Besides the general check of the record and soil classification certain duties are specifically imposed on the Settlement Officer himself. These include the verification of the Village Administration Paper and also of the *Fard Nazarian*, a confidential document, describing the financial and economic condition of the village, and its inhabitants, and forming an index to its assessable capacity. If the Settlement Officer makes any change in the records he has a small camp office with him and the corrections are carried out at once.

6. The papers are then sent into office for examination of inconsistencies, after which they are passed for fair copying and the map for colouring. The maps and records are signed by the Assistant Settlement Officers (not by the Settlement Officer) and by the fact of signature become the Record of Rights with an evidential value. On certain points the Record is conclusive and on others, presumptive as shown in section 80, Land Revenue Act. Regarding any matter which can be corrected by a civil suit there is no appeal to the Settlement Commissioner. The record is supposed to be brought up to date annually, but the annual papers are given no evidential value. This distinguishes the record here from the record in Berar, where the Record forms a permanent Record of Rights after changes have been, certified, after verification on the spot by an officer not below the rank of Naib-Tahsildar. This is considered safe in Berar because there are less changes in occupancy there and the *patwaris* are more intelligent. The *patwaris* and *patels* in Berar ordinarily reside within their charges and are real leaders of their community ; there still survives a strong village feeling. It is hoped that annual papers maintained in the Land Records Department in the Central Provinces will in time become equally trustworthy.

**Memorandum of Account of Irrigation Policy and Revenue,
given by Mr. J. F. Dyer, I.C.S., Revenue Secretary to
Government, Central Provinces.**

1. Irrigation projects are classed as—

- (a) Productive works,
- (b) Protective works, and
- (c) Minor works.

(a) Productive works are those which within ten years of completion promise to pay maintenance charges and interest on capital outlay calculated at 5 per cent. (for works sanctioned before 1st April 1919, 4 per cent.). These are financed from borrowed funds.

(b) Protective works are undertaken with a view to increase the resistance of a tract and to abolish future expenditure on relief operations. They are not expected to be remunerative and the cost per acre of construction depends on the insecurity of the area to be protected. The province has been divided into four tracts—

- (i) Deeply depressed rice tracts.
- (ii) Rice tracts which suffer considerably from drought.
- (iii) Mixed rice and wheat tracts requiring irrigation.
- (iv) Ordinary secure tracts.

(Formerly areas where rice was unimportant were considered not to require protection, but further experience has shown that protection in these tracts is also desirable and a sound insurance against relief expenditure.) The cost per acre for protection is now Rs. 120 per acre, Rs. 70, Rs. 48, Rs. 32 per acre according to class. These works are constructed from the Famine Insurance Grant (Imperial) financed from current revenues.

(c) Minor works comprise the smaller irrigation works, including agricultural works, not large enough to justify construction from Imperial funds; they are financed from current Provincial revenues.

The justifiable limit of cost is the same as for productive works.

2. The projects for all irrigation works are prepared in two stages—

- (a) The preliminary stage, and
- (b) The detailed estimate stage.

(a) *The Preliminary stage.*—Irrigation schemes may be proposed either by the Executive Engineer or the Deputy Commissioner, who should, usually, first of all discuss the project informally.

If they agree that it is likely to be useful, the Executive Engineer prepares a rough note on the nature and probable cost of the scheme, which is submitted through the Deputy Commissioner and Commissioner to the Superintending Engineer.

The Deputy Commissioner is required to note on the necessity for irrigation, the extent to which irrigation is already practised, the castes and circumstances of the cultivators, the value of the project as a productive work, the willingness of the people to pay for water, the probable water rate and revenue. Any expenditure necessary in this stage may be sanctioned by the Executive Engineer if not over Rs. 1,000 and the Superintending Engineer if not over Rs. 5,000. If all

officers are in agreement, the proposal goes through the Chief Engineer who takes the opinion of the Financial Commissioner and obtains the orders of the Government.

In the case of a minor work sanction is accorded by the Local Government and of a major work by the Government of India. On receipt of sanction for survey, the Superintending Engineer orders the survey and preparation of the project or detailed estimate. This completes the preliminary stage.

(b) The detailed estimate is then prepared by the Executive Engineer; agricultural statistics regarding the area commanded in a normal year are prepared in consultation with the Deputy Commissioner.

3. Expenditure on irrigation is recouped in two ways—

(a) by enhanced revenue on the improvement of the land by irrigation and

(b) by a rate for the use of water.

(a) The improvement of the land due to irrigation is assessed as land revenue.

The Settlement Officer is required to estimate the revenue derived from land which, but for the construction of the work, could not have been cultivated, and add to this an estimate of the increase of revenue resulting from the enhancement of rents on account of the greater security given to the tract by irrigation. The total of these two sums represents the yearly indirect revenue from privately owned villages.

The indirect revenue in ryotwari villages is similarly estimated.

(b) In addition to the enhancement of revenue people who use water are required to pay for it by water rates on the amount used. Thus irrigation revenue comprises an element of land revenue, a tax on the enhanced rent of land due to irrigation, and also a rate, a payment for service rendered in the supply of water.

4. A schedule of water rates is prepared by the Executive Engineer in consultation with the Deputy Commissioner submitted through the Commissioner and Superintending Engineer and notified under the appropriate section of the North India Canal and Drainage Act. The water rates are not fixed with any reference to the value

Crop.	Water rate per acre, 1919-20.	
	Rs.	A. P.
Rahi	1	0 0
Groundnut	2	8 0
Summer juar	3	0 0
Betel and other gardens	6	0 0
Fruit orchards	8	0 0
Plantains	10	0 0
Sugarcane		
Rice—		
Annual	2	8 0
On demand	5	0 0

of the water in enhancing productivity but by the amount which the people will pay without checking the spread of irrigation. The water rates per acre for different crops in the Bhandara and Nagpur Districts are given in the marginal schedule.

NOTE.—1. Rice, fruit orchards, plantains, cane raised 25 per cent. in 1920-21.

2. Long term agreement for rice Rs. 1-8-0 rising to Rs. 3-8-0 in 9th year by 4-anna increments

5. The rate varies with the crop, but for rice, the water may be taken either by an annual agreement, or can be supplied on demand at a higher rate per acre. A recent innovation has been the introduction of the long term agreement system under which villages contract to pay for a period of years, usually ten, a water rate on the whole of their cropped dry rice areas which are commanded, irrespective of whether they take water or not. In Chhattisgarh water is given free the first year, the rate rising thereafter by yearly increments of annas 8 until Rs. 3 is reached in the 7th year which rate remains in force until the expiry of the agreement. This system was only introduced in 1918 and is expected to assist materially in the development of the irrigation by its educative influence upon cultivators who were previously unaware of the advantages of assured irrigation. Some difficulty, however, has been experienced in working the system, because the Irrigation Department has sometimes taken an unduly optimistic view of the areas commanded.

6. The water rate is assessed by an Irrigation *Amin* who goes round and measures up the crops. The revenue is collected by an Irrigation *Panchayat* who collect irrigation rates and pay the money into the treasury, and also assist the Irrigation Department in distributing the water. They draw a commission at 3 annas per acre on the acreage irrigated. For some tanks *amins* are not appointed and the *patwari* performs the duties of the *amin* under the supervision of the Revenue Inspector. The Revenue Inspectors and *patwaris* receive a commission at a rate not exceeding 6 pies in the rupee of water rate. By Act I of 1919, the latest amendment to the Irrigation law, it has become permissible to charge water rate on seepage, and power has been given, if a four-fifth occupancy majority desire to enter into a long term agreement, to make the agreement binding on all the cultivators within the area commanded. This enforcement of the will of the majority makes distribution arrangements easier.

There appear to have been difficulties in working these *panchayats*; it has been found that a strong *panchayat* is essential and unless the members of the *panchayat* possess influence in the village and are able to ensure the best possible distribution of the water the system cannot attain full success.

7. Another recent innovation is the appointment of a Canal Deputy Collector, a sort of liaison officer whose primary duty it is to relieve the Executive Engineer of his Revenue Administration work. In some districts there had been serious trouble between the Irrigation Department and the cultivators and in a less degree the revenue authorities, and this Canal Deputy Collector was introduced to obviate such difficulty. He is as a rule a selected tahsildar on Rs. 175 to Rs. 275 with a deputation allowance of one-fifth of his pay and prospects of promotion to the post of Extra Assistant Commissioner. He was introduced four or five years ago much against the will of the irrigation people, but (largely perhaps on account of the personal qualities of the officer first selected for the appointment) the experiment has been quite successful, and the Department wish it extended. The Canal Deputy Collector arranges for the taking of agreements and enquires into and settles disputes; but he has no power as a Magistrate to try canal cases, or to impose penalties. He is

subordinate to the Executive Engineer and not to the Deputy Commissioner; and though he can bring the Deputy Commissioner into closer touch with Irrigation than would otherwise be obtained he is primarily a Revenue Assistant to the Executive Engineer.

A Description of the Soil Unit System and Simplified System of Rent Fixation by Mr. C. G. Chenevix Trench, I.C.S., Commissioner of Settlements, Central Provinces.

1. The annual demand of every *mahal*, which is usually every village, is fixed at each settlement and remains unchanged for a term of settlement. Being an annual demand it is based on the annual income of the *mahal*. That income in settlement parlance is called the assets of the *mahal* and is assumed at every re-settlement for the purpose of fixing the revenue which will be recovered annually during the term of settlement. These assets consist exclusively of the following items:—

(a) *Malguzari* assets—

- (i) Rents,
- (ii) Valuation of home-farm and privileged tenant lands,
- (iii) Siwai income, *i.e.*, income from waste and from such items as fruits which although found in the occupied area are not taken into account in fixing rents.

(b) *Malik makbuza* revenue, or revenue fixed on plot proprietors who hold within the *mahal*.

2. The Settlement Officer has to frame revised assets, under each of the above heads. Thus, he

- (i) enhances the rents,
- (ii) re-values the home-farm, and
- (iii) records the income from siwai, which owing to the development of the province has enormously increased in the past 20 years; he also

(iv) revises, *i.e.*, enhances revenue of the *malik-makbuza* plots. He then proposes, first a revenue on the *malguzari* assets, at about 50 per cent., then the *malik-makbuza* revenue, then adding the two together a total revenue for the *mahal* as a whole.

3. Though by far the majority of rents have been fixed at least once by a Settlement Officer, to a great extent the rents paid by the tenants are still customary; some will have continued unchanged since the previous settlement, some lands recently leased may be held at a rent approaching the competitive economic rental. Ordinarily, between one settlement and the next, economic progress will justify an enhancement of rent and therefore of the assets and the revenue. General conditions, such as the rise of prices and the rise of rents in those cases where the pitch is governed by competition, will indicate the degree of enhancement suitable. One main problem of the Settlement Officer is to apply these considerations to the fixation of individual rents. For this it is necessary to ascertain the rental pressure because one rent may be very low, another very high and it is obviously unjust to enhance both to the same extent. In one village or holding, the rent actually paid may be nearly as much as

the land can stand; in another, the rent per acre may be higher but represent a much smaller proportion of the rent which could be paid. Acre rates convey very little information about pressure. *For every holding, bearing in mind the considerations justifying enhancement and also the existing pressure of rents on that holding, his task is to fix a new rent.* For this he applies the soil unit system

4. A soil unit is a measure of the productive capacity of the soil, just as an area unit, a square foot, is a measure of area. A soil unit system is a system in which the relative value of different soils is expressed in soil units. (The value of land depends on the average net profits of cultivation.) The claim of the soil unit system is that it provides a basis for comparing pressure of rents in different tracts as well as an implement for enhancing these rents. Under this system one acre of each class of soil is given a certain number of units or marks which express the relative value of each soil as compared with any other soil. For example we have five soils, A, B, C, D and E in descending order of value, E being the soil on the margin of cultivation. Now we have to allot to each of these soils a number of marks or units which will express its relative value as regards the rest of the soils. To do this we take a basal soil, say C, and because the number 32 has many divisors we will take 32 as the number of marks or units to be allotted to C. This number we call the soil factor. Now by a chain of very careful enquiries conducted over large areas we find that E the lowest soil is popularly estimated at only one-eighth of the value of C or 4. We check these vague popular estimates as far as possible in many ways, *e.g.* by figures of sub-rents or new rents of holdings which are homogeneous in soil by crop experiments, and by Court of Wards accounts. (Sub-rents are generally competition rents and show the real market value of the land.) Now A is the finest irrigated land in the tract to be settled. Enquiry and especially sub-rents indicate that an acre of A is at least twice as valuable as an acre of C. The factor for A will therefore be 64. Similarly, the factor for B is fixed at say 42 and for D at say 16. We have now got our soil factors; and the fixing of these is an extremely important and delicate operation. In practice the scale adopted at the previous settlement is a good guide. But alterations of the scale will be necessary and are freely made where the relative values of land have changed, *e.g.* owing to the appreciation in price of an old crop such as cotton, or the introduction of a new crop such as groundnut, both of which changes would enhance the relative value of the prevailing cotton or groundnut soils.

5. We are now in a position to discover the actual rental pressure of any cash rented land. To do this we class soils of the land, enter the area in acres under each class of soil, multiply that area by the factor chosen for that soil, and add up the number of units or marks in the whole field or holding. We have now a total of the soil units in that field or holding and if we divide the rent of the holding reduced to annas by that total we shall know exactly how many annas the tenant is paying for every soil unit. Let us suppose he is paying half or .50 of an anna. Another tenant in the same village may be paying at 1.50 annas. Another, who took up his land years ago when

land was cheap may be paying at only '27 of an anna. Thus it is possible to compare the pressure of one holding belonging to one tenant with that of countless other holdings. Similarly if we add up the total number of soil units in the occupied area of a village, which is in the possession of tenants, and divide the total rent roll of the village by this total number of soil units we get the rental pressure of the village as a whole expressed in terms of annas per soil unit. We can then compare the rental pressure of one village with that of another, one group of villages with that of another group, and even, to a certain extent, of one district with that of another district.

6. In fixing rents the soil unit system is used as follows:—

The forecast has given the probable enhancement for the tahsil, determined by general consideration. This is further considered and modified if necessary during detailed inspection, and a suitable enhancement determined for each group with reference to the tahsil as a whole and for each village with reference to the group as a whole. Having decided this, the Settlement Officer proposes such a unit rate for each of the villages of the group as will give approximately the enhancement desired over the group as a whole. In many villages he may aim at an enhancement well above the group "standard" enhancement, in many, far below it. He multiplies this unit rate by the factor for each class of soil in each position, *i.e.*, for every distinction of relative value which has been recognized in the village and this gives him acre rates rounded where necessary to the nearest anna (or in the higher classes to the nearest two annas). These acre rates do not claim to represent the absolute rental value; the Settlement Officer is only concerned to fix rents at a standard which can be applied having regard to existing rents. He is generally limited by practical considerations to a maximum rental enhancement of 50 per cent. over the village and 100 per cent. for any single tenant. Applying these acre rates to each holding he obtains a deduced rent, which is used as a guide to fixing the actual rent.

7. The soil unit system was open to the criticism that—

(i) it was complicated and expensive requiring elaborate checking and calculations.

(ii) owing to its elaboration a long delay was necessary between the visit of the Settlement Officer and the enhancement of the rates.

(iii) The results arrived at were not always suitable because the rate punished or let off all soils in one village alike. Some soils had a special value in some villages, *not* properly expressed by the factor scale which was for a whole tract and could not be conveniently varied to suit a single village, or a few. It was not sufficiently elastic.

(iv) it could not be understood by the people.

Perhaps the chief defect of the soil unit system is its apparent facility. Officers tend to place too much reliance on its arithmetical results without sufficiently critical consideration of the underlying circumstances. People are apt to think they understand the soil unit system when they don't, and to follow it even where it is misleading. We have, therefore, devised a simplified system for the "backward tracts" of the Central Provinces. The simplified system has been successful in reducing the cost of settlement operations, and although as yet it has only been applied in backward tracts it can probably be

applied in most parts of the province where rents are not on an economic level, are paid in small sums, and the limits of enhancement are governed by the low pitch of existing rents rather than by the rise in the productive value of the land. (Mr. Dyer considered that it could have been applied all over Nagpur District.)

8. (a) The essential distinction of the simplified system is that soil units are discarded, and, therefore, no attempt is made to gauge the existing pressure of rents with any approach to accuracy. In backward tracts we know perfectly well that the annas 3 and annas 4 per acre rents are peppercorn and gauging their pressure would be sheer waste of time, as nearly all will be enhanced from 30 per cent. to 50 per cent. The Settlement Officer adopts a very simple list of soils and positions based primarily on the rental demand for the land rather than on its productive value. For example, aboriginals ignore fine distinctions between soils and a rich black soil which would be highly valued in settled areas may be lightly esteemed for want of cattle or risk of damage from wild animals, etc. The Settlement Officer on entering a backward tract, *i.e.* group, inspects sufficient villages to obtain a thorough acquaintance with the soils and general conditions. He then considers the rental enhancement forecasted for the tahsil and the propriety of varying the enhancement for the group under consideration and frames an estimate as to the enhancement which should be taken for the group.

(b) The next step is to frame his standard set of acre rates for his few soils. Rents on homogeneous (single soil class) holdings and the revised rental incidence per soil acre fixed by the previous Settlement Officer, help him in this. He may find that at last settlement the Settlement Officer fixed acre rates of annas 4 and annas 8 on soils A and B, so, making allowance for old fallow (which was not valued in the earlier settlements) he enhances these acre rates to the extent already decided by him to suit the group as a whole. He thus obtains a standard set of revised acre rates which may be expected to produce the group enhancement at which he aims. He modifies these rates when necessary from village to village according to the qualities of the soil, strength of the tenants and advantages or disadvantages of the position of the village and thus fixes a series of soil rates for each village which he inspects.

(c) These rates are applied to each holding by the camp staff of the Assistant Settlement Officer who sends his proposed rents to the Settlement Officer in camp for his approval. This obtained, he announces the new rents in the presence of the Settlement Officer hearing and deciding all objections but stating that the rents are subject to revision by the Settlement Commissioner and the Financial Commissioner.

9. The simplified system may be contrasted with the regular settlement procedure briefly, as follows. Under the regular procedure the Settlement Officer adheres to an uniform factor scale for the whole group and varies the unit rate from village to village. Under the simplified system he varies the factor scale from village to village and applies a unit rate of one anna for the whole group. The second difference is that he announces the rents before they have been reviewed by the Settlement and Financial Commissioners. He fixes

and announces his new rents in the field and obtains sanction to them.

10. Examples of the application of this system in the wild Tapri valley group of the Betul District are shown below :—

Soil Class.	Villages															
	21			22			23			24			25			
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Morand	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Morand	2	0	12	0	..	..	0	12	0	1	0	0	1	0	0
Mutharra	1	0	8	0	..	..	0	8	0	0	8	0	0	8	0
Bardi		0	3	0	0	3	0	0	3	0	0	3	0	0	4	0

Although the rents in these villages were raised by 46 per cent. there were no appeals. Under the regular procedure, owing to the lapse of time between the visit of the Settlement Officer and the enhancement of rents, appeals are generally numerous, for the cultivators have no notion of what mysterious action has been going on in headquarters office for the last year, have forgotten the Settlement Officer's visit to their villages, and the announcement of their enhanced rents strikes them *ex-improviso* as a belated calamity which they had hoped to have escaped.

Memorandum of Account given by Mr. C. G. C. Trench, I.C.S., Commissioner of Settlements and Land Records and of Survey in Remote Areas, in the Central Provinces.

1. Formerly the whole area under survey was surveyed on a uniform system, now we have decided that uniformity is expensive and unnecessary and the area under survey has been divided into three classes. There are three systems of survey :—

The first system is full cadastral survey from fixed traverse points ; this is for valuable and permanent cultivation.

The second system is known as the Betul plan. As originally devised this plan was only intended for isolated plots of poor shifting cultivation in forest, but it is now being extended to quite large areas of soil on the margin of cultivation whether isolated or not. Survey on the Betul plan is done by triangulation on floating base lines, which are not linked up with the traverse system. Thus the area and shape of a plot surveyed on the Betul plan will be nearly or quite correct ; but the position will be only approximate. One reason for adopting the Betul plan is the extreme difficulty of clearing the jungle between one traverse point and another.

The third system is the Masahat system. In this no survey whatever is attempted but the cultivated areas are roughly sketched on the map after measurement with a chain and their area entered in the Khasra by length and breadth calculation.

2. To introduce this method it has been necessary to examine every village and throw it into one of three classes:—

A.—Those in which full traverse and survey are necessary; the great majority of villages belong to this class.

B.—Those in which the Betul plan can be employed over the whole or part of the village area.

C.—Masahat villages.

3. When the programme of traverse work is prepared every year we do not permit, except for special reasons, any new traverse to be laid down in the second class areas of B villages, or in the C class villages, nor if the traverse stations in these areas have disappeared do we attempt to replace them. In this district (Raipur) new traverse has in the past been laid down, lists of areas for sub-traverse were prepared by the Superintendents of Land Records on an unthinking and unnecessarily lavish scale, and the *patwaris* and the *magdums* are liable to punishment for not reporting and maintaining the marks, but as cultivation did not expand and the traverse was never used the attempt to extend traverse and maintain stations is a waste of labour and we want to avoid spending this money to no purpose. In such areas if traverse stations disappear we make no attempt to replace them.

4. Such areas are almost entirely Zamindari or Malguzari. Government land is either laid out in Ryotwari villages (which with a few exceptions of patch cultivation villages are all A class fully surveyed) or is Government forest. If Government forest is to be given out for the establishment of a ryotwari village or for a grant to capitalists for experimental cultivation, the orders of the Government of India have to be obtained and the area to be excised must be traversed by the special traverse survey party. We are also now very chary of adding to the number of sub-traverse stations in a village.

Description of Preliminary Stages of Settlement Operations in the Central Provinces, given by Mr. V. R. Khishly, Deputy Director of Land Records, and Mr. C. F. Waterfall, I.C.S., Settlement Officer-Designate.

1. The first step in the preliminary stage of settlement is map correction. All *patwaris* were called into Raipur last rains with their maps. They received as travelling allowance their actual expenses and a headquarter allowance of Rs. 3 per mensem. Their traces (*i.e.*, the maps on which they had been working) were examined. Those clean enough to use for map correction were set aside. Those traces which were congested, dirty, stretched or torn were condemned for retracing. (All map corrections during the course of settlement since the previous survey had been shown in red ink, the original survey lines in black ink.) About 30 to 35 per cent. were condemned as not clear enough for map correction. These were retraced.

2. Villages are divided into A class, B class and Masahat. In A class villages the whole village with internal details has been accurately surveyed. In B class villages, outer boundaries have been

accurately traversed, but the interior detail is wholly or partly approximate, fields being accurately mapped, so far as concerns dimensions, but approximate as regards position without strict reference to fixed survey marks. Masahat villages are fluctuating villages which have no fixed boundaries. Two specimens of maps are shown, one of an A class village, Binori, Mahasamand Tahsil, where the survey is permanent and accurate. This trace has been condemned, because it is dirty. Another village shown is a B class village, Pandarachua village, in the same tahsil. The boundaries of this village have been traversed. On the north-east there are two extensions of about 50 acres in the Zamindari forest. At settlement the Settlement Officer may, and if cultivation is valuable probably will, extend the boundaries of the village and include the cultivation, or in the alternative, he may recognize the patch as a separate *masahat* village. During the interval between settlements the Deputy Commissioner might take similar action, but it is unlikely that he would do so as he is little concerned with such matters, unless from the point of view of forest conservation the matter were important.

3. The condemned traces are retraced and taken into the field at the beginning of the open season to be brought up to date. Hitherto it has been the practice to mass the *patwaris* for survey work, but difficulties have been experienced in this connection and the difficulties are increasing as the men object. At the end of the open season when the traces have been brought up to date the *patwaris* are again called into the district headquarters and carry out the following work:—

- (a) A clean trace is made of every map
- (b) Survey fields are re-numbered.
- (c) The area of each field is calculated.
- (d) A fair Khasra and Jamabandi are prepared. The maps are then ready to be taken over by the Settlement Officer.

4. At the beginning of the next open season the Khasra and the corrected map are sent out early in the season for the *patwaris* to make the entries of the attestation year. This Khasra prepared by them is the Khasra which the Additional Revenue Inspector attests and becomes the basis of the Settlement Record. On the fair map the attesting officers, Additional Revenue Inspector, Assistant Settlement Officer and the Settlement Officer mark the soils and carry on their various kinds of work.

5. The officer on special duty (or Settlement Officer-designate) took over charge of his duties in Raipur last December. He had previously done settlement training during November and December 1912 in Nagpur. During his training he spent a few days with the Settlement Officer. Then he attested a village working as Revenue Inspector; was present with the Assistant Settlement Officer when the village was checked and accompanied the Settlement Officer while inspecting villages; finally spent some days in office studying office work. Since then he has had no further training. He is now spending his time going round to all Zamindaris (of which there are 20) inspecting them, deciding on the enhancement which should be imposed, and which parts should be dealt with in the simplified system as "backward tracts." His staff consists of a Reader, a

Checker and two Moharirs. He has to compile Mahalwar assessment statements in the ordinary form for each Zamindari and for each group, *i.e.*, Statements 1, 2, 3, 5, 6, 7, 8, 9, 10. If he were dealing with a Malguzari area he would also have to compile Statements 11 to 14. Figures for Statements 4A and 4B are not available. The figures from heading No. 7 onwards in Statement 8 and Statements 9 and 10 can only be entered provisionally. These statements will be attached to the Forecast Report and utilised in the preparation thereof. Additional statements will also be prepared showing for each group and Zamindari the cropping under certain specified heads for each year since last settlement (1902).

Soil Classification in Nagpur District.

1. Under the revenue system of the Central Provinces the assessment does not necessarily bear any relation to the productivity of the soil; the assessment depends upon the rent, and the rents have been determined, more or less but almost universally in some degree, by custom. Good soil lightly rented would bear enhancement but not necessarily to so high a rent per acre as less productive soil already rented more highly. Thus classification is not utilized as an index to assessable capacity, but as a means of testing rental pressure; for the practical purpose of fixing rents and assessing revenue a relative valuation of the soils is sufficient.

2. The first settlement on modern lines in Nagpur District was the "Thirty Years Settlement" of 1860-64. In these operations the soils were classified but the principles of classification and the use made of it are obscure.

3. At the revision of this settlement in 1890-95 a systematic classification of the soils was undertaken. The land was classified according to the inherent physical properties of the soil, according to its crop capacity; and according to its position.

4. In the primary classification according to physical properties the Settlement Officer recognized eight classes and qualities of soil.

(i) Kachhar; recent alluvial soils on river banks;

(ii) and (iii) Kali; a rich black soil of first rate productiveness; with two classes,—

Kali 1 containing little or no grit;

Kali 2 containing grit or small pebbles;

(iv) and (v) Morand; not so black as Kali and more loamy; generally containing limestone grit; with two classes,—

Morand 1, black or dark brown and little limestone grit, and

Morand 2, lighter in colour and more gritty;

(vi) Khardi; inferior Morand, seldom more than a cubit deep and often mixed with sand and limestone nodules:

(vii) Retari; yellowish sandy soil:

(viii) Bardi; poor stony soil often reddish coloured.

5. Many confusing varieties of soils were found; in some the appearance did not correspond closely with the description, in some different classes were intermixed. Khardi or even Bardi might present the surface appearance of Kali, and although in such cases digging

would ordinarily disclose rock or gravel 18 inches or much less below the surface, it was possible to mistake the worst kind of soil for the best and there was room for great differences of opinion as to the intermediate or minor divisions. Again, the same soil might exist in very well marked varieties in different parts of the district. Thus soil of the same consistency and appearance as Kali (typically the rich *black* soil) and equal to it in productive power was occasionally met with of a *red* colour. Morand in the same area might be reddish brown or light yellow. Also Khardi, though strictly a poor Morand, was used to describe many varieties of soils of inferior depth and quality not poor enough to be classed as Retari or Bardi. Bardi also though primarily signifying red or yellow gravel slopes was used for red or black stony soil on the summit of a plateau, and for red or yellow sandy soil resembling Retari

6. Thus although there were nominally eight soil classes:—

Kachhar,	Khardi,
Kali 1, 2,	Retari,
Morand 1, 2,	Bardi,

abnormal varieties and qualities of soil were fitted in to these classes according to common sense and the discretion of the Settlement Officer rather than with strict reference to the fact that Kali is supposed to be a rich black soil composed of very small particles, and Bardi a yellow gravelly slope. The so-called soil classes were not rigidly distinguished by soil differences but were in some degree Assessment Classes ordinarily determined by the nature of the soil.

7. The classification according to crop capacity distinguished the land according to its natural advantages for growing the more valuable crops. Land habitually cultivated with wheat, rice or chillies could pay a higher rent than land not used for such crops. (This must be carefully distinguished from the taxation of industry.) As regards crop capacity four divisions were recognized—wheat land, rice land, garden land, and minor crop land.

8. Lands were further classified by their position, *e.g.* (i) for Wheat lands—

(a) as Sadharam, ordinary level fields ; Pathar, sloping or high lying ; Wahuri, cut up by watercourses, or Laun, lying in a hollow ;

or (b) Khari, near the village site, or Ran, distant from the village ;

or (c) similarly they might be
Irrigable or Embanked.
Bandham—with large embankments, or
Bandhia—with small embankments ;

(ii) for Rice lands—

as (a) Irrigated ; or

(b) Unirrigated ;
Sawan, level ;

(iii) for Garden lands—

as Irrigable near or far from the village; or
Unirrigable near or far from the village.

9. The foregoing classification was adopted as the basis of classification at the re-settlement of 1912—17.

(a) But the Settlement Officer divided *Khardi* into *Khardi 1* and *Khardi 2*, partly on the ground that under the former settlement the better class of *Khardi* had been distinguished as wheat-bearing, and partly for the practical purposes of assessment to avoid too rapid a descent from *Morand* to *Bardi*.

In addition to the above which form the regular soil of the district certain exceptional soils were also recognized. *Wardi*, a sandy soil on which rice is cultivated, was subdivided into *Wardi 1* and *Wardi 2*. (In some places called *Khardi*, or if it is very thin, *Bardi*, which are merely their names for inferior or really poor land.) *Wardi-Morand* is sandy *Morand* adjacent to *Wardi* differing from *Morand* under rice in that it can rarely be double cropped.

Retari, the sandy soil in the rice country varied in quality and depth, but only one class was recognized.

Tambhari is a copper coloured soil, the best of it corresponding with the red soil formerly included under *Kali*. The Settlement Officer recognized three classes—

Tambhari 1,
Tambhari 2 and
Tambhari 3.

(b) The classification by crop capacity was modified by abandoning the separate distinction of wheat land. During the twenty years of settlement, cotton had become the basis of value and at resettlement the most prosperous parts of the district produced less wheat than cotton.

(c) The position classes of the former settlement were simplified. All non-rice land was classed as—

Samam flat;
Sadharam ordinary, or
Pathar sloping or cut up.

(Literally *Pathar* means sloping and *Wahursi*, cut up; but the two classes were amalgamated, and the class *Pathar* means generally, as used in this settlement, defective from any cause whatsoever that is not recognized in some other way.)

(d) An innovation was the recognition of Zones of Distance from the village. Distance from the village has been recognized in three grades—

Gaonpatti,
Harpatti, and
Sheopatti.

(e) For rice the factors varied with the quality of the irrigation; small ponds likely to fail at a critical time in a bad year were neglected for assessment purposes. For other sources constant factors were employed, irrespective of the soil.

10. The classification of soils at Settlement and Re-settlement is shown in the following table:—

			Settlement.	Re-settlement.
Kali I	...	...	421	5,344
Kali II	...	...	23,448	46,714
Morand I	...	...	180,973	330,438
Morand II	...	...	685,466	629,910
Wardi-Morand	...	...	...	20,663
Wardi I	...	...	...	3,750
Wardi II	...	...	...	1,538
Tambhari I	...	...	...	348
Tambhari II	...	...	...	971
Tambhari III	...	...	...	148
Khardi I	...	...	356,665	{ 301,437
Khardi II	...	...
Bardi	...	...	71,752	118,693
Retari	...	...	8,095	7,262
Kachhar	...	...	1,815	1,713
Total	...	...	1,328,035	1,599,438

The difference in area is chiefly due to the exclusion of old fallow at the former settlement. At re-settlement according to modern practice, land left uncultivated was not excluded in calculating the pitch of rent unless the soil was unfertile. (As will appear below this inclusion of fallow land had the effect of reducing the apparent pitch or pressure of rent.)

*Scale of relative values (soil factor) in Irrigated group,
Ramtek Tahsil.*

Soil Class.	Non-rice Land.			Rice Land.			Garden land.
	Good.	Ordinary.	Defective.	Low.	Medium.	High.	Bari-irrigated.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Kali I	55	50	40	} 70	60	50	} 55
Kali II	50	45	35				
Morand I	45	40	30				
Morand II	35	30	20	50	50	40	35
Wardi-Morand	25	20	15	50	50	35	25
Wardi I	...	...	...	50	50	35	...
Wardi II	...	...	...	40	30	20	...
Khardi I	20	15	10	...	...	...	20
Khardi II	...	10	...	...	...	...	...
Bardi	...	5	...	...	...	...	...
Retari	...	5*	...	...	...	...	...
Kachhar	...	30*	...	...	...	...	35

* Rare.

For *khari* constant factor of 20, for *ab pashi* I (1st class irrigation) 20 for *ab pashi* II (2nd class irrigation) 10, (Rates in above table for rice land are for rain-fed rice).

11. Land near the village (*gaonpatti*) was raised 25 per cent. and land remote (*sheopatti*) was reduced 25 per cent. If the land besides

being near the village consisted of village soil (*khari*) the value was raised by sometimes 20. Thus for dry soils, in that area alone, nine grades of value were recognized ranging from 60 to 5; the highest might be raised, by 25 per cent. to 75 if near the village and to 95 if part of the village; no position distinctions were recognized for the lower classes.

12. This scale of values varied from tahsil to tahsil or group to group. Where rain is heavy and cotton important the values of Kali and Morand approximate, as Kali is not specially suitable for cotton; where people wish to grow cotton but rain is scanty, black soil is valuable; and where wheat replaces cotton as the staple, the black soil (Kali) has a high value compared with loam.

13. The distribution of soils is shown by colours on the map and the defects or advantages by symbols. This was found of great assistance to the Settlement Officer in supervising the classification; he could see where a mistake was probable. It is also thought that this expedient will obviate the need for extensive reclassification; changes in agricultural economy may affect the relative valuation of the soils but the classification will remain unchanged except in so far as erosion, etc., has actually changed the nature of the soil.

Account of the Introduction and Maintenance of the Record of Rights into Berar by Mr. Dongre, E.A.C., Sub-divisional Officer, Balaghat, Berar.

1. The necessity for a Record of Rights was felt as strongly in Berar as in Bombay and for the same reasons. The authorized occupant or *Khatedar* had little and very often no connection at all with the actual occupants. When the Record of Rights had successfully been introduced in Bombay it was decided to introduce it in Berar and Mr. Dongre was borrowed from Bombay and, together with Mr. McDonald who went to Bombay to study the system, introduced the Record of Rights into Berar. In the first instance an experiment was made in 30 villages. When they had ascertained thus the most suitable method of proceeding they took up the whole Berar Division systematically at the average rate of 4 *taluks* a season. Every year during the rains the Revenue Inspectors of the area to be dealt with during the next field season were given practical instruction in compiling the Record, and new measurers (of whom 150 were required each year) had also to be trained.

2. Mr. McDonald, the officer in charge of the whole party, and Mr. Dongre, Superintendent of the Record of Rights (corresponding as it were to Deputy Commissioner and Superintendent of Land Records) supervised operations. In each of the 4 *taluks* dealt with annually there were two Assistant Superintendents of the Record of Rights; subordinate to each Assistant Superintendent were 3 or 4 Revenue Inspectors and about 15 Measurers (*i.e.* Special Survey Inspectors); subordinate to these were the normal staff of about 100 *patwaris* per *taluk*. Just as the Superintendent of the Record of Rights has become a Superintendent of Land Records, so the Assistant

Superintendents have survived as Assistant Superintendents of Land Records, but there are now only two of these to a district. For each *taluk* there are now about 5 Revenue Inspectors and one Measurer.

3. Before starting field work an endeavour was made to ascertain all the survey numbers where subdivisions were believed to have occurred. Copies of the *Tippans* or Survey Field books for these survey numbers were prepared during the rains by the surveyors (measurers). (This *Tippan* is the field book, the book prepared in the field corresponding to the *Kshetr* Book or Atlas of Field Maps drawn to scale retained in the office.)

4. About October the party took to the field.

(a) The *patwaris* prepared a rough copy of the Record of Rights in the form still in use; this work was checked by the Inspectors. First of all they entered the survey and subdivision numbers (columns 2, 3 and 6) and then against each subdivision entered the *kabjedar*, the nature and origin of title and details of encumbrances (columns 9 to 11), and also details of the assessment actually paid in the previous year by the occupant of the sub-division (columns 4 and 8). These rough copies were prepared in the first instance by *patwaris* and checked by the Inspector.

(b) Another party of men undertook the measurement of subdivisions. For every subdivision a fee of As. 8 was charged [Now Re. 1. See Rule 233 (h) under Berar L. R. Code.] The measurer surveyed each subdivision and prepared in the following rains a *gat* map (on 10 chains of 33 feet to 1 inch = about 16 inches to 1 mile) and a new *tippan* book with old measurements on one side and new measurements on the other.

5. The papers then went to the Assistant Superintendents who were in charge both of the Inspectors and Measurers but primarily concerned with checking measurements. After they had checked the measurements these were entered in column 7 of the Record of Rights.

6. If the occupation was in dispute the facts of the dispute were entered in a separate note book or Dispute Register by the *Patwari* (or by the Inspector if the dispute was complicated) and in the case of measurement disputes by the Assistant Superintendent on the report of the Measurer. No entry was permitted in the Record of Rights concerning disputed holdings until the Superintendent or Officer in charge had enquired into the dispute and passed orders on it.

7. If during the course of measurement or inspection, field boundary marks were found to be missing they were replaced, and mistakes in the original *khatedar* record were corrected under orders of the Deputy Commissioner.

8. A fair copy of the Record of Rights was prepared during the ensuing rains. The entries were carefully verified by the Inspector, etc., and signed by the Assistant Superintendent and *Tahsildar*; similarly the measurements and *gat* maps were checked and signed by the other Assistant Superintendent. The result of the measurements and record were announced by the Subdivisional Officer during the ensuing field season at about 8 to 10 central camps in each *taluk*. He then signed the Record which by the act of signature was legally introduced. The *parchas* or extracts from the Record of Rights

prepared during the previous rains were then issued on payment of As. 4 to each *kabjedar* and the record was made over to the *patwari* for custody and the preparation of the annual *jamabandi*. The original Rough Copy with all its corrections and the Dispute Register was made over to the *Tahsil* office.

9. The distinctive features of the method adopted in Berar for introducing the Record were—

(a) the omission of the name of the *khatedar* from the original Rough Copy, and (b) the allotment of revenue assessment according to the amount actually paid instead of according to the classification.

There have also been changes in the methods of Maintenance.

Maintenance of Records.

10. *Mutations*.—The Registration Office and the Civil Court send to the *tahsil* office through the Deputy Commissioner abstracts of registration documents and of decrees affecting land. These changes are intimated to the *patwari* who also consults the birth and death registers and makes oral enquiries regarding partitions, successions, etc., and sends in a monthly abstract of mutations.

11. Subdivisions are reported by the *patwari* to the measurer of which there is one for each *taluk*. Reports are received up till the beginning of November when an annual programme of measurement is prepared. From the 1st December the measurer must remain on tour measuring up the subdivisions which have been reported prior to the arrangement of his tour, or which come to notice and can conveniently be surveyed during the course of his tour without altering his arrangements. Any subdivision, after the beginning of November which the measurer cannot conveniently visit during the current field season is left over until next year.

12. The mutations entered in the Mutation Register are attested in due course by the *Naib-tahsildar*, or some officer superior to him or a temporary *Naib-tahsildar* specially appointed. The parties are both required to admit the correctness of the entry *in the village in the presence* of the *Naib-tahsildar*, *Rafel* and *Patwari* (no other witness beyond these is obligatory) and the parties do not sign the register. If there is a subdivision requiring remeasurement the entry relating to area is left blank at the time of attestation until the land has been measured when the area is entered by the measurer in the presence of the *Naib-tahsildar* but not in the village.

13. Disputes are dealt with as at the original compilation of the records. A Register of Disputes is maintained and no entry may be made in the Register of Mutations until a *Naib-tahsildar* or superior officer has passed orders on the dispute.

14. *Arrears*.—It is annually necessary to appoint a special *Naib-tahsildar* as certifying officer in almost every district for the purpose of certifying Mutations; as regards the maintenance of the subdivisions, the effort requiring to keep the record up to date is something tremendous, and annually a balance has to be held over for survey as the number of measurers is quite inadequate.

15. The details entered in the Mutation Register are carried on to the Record of Rights from time to time as they are certified and the Record of Rights is re-written either when required, or at the end of five years if the number of corrections has not made a fresh copy necessary before then. The *patwari* keeps the Record of Rights, the Mutation Register, the Dispute Register and also holds the Village Map, that is to say, the original index map of fields together with the *gat* maps showing the measurements for every subdivision subsequent to the original survey. These are filed in loose leaves so that later subdivisions can be filed in serial order according to the survey number.

Miscellaneous Notes in connection with the Record of Rights.

16. It has not been found necessary in Berar to abolish the Receipt Book. This shows the area, the assessment, and subdivision and survey numbers, but not the origin nor the extent of the title; for example, a man might own land as one of 4 co-heirs, but in the receipt book there would be nothing to indicate that he had only a quarter interest and he can therefore, and does, raise money on the evidence of the receipt book which shows that he has in certain land an interest recognized by Government. In other respects the precautions taken have been similar to those in Bombay. Thus no civil or revenue case can be entertained without an extract from the Record of Rights.

17. Survey numbers have been allotted to all lands liable to come under cultivation, such as assessable waste and also all unculturable waste (here called *poramboke*). Grazing grounds, threshing floors, etc., have been excluded from the assessable waste and allotted separate survey numbers. [See section 96 (b), page 37 read with Rule 151, page 119.] Village lands and roads, however, have not been allotted survey numbers at all. They are not referred to in the Record of Rights but appear at the end of the annual *Jamabandi* Statement, which accounts for the whole area of the village without showing however the area of particular roads or specific residential areas.

18. The village maps are printed and new maps are issued as required. A new map is generally wanted after 3 or 4 years as that in the hand of the *patwari* is probably dilapidated after that period. The *Jamabandi* is prepared annually. It is an annually assessment roll or demand statement.

19. If land goes out of occupation, for example, because acquired by Government for a railway or becomes non-culturable under a factory or disappears by diluvion, the Collector can alter the assessment. The practice in this respect differs here from that in Bombay.

20. A long period lessee or a mortgagee with possession is not shown as the *kabjedar*; his name is only entered in the column for incumbrances. But if a man purchases land by an oral transaction (or by an unregistered document) and the parties admit the change the purchaser is entered in the Record of Rights as the owner. If A

mortgaged the land to **B** who leased the land to **A** or **C**, the transaction would appear in the Crop Statement Book as follows: in column 4 **A**'s name, in column 5 **A**'s name (or **C**'s name) as tenant of **B**. Mortgages with possession are uncommon but long period leases for redemption of debt where the lessee sublets are frequent and these are dealt with in the same way.

[NOTE.—this is essentially different from the Bombay practice where **B** would be entered as *Kabjedar* in the Record of Rights and Crop Statement: the directions given in Explanation 5 of the Berar Instructions are not very explicit, but the above is the interpretation in practice.]

21. After subdivision has been certified the occupant of the subdivision is by law finally and solely responsible for the revenue on that subdivision and nothing more than that. (This also is contrary to Bombay practice.)

22. It is the general opinion, annually repeated by the Judicial Commissioner, that the introduction of the Record of Rights has greatly facilitated the work of the Civil Courts: it is doubtful whether it has reduced the work. The introduction of the Record coincided with the formation of a separate judicial service which gave facilities for filing suits which had not previously existed.

Note on Village Inspections in Berar.

1. An inspecting officer wishes to ascertain for any given field the owner and actual occupant, the area occupied, the area cultivated with each crop, the area, if any, mortgaged with or without possession, the amount of the rent or mortgage money, if any, the amount of the revenue due on the land, the amount paid in that particular year and the person by whom it was paid.

2. He reads out the survey number of the field from the village map. This village map does not show any subdivision which may have occurred since the map was prepared either at settlement or at the last survey; if there has been any subdivision of the field this will only appear in a separate atlas of *gat* maps (*i.e.*, subdivision maps). These *gat* maps only show permanent subdivisions where the name of the *kabjedar* is changed. (The transfer of a field or part of a field by mortgage or long period lease would not appear in the Mutation Register as a change of occupancy and there would therefore be no mutation nor any new subdivision nor maps.)

3. Neither the original map nor the subdivision or *gat* map shows the area cropped or the area cultivated by individual tenants at will. These particulars are only given in the Crop Statement Book, *Peri-patrak*, in which the areas are entered according to eye-sketches. This Crop Statement Book also shows the registered occupant or *kabjedar*.

4. The name of the *kabjedar* also appears in the *jamabandi* or annual demand statement which shows also the revenue permanently settled on the land. But this does not contain any details regarding mortgages with or without possession or long period leases.

5. To ascertain these particulars it is necessary to turn to the Record of Rights and to verify the entries in the Record of Rights the Mutation Register must be consulted.

6. None of the above registers show the revenue actually paid on account of the land during the year. This only appears in the *Khatauni* or ledger of which a separate page is maintained for each *kabjedar* (and also in the Day Book—*Kird*—entries on which this ledger is compiled). This ledger shows how much money was actually paid and by whom it was paid. It includes demands on account of suspensions from previous years' accounts. The ledger is prepared *after* the *jamabandi* but the detail seems unimportant as the entries relating to previous years' accounts have no connection with the *jamabandi*, and the *jamabandi* demand is ordinarily fixed.

7. The accuracy of the entries regarding suspensions can only be verified in the *tahsil* office. As regards the permanent demand this can be verified by the entry at the beginning of the Receipt Book, which was announced when the record of rights was introduced. If a cultivator thinks he is being overcharged he can apply to the *patwari* or the *tashildar*. The receipt book does not show how the demand on account of arrear collection of suspended revenue has been calculated.

8. The receipt book with the *kabjedar* should show the revenue due and also the name of the man who paid it. But if land was transferred from A to B on a long lease for redemption of debt and B let to C whom he sent to pay in the revenue, C would be expected to get the receipt book from A and entry would be made in the receipt book of A through the hand of C, and the book would be returned to A leaving B no receipt for the payment.