

CHAPTER V.

Preparation of the Record.

77. *Arrangement of blocks.*—For the purpose of the operations the whole area was divided into blocks, and one block was taken up for survey in each successive field season. At first a programme was framed for completion of the work in six blocks containing about 19 lakhs of plots each. But as it was not found possible to keep up with this programme it was subsequently decided to form seven blocks and extend the survey over seven field seasons. Owing to the exclusion of the Khurda *khas mahal* and other areas, the last block G was very small, and as it contained practically no temporarily-settled area it was possible to finish it at about the same time as block F. Cuttack town was treated as a separate unit in which the work was begun in 1927 and dragged on until the end of the settlement.

The blocks were formed so as to take up the extremities of Balasore and Puri in the early seasons and finish up with the area close to Cuttack.* The Ekraja *mahal*, however, was taken up in the last block. The arrangement was as follows :—

Block	District	Thanas
A	Balasore	... Jaleswar, Basta, Baliapal, Balasore, Soro, Bhograi, Singla Remuna, Samilia and Kharia.
B	Balasore	... Basudebpur and Chandbali.
	Puri	... Puri, Brahmagiri, Satyabadi, Pipli, Baliana, Balipatna, Nimapara, Delang, Gop and Kakatpur.
C	Balasore	... Chandbali, Dhamnagar and Bhadrak.
	Cuttack	... Jajpur and Aul.
D	Cuttack	... Salepur and Dharamsala.
	Puri	... (Balukhand <i>khas mahal</i>).
E	Cuttack	... Jagatsingpur, Tirtol, Salepur, Kendrapara, Patamundai, and Aul and one village of Dharamsala.
F	Cuttack	... Cuttack, Jagatsingpur, Tirtol, Kendrapara, Patamundai, Kakatpur P. S., Cuttack town and Killa Marichpur.
G	Cuttack	... Thana Cuttack (Patia), two villages of Dharamsala and three villages of Tirtol and one village of Kendrapara.
	Puri	... Khurda (<i>ekhraja</i>), two villages of Satyabadi, one of Brahmagiri, three of Banpur.

78. *Obstruction to the work.*—In the early days of the settlement the field work was considerably hampered by the obstruction of political agitators. When survey of Block A was started it was found that except in the permanently-settled area the villagers refused to give the *amins* lodgings or to assist them in any way. Pamphlets had been distributed advising the public not to take service in the Settlement Department. The survey operations had to be postponed while the local authorities took legal action against the agitators. Even after the work had been started it proceeded slowly for a time owing to the general apathy of the public. This apathy continued throughout the settlement as regards survey and *khanapuri* operations, in which the people took little interest. At attestation stage, however, the *raiya*s generally showed sufficient interest in the proceedings, and disputes and applications for re-measurement were numerous.

For some time after the beginning of the settlement attacks continued to be made in some sections of the press. These sometimes took the form of personal allegations against Assistant Settlement Officers,

*In the first season the headquarters were fixed at Balasore and the intention was to work from North to South. Owing to the unhealthiness of Balasore in that year and the difficulty of accommodating the staff there, the headquarters were removed to Cuttack, and the programme revised. P. T. M.

presumably by those dissatisfied with their decisions. One such attack was made against an Assistant Settlement Officer in December 1924 in the *Sakti*. Mr. Mansfield as Settlement Officer made an enquiry and finding the allegations false obtained Government sanction to prosecute the editor, who was convicted under section 500 of the Indian Penal Code and sentenced to a fine of Rs. 250.* In the next year there were fewer attacks in the local press against officers. There was, however, one false complaint of rape, which led to the prosecution of the complainant for defamation. A criminal charge was also brought against a probationary Munsif on settlement training for an alleged attempt to kidnap an unmarried girl. The allegations were found to be entirely false. In later years such open charges were not made but anonymous petitions were fairly frequent.

79. *Training of the staff.*—At the beginning of the settlement many of the gazetted officers were inexperienced, few of the ministerial officers were really competent, and the subordinate staff were in general ignorant and were often lazy and dishonest. The majority of the staff were of course Oriyas. In 1925 there were 560 Oriya *amins*, 230 Biharis and 40 from Bengal or "up-country". The Bihari was on the average much more efficient than the Oriya, his work being both faster and more accurate. The attestation staff was also mainly Oriya but some Biharis were taken in from the Chota Nagpur Settlement and did well after they had got used to the language. An analysis of the composition of the staff in 1928, when the operations were in full swing, shows that out of 2,211 men, 1,692 were Oriya Hindus, 319 Biharis, 113 Bengalees, 41 domiciled Bengalees, 32 Muhammadans, 11 Christians and 3 Telugus. Messrs. Toplis and Mansfield as Settlement Officers devoted much attention to the training of the staff and inculcation of habits of accurate work. All second and third-class *amins* were examined in recess and given further training when necessary. Attestation *peshkars* were also examined and graded, and every officer in Janch had to spend some time each day in instructing the staff in the rules. Mr. Mansfield also encouraged any suggestion for the improvement of the progress and quality of the work, and organized competitions among the officers and staff for the best ideas on this subject. Several improvements were actually introduced as a result of ideas contributed by officers and staff. Annual conferences were also held in which officers were invited to put forward their suggestions for improving the procedure.

80. *Punishment of the staff.*—The difficulties experienced in training the survey staff can be gathered from the fact that out of some 700 *amins* employed in the season 1923-24, 9 had to be dismissed for bad work, 5 had to be prosecuted for bribery and 87 were discharged as not worth retaining. Between 1924 and 1930, 64 *amlas* were dismissed and proscribed and 19 were prosecuted and convicted in the criminal courts. In 1931 it came to light that several maps had been tampered with in the drawing section. The maps affected were of the Jagatsingpur area of Block F, where many *amlas* have their residence. One draftsman was dismissed. This illustrates the necessity for very strict control of the maps during preparation. These tamperings have been as far as possible set right. If any remain it will be possible to detect them by comparing the areas entered in the record-of-rights, which were not altered to correspond with the tamperings. Two gazetted and four non-gazetted officers were removed from service for misconduct.

81. *Bribery case.*—In 1928 a *mahant* of thana Jagatsingpur was prosecuted and convicted for offering a bribe of Rs. 100 to an Assistant Settlement Officer. The Magistrate ordered the quite inadequate punishment of a fine of Rs. 80 but on a reference to the High Court, this was altered to three months' imprisonment.

82. *Health of the staff.*—The field work was much delayed by ill-health of the officers and staff especially in the early years of the settlement. The season, 1924-25, was perhaps the worst. The Settlement Officer and four Charge Officers suffered a great deal from fever and Mr. Reuben's health broke down completely. Twenty officers fell ill and six had to take leave.

* Reduced to Rs. 25 by the High Court.

On the cadastral side 655 cases of illness were reported among 1,097 persons employed in the field. In November 1924 Babu Bindu Charan, a non-gazetted Assistant Settlement Officer, died under an operation. Two *amins* died of fever and two peons of cholera. After this season it was decided not to begin the field work until about the 1st of December, as much damage had been done to the health of officers and staff working in the field in November. In 1925-26 also many officers suffered from illness, including three Charge Officers. There were 543 cases among the cadastral staff and two *amins* died of small-pox. Fever was particularly bad in the *khanapuri* Circle in Sukinda, where a camp hospital was opened for about a month. On the settlement side illness attacked 261 persons and resulted in a loss of work of 153 days. Mosquito curtains were supplied to 14 of the unhealthy attestation camps with satisfactory results. In the next year sickness was not quite so bad, but still affected the progress of the work considerably. Seven men died during the field season and seven during recess, when a cholera epidemic broke out in Cuttack. One officer, Babu Sudhir Chandra Ray, died of malaria contracted in camp. In the subsequent years, illness was distinctly less severe. In November 1928, however, a serious epidemic of cholera hampered the survey work in the Khurda subdivision. Mr. Scotland's health broke down while he was Settlement Officer and he was compelled to go on leave in February 1929.

83. *Traverse work*.—The great bulk of the survey work of this settlement was revisional and was done on blue prints of the maps prepared at last settlement. But in some areas the survey was original, while in others the maps of last settlement could not be used as the basis of the resurvey owing to the extent of the changes which had taken place since the last survey. In these areas traverse had to be done before starting survey. Generally the traverse work required in any block was taken up in the field season preceding that of survey and *khanapuri*. In 1920-21 the traverse work was done by a special traverse party under the control of the Director of Land Records and Surveys. But in October 1921 the traverse section was amalgamated with the Bihar and Orissa Drawing Office, and thereafter the work was done by the Deputy Director of Surveys on the requisition of the Settlement Officer.

84. *Amalgamation and division of villages*.—In the areas under revisional survey the unit of survey was generally the village as mapped at previous settlements. But in many cases the old villages were found to be inconvenient units, sometimes because they were too small, so that time and money were wasted in preparing separate maps and records, and sometimes because they were too large and the records became unwieldy. In order to remedy this, proceedings were taken up under rule 49(d) of the Government rules under the Orissa Tenancy Act for amalgamation of two or three small villages into one or for the division of large villages. For purposes of division the rule applied was that each village should consist of not more than three to four thousand plots, and in making the divisions convenient natural boundaries were looked for, pre-existing *tolas* being adopted as units where found. The total number of amalgamation and division cases were 1,164 and 192, respectively, and the net result was a reduction of the number of villages by 1,066.

85. *Determination of new villages*.—In areas where there had been no previous survey, or new villages had come into being by reclamation since the last survey proceedings were taken up under section 49(e) of the Rules under the Orissa Tenancy Act to determine the area to be included in the village. Four hundred and ninety such boundary determination cases were disposed of.

86. *Thana-numbering of villages*.—As the village units had become changed by amalgamation and division, it was necessary to alter the thana serial numbering of the villages. This was done in recess after *khanapuri*.

In Blocks A and B, which consisted of revenue thanas Jalasore, Baliapal, Basta, Balasore, Soro, Basudebpur and Chandbali in Balasore district and Puri, Pipli and Gop in Puri district, the police-stations were

taken as units in numbering the villages. In subsequent blocks the unit was the revenue thana, but each police-station was kept compact in the serial, which ran on from one police-station to the next within the revenue thana.

No re-numbering of the villages was done in Khurda subdivision. The only part of the subdivision which came under the operations was the *Ekhrajat mahal*, and here the old village units were not interfered with by amalgamation or division.

Where some part of a thana had been excluded from the operations, and it was necessary to alter the village numbers (as for instance in the cases of Darpan, Madhupur and the *Jagir mahals*), numbers were allotted to the villages according to the new serial, and these were reported to the Drawing Office at Gulzarbagh and to the Collectorates for inserting new numbers on the old maps and records.

87. *Scale of the maps.*—The scale of the village maps was as a rule 16 inches to a mile as in previous settlements. In some irrigated areas, however, where the plots are very small, in thanas Jagatsingpur, Tirtol, Kendrapara and Cuttack, maps were prepared on the scale of 32 inches to a mile.* This scale was also applied throughout the *Ekhrajat mahal*, and in some villages inside the towns of Jajpur, Bhadrak, Balasore and Kendrapara. The maps of Cuttack town area were on the scale of 64 inches to a mile, as also were some villages of Kendrapara town and of village Balukhand of Puri town.

88. *Double-plotting.*—In many cases portions of a village had to be mapped on a scale double that of the rest of the village, owing to congestion of plots in those portions. This double-plotting was done on another part of the same sheet, if space was available, or if not on a separate sheet.

In the first blocks it was left to the inspectors to select the portions suitable for double-plotting, but in the last two blocks a preliminary selection was made by the head draftsman in office, and the portions to be double-plotted were encircled in pencil on the blue prints. Inspecting officers had to see that at time of survey all necessary double-plotting was done. It was generally necessary to double-plot the village sites. In the last two blocks the practice was introduced of plotting the outer boundaries of the large village sites on double scale in office and sending them to camp for detailed survey.

89. *Inception of survey.*—The first year's programme (Block A) included the original survey of the permanently-settled estates in the north of the district. In spite of a late start due to obstruction by political agitators and some delay caused by bad weather and sickness the whole programme was completed in the year, with the exception of six villages in which owing to much extension of cultivation a fresh traverse was found to be necessary.

The following is Mr. Mansfield's account of the difficulties experienced in the first year's survey :—

"The method of revision survey used was the North Bihar method ; blue prints of the previous maps are taken and the *amin* divides the sheet into quadrilaterals by means of the trijunctions marks, traverse stations, and any other permanent marks which he can identify in the map and ground. He then runs *shikmi* lines and revises the map, and adds in new fields wherever they have occurred.

The first difficulty was that in the first season the blue prints had been taken from the maps of the revision survey, and it was found that these maps had become so distorted that the blue prints were almost useless as the basis of accurate revision. This was due to the fact that in the revision settlement the maps had not been properly cared for, but were evidently carried about and often folded under the *amin's* arm. At any

* In the next settlement, I think it will be necessary to adopt the 32-inch scale more extensively. The plots are so small that they cannot be shown satisfactorily on the 16-inch scale. P.T.M.

rate area extraction shewed that the area of villages had (apparently) decreased by one or twelve per cent. the average being 3 per cent. It was, therefore, decided that in future years (i.e. in Block B and onwards) the blue prints should be taken from the maps of the Provincial Settlement. This was done, and though there was still, as a rule, a slight shrinkage (rather less than half a link in a chain, or one per cent in area) the maps were still suitable for all practical purposes*

The second difficulty was that in Orissa the *amins*, many of whom had worked in state surveys and in the revision survey, had got into the habit of relying on 'pole survey', or what they called the 'Orissa method', i.e. merely putting in newly-created field ridges by pole survey from the nearest field corner shewn in the old map. This tendency was perhaps aggravated by the system which was at first adopted of running diagonal lines in each quadrilateral. This was intended to be a guide to show how much revision was necessary; if no fields had changed at all, it might be unnecessary to run any *shikmi* lines at all. But the result was that the *amins* (except those who had worked in North Bihar), having run their diagonal lines, rarely or never bothered to run any *shikmi* lines. The system was gradually modified and in the last three blocks the whole survey was done by *shikmi* lines"

90. *Progress of survey.*—Survey on blue prints of the Provincial Settlement maps was thus introduced in Block B in season 1923-24. Experienced *amins* were enrolled and others were given training in this method of survey. It was found useful to show the square marks from the original maps on the blue prints for guidance in double-plotting and other purposes and this practice was adopted from Block B.

In Block C a rule was introduced towards the end of season 1924-25 forbidding the running of two diagonal lines across each quadrilateral and insisting that at least three *shikmi* lines should be run in every quadrilateral. At the same time *katan partal* by the inspectors was abolished. These changes made the work a little slower but led to greater accuracy.

In the first three blocks the increase in the number of plots since the last settlement in the areas under revision was comparatively small, being 15 per cent, but in Block D an increase of 25 per cent was found, mainly due to the large number of partitions. In Block E the increase was 24 per cent, and in Block F 31 per cent.

In the first four blocks *khanapuri* was done simultaneously with survey, the record being written up for each quadrilateral after it had been mapped. In two circles of Block E it was decided to do *khanapuri* after survey had been finished, as many of the *rai-yats* had emigrated, owing to floods, and it was hoped that attendance would be better at a later stage in the season. The system worked well and in the next season, 1927-28, it was introduced throughout Block F. It was found that this did not make the work appreciably slower and that it was, on the whole, done better.

In the later field seasons considerable improvement was observed in the quality of survey work, particularly among the Oriya *amins*.

The *kistwar* and *khanapuri amins* were paid on the contract system.

91. *Survey difficulties.*—The main difficulties experienced in revisional survey arose from alteration of the configuration of fields and disappearance of boundary marks and traverse marks. This was especially found in areas subject to annual floods. In a few parts, for instance, Sukinda, Patia and Kujang, the survey of thick jungle caused trouble. The survey of the congested urban area of Cuttack town was extremely difficult.

92. *Boundary discrepancies.*—In Block F some simplification was introduced in dealing with boundary discrepancies in revision survey areas. In former blocks, no alterations in the old boundaries were made except

* Government sanctioned the additional sum of Rs. 1,56,000 which the change of system was estimated to cost.

after regular proceedings, subject to the approval of the Settlement Officer. In Block F discrepancies of less than one chain in width were adjusted by the Assistant Settlement Officers, provided there was no dispute. In larger cases proceedings were drawn up and recommendations made for the approval of the Settlement Officer. Where the last settlement boundaries of both villages coincided exactly, but at this survey another boundary was found, the last settlement boundary was maintained, unless both parties agreed to accept the new boundary. Where the last settlement boundaries differed and the parties did not agree on a common line, the matter had to be decided as a dispute.

93. *Preparation of khewats.*—Writing of *khewats* was done by inspectors, but a rule was made that the *khanapuri* officer should write the *khewats* of one village in each *halka* and the *kanungo* those of five villages in each *halka*. Great importance was attached to getting *khewats* written early and correctly.

In Block F it was decided to give no copy of Register D to the *khanapuri* staff, and to dispense with the writing of the *khewat ekhtilaf* (in which the *khewat* writers used to enter all the discrepancies between the present facts and the Register D). This had been considered necessary for the guidance of the Collector in rewriting his Register D after the settlement. But this work had now been given to the settlement staff to do. The non-supply of copy of Register D led to more careful *khewat* writing, as the inspectors, when supplied with a copy, tend to rely on it too freely and to shirk enquiry on the spot.

Block G work.—The field season of 1928-29 was a short one as Block G was very small and was divided into three compact circles to expedite the work. There was some difficulty in surveying some of the original survey villages of Patia, as the traverse marks had been washed away or disappeared in sand. In Ekhrayat *mahal* difficulty was caused by the inter-mixture of *khas mahal* plots in Ekhrayat villages. The work however, was completed by the beginning of March.

94. *Areas recorded in acre system only.*—When taking up survey and *khanapuri* of the permanently-settled area of North Balasore which had never been settled before, it was considered whether the areas of plots should be recorded in the local measures as well as in acres. This was not, however, decided to be necessary, as the people of Orissa are by this time used to the acre-decimal system, and the Board of Revenue approved of the proposal to enter the area in acres and decimals only.

95. *Disputes about laggi measurements.*—Throughout the settlement in estates which had not been settled before, and especially in North Balasore, frequent disputes arose between landlords and tenants over the length of the local *laggi* or *nala*, on which depends the interpretation of the areas found in the *jamabandis*. These areas are generally entered after periodical measurements of the land by the *laggi* or *nala* and the preparation of *bhourias*. In North Balasore the length of the *nala* was very difficult to determine, as the tenants produced extracts from the *nala* Register maintained in the Midnapore Collectorate under the orders of the Bengal Board of Revenue in 1837, while the landlord produced certified copies of the list of *nalas* prepared in 1849, and kept in the same Collectorate. These documents were of little value as they differed not only from each other but among themselves. Great difficulty was therefore experienced in estimating the amount of excess areas liable to assessment.

96. *Partial af survey and khanapuri.*—Check or *partial* of *kistwar* and *khanapuri* was done by inspectors, *kanungoes* and Assistant Settlement Officers.

The standard minimum of *partial* set for inspectors was (1) quadrilateral *partial* by actual measurement of 400 chains for a fortnight for the first

* In case work the length of the *lagga* was decided on the evidence in each case, and a percentage allowed for inaccuracy of measurement. P. T. M.

month, and thereafter 200 chains, (2) 250 chains of *kistwar partial* and (3) 100 plots of *tukra partial* (after commencement of *khanapuri*). In addition the inspectors had to check all the trijunction stones, 10 per cent of the adopted stations by actual measurement and the rest by comparison of the *khaka* with the map, and one boundary line in each village, and they had to do one line of *basti partial* in each *basti*.

After the *amin* had finished survey, some final or independent *partial* was done. The minimum of independent *partial* was 12 chains per 100 acres, and it was laid down that every quadrilateral should contain a final *partial* line. Occasionally the *Khanapuri* Officer himself did the final *partial*. Mistakes found at final *partial* were corrected. In a very few cases it was found necessary to order a complete re-survey. In these cases the *amin* was discharged and forfeited his earnings.

At *khanapuri* the inspectors had to check the recording of at least 10 per cent of the plots and the officers and *kanungoes* had to do as much check as they could manage.

The average incidence of *kistwar* check over the whole settlement was as follows :—

- (1) Inspectors' check—2.45 linear miles per square mile.
- (2) Assistant Settlement Officers' and *kanungoes*, check—.76 linear miles per square mile.
- (3) Independent or final *partial*—.70 linear miles per square mile.

The number of plots checked at *khanapuri* was 1,474,661, or 13 per cent of the total.

97. *Form of khatian and distribution of parchas*.—In the first three blocks the draft *khatians* were written up on the elaborate triplicate *parcha* form no. 64 (see page 385 of the Settlement Manual, 1927). This form of *khatian* contains 19 columns, all of which, except the area columns, are reproduced in triplicate in the landlords' and *raiya*t's *parchas*, while the form also includes landlords' and *raiya*t's area slips. The practice at first was to let the *amins* give the *raiya*t's their *parchas* as soon as the first entries were made in them, the *raiya*t's being required to produce them from time to time to get subsequent entries made. The landlords' *parchas* were distributed by the *amins* at the end of *khanapuri*. In Block C, however, the method was tried of having both the landlords' and *raiya*t's *parchas* distributed by the Assistant Settlement Officers and *kanungoes* at the end of *khanapuri*. But this did not work quite satisfactorily as many parties failed to appear so that the *parchas* had to be returned to headquarters and distributed at attestation. The area slips were written up in recess after area extraction, and were distributed just before attestation.

From Block D a simplified form *khatian* was introduced for use in the areas under Revision Settlement. The new form is smaller in size and easier to handle. On the obverse the columns dealing with rent are reduced from 5 to 2 and on the reverse the column for "nature of rent if not paid in cash" is omitted. The area slips are omitted and instead there are columns for area on the reverse of the landlords' and *raiya*t's *parchas* thus in effect making a combined *parcha* and area slip. These were not distributed until after cadastral recess, when they were made over with the areas entered, shortly before *bujharat*.

98. *Inking of maps*.—For the purpose of inking the maps after survey several modes of procedure were tried in the course of settlement. For the first five seasons the maps were inked up in the *khanapuri* circles after survey and *khanapuri* (which were done together) either by the tour clerks or by the *amins* themselves if the latter had passed the test in inking. In some cases, however, the maps were not finally inked up until recess, when the work was done by draftsmen. In the meantime they were inked up in cobalt blue. In the subsequent seasons the maps were inked up by draftsmen deputed to the circles for the purpose. Generally the field boundaries only were inked up in the circle, and the plot numbers left for recess, but some times the plot numbers were also inked up in the circle.

The sheet margins and village boundaries were never inked up in black until they had been thoroughly checked in recess.

The system of deputing draftsmen to the circles for inking worked satisfactorily and produced the best results. It is of course open to the objection that the *Khanapuri* Officer is not in a position to exercise very close supervision over the draftsman, who if he is dishonest may tamper with the maps.

99. *Printing of not-final maps.*—After the village maps had been prepared in the field and checked in recess they were sent to the Survey Office for not-final reproduction, in order to have copies for use in attestation camps and at later stages. In the first three blocks only two copies of these van-dyke maps were prepared for use in camps, the original being kept at headquarters and corrected from time to time. But as it was found that the original map deteriorated with frequent handling, in the later blocks three copies of the not-final maps were obtained, one being kept at headquarters to show the corrections. The original maps remained untouched until the last stage, when all the necessary corrections were effected on them prior to their despatch for final reproduction.

In Killa Patia (Block G) an extra copy of each village map was prepared and given to a leading *raiyyat* of each village before attestation in order that the *raiyyats* might more easily understand their *parchas*.

100. *Thana maps and lists.*—In the first three blocks skeleton thana maps were prepared in the Drawing Section from the new village maps after reproduction by the Survey Office, but this practice was thereafter given up, and we simply supplied the Survey Office with copies of the old thana maps, after showing the changes due to amalgamation and division or to orders in boundary disputes, and entering the correct village names and new thana numbers. From this the Deputy Director of Surveys prepared the new thana maps. These maps were on the scale of 1 inch to a mile, and the unit was the revenue thana, even when the police-station had been taken as the unit for numbering of villages.

The proofs of the thana maps were sent to the Settlement Office by the Deputy Director of Surveys, for checking before final reproduction.

Thana lists, or jurisdiction lists, were written up in the cadastral office. The Attestation Officers prepared registers, containing the correct names of all the villages, and these were used for guidance in preparing thana lists. The lists were printed at the Government Press at Gulzarbagh, and sent to the cadastral office for check,

101. *Trijunction mark maps and registers.*—Maps were prepared, generally on the one-inch scale but in a few cases on the two-inch scale, showing the villages with their trijunction marks, which were numbered. In the later blocks it was not considered worth while to strive for accuracy, in the village boundaries on these maps, which are simply indexes to the trijunctions. The unit of the maps was the police-station. Where some parts of the police-station were unsurveyed at this settlement, no numbers were given to the trijunction marks in these parts. The maps were reproduced in the Survey Office.

Trijunction mark registers were also prepared, showing the numbers of the marks and the villages to which they belonged. These were only prepared in manuscript and made over to the collectors, along with the receipt registers which contain the signatures of the *chaukidars* to whom the stones had been made over. The *khanapuri* officers had to see which stones were missing and to embed stones to replace those missing. The stones were then made over to *chaukidars*. At attestation the stones were again checked and *khanapuri* inspectors who were found to have neglected this part of their duties were punished,

102. *Khanapuri.*—At *khanapuri* the *amins* wrote up the *hasras* or lists of plots in numerical order showing the description of the land in

each plot. They also made entries in all the columns of the *khatians*, except regarding area, status and rent, which were left for attestation.

When any contest arose about an entry in the record at *khanapuri* a dispute was entertained and decided by the Assistant Settlement Officer, or in a few cases by experienced *kanungoes*.

The cadastral survey and *khanapuri* work began in the field season of 1922-23 and was completed in that of 1928-29. The number of plots *khanapuried* in each season and the number of disputes entertained are shown below :—

	Season.	No. of Plots.	No. of disputes.	Percentage of disputes to plots.
1	2	3	4	5
A ...) ...	1922-23	1,495,057	8,803	0.6
B ...) ...	1923-24	2,158,426	8,767	0.4
C ...) ...	1924-25	2,002,011	12,653	0.6
D ...) ...	1925-26	1,559,952	9,562	0.6
E ...) ...	1926-27	1,783,710	9,785	0.5
F ...) ...	1927-28	2,036,554	13,074	0.6
G ...) ...	1928-29	174,420	1,574	0.9
Cuttack town ...	1927-28	25,326	618	2.4

103. *Boundary disputes*.—Many petty disputes and discrepancies regarding village boundaries had to be dealt with. The more important ones are referred to below.

The Kharsua river forms the boundary between the Kanika and Aul estates. As the river had altered its course many boundary disputes arose. It was found that a definite custom of *skikast-paiwast* exists between these estates, so that the middle line of the stream remains the boundary. Some difficulty was experienced in determining this middle line as Kanika was surveyed two years later than Aul and the course of the river had shifted slightly in the meantime.

Between Kanika and Kujang also many discrepancies arose. No custom of *skikast-paiwast* was found, and so the old boundary was relaid. In 1928-29 demarcation was done of the boundaries between Kanika and Aul and between Kanika and Kujang.

The proprietor of Patia tried to raise a boundary dispute with the Khurda *khas mahal* but he made out no *prima facie* case. In some places, however, the present pillar boundary was found to differ from the last settlement map of Khurda. The discrepancies were reconciled and the boundary relaid.

Many discrepancies were found between the last settlement boundaries of Khurda *khas mahal* and those of the Ekhrayat *mahal*, and also with the present boundaries according to possession. These were dealt with at attestation. Generally the present boundary according to possession was adopted.

A dispute concerning over 2,000 acres of land arose between Harishpur and Marichpur estates. It was decided by a Charge Officer,

who gave about 350 acres to Marichpur and the rest to Harishpur. Cross-appeals were filed to the Settlement Officer (Mr. Scotland) who gave the whole disputed area to Harishpur.

104. *Settlement Officer as Boundary Commissioner.*—The area under the present operations is bounded on the north-west side for a distance of 320 miles by some of the Orissa Feudatory States. As questions frequently arose in the course of survey which required an authoritative decision Government appointed the settlement Officer to be *ex-officio* Boundary Commissioner for all disputes that might arise between the Feudatory States and British India.* Many parts of this boundary lie in hilly country covered with dense jungle. The previous demarcation had often been inadequate or had not been carefully maintained. Difficulty was occasionally experienced in relaying the boundary, and disputes arose at several points. It was frequently urged by the Feudatory Chiefs that they had had no official knowledge of the previous surveys of British India. It is therefore important to place on record that all the border States have received proper notice of the present operations, have had opportunities to make objections, and have generally taken a keen interest in boundary questions. All claims put forward have been carefully investigated.

The following Boundary Commissions were held by the Settlement Officer, the first four by Mr. Mansfield and the other two by myself :—

The whole boundary between Dhenkanal State and Killa Kalkala was disputed. The Boundary Commissioner inspected the area and passed a boundary based partly on the natural features of the land and partly on the topographical map of 1894. The decided boundary was demarcated by cairns and pillars.

A dispute arose between Dhenkanal State and Killa Sukinda regarding the boundary from the Keonjhar trijunction to the Brahmini, but this had already been settled by Mr. Cooke, the Superintendent of the Tributary *mahals* in 1894 and demarcated in 1903, and this line was upheld. Another dispute between the same parties concerned the bed of the Brahmini river in mauza Pankapal, and in this the midstream line was declared to be the boundary.

The Keonjhar-Sukinda boundary was settled by the Boundary Commissioner but without dispute. It was determined in detail and temporarily demarcated, the parties being requested to take steps for permanent demarcation.

Another dispute arose between Keonjhar State (the detached portion near Jaipur Road Railway Station) and village Chhatrapur. The boundary had previously been decided by Mr. Cooke in 1895 but not demarcated, and neither the Provincial Settlement nor the Revision Settlement maps showed the line according to the decisions. Mr. Cooke's line was now adopted and was temporarily demarcated.

The Boundary between Killa Dalijora and the Feudatory States of Dhenkanal and Athgarh caused much trouble in traverse and survey on account of the thick jungle and difficulty in finding boundary marks. The western part of the Dhenkanal-Dalijora border was strongly contested, the State claiming a different line from that surveyed in both the previous settlements. I decided the dispute during an inspection of the boundary in 1931 as Boundary Commissioner and disallowed the State's claim. Demarcation of the line by stones and masonry pillars is pending. †

On the Athgarh-Dalijora border in village Kuchila Nuagan it was discovered that a line of pillars runs some 40 chains to the east of the boundary as surveyed at the last two settlements, and it came to light that this actually represents the line passed by Mr. Cooke in a dispute of 1896. This line was adopted, the Dalijora proprietors consenting when the facts

* Order no. 2168, dated 3rd September 1926.
† The demarcation has since been completed.

had been placed before them. I made an inspection of the whole border between Athgarh and Dalijora in 1931, and this part of the line was undisputed. Several petty disputes and discrepancies arose in other parts of the boundary and the disputes were decided and the discrepancies amicably adjusted at my inspection. The boundary where it runs in the bed of the Mahanadi has been altered by the decision of Mr. James Taylor in a dispute between Athgarh and the Motri *zamindars* in 1913, and Mr. Taylor's line has been adopted in this settlement. It runs down the middle of the Mahanadi to a point opposite Naraj then turns south-east to the *anicut* and runs skirting the *anicut* and on to the *bhuasuni* tree and then turns north to a point in village Banmalipur. But a narrow strip of river in villages Tapanda and Banmalipur are left in British India. At my... boundary inspection there was some dispute about the boundary of villages Mahalpara and Kakhari on the Mahanadi side, and I passed the line of the river bank as it appears on the Revision Settlement maps. This leaves a strip of the present river in Cuttack district.

The Athgarh State was also found in the course of this settlement to be in possession of 288 acres of land in village Bidyadharpur, which is on the Cuttack side of Mr. Taylor's boundary in Killa Patia. This was claimed as part of the State but this was not allowed as the boundary had been clearly settled by Mr. Taylor. With the sanction of Government the Rajah of Athgarh was recorded as a tenure-holder under the proprietors of Bidyadharpur.

A dispute between Baramba State and Bañki *khas mahal* was also made over to the Settlement Officer as Boundary Commissioner, although this area was not included in the settlement operations. Mr. P. J. Scotland decided this dispute.

105. *Cadastral recess*.—In recess after *khanapuri*, defects in inking of maps were removed, and boundaries and margins were checked, and inked up. Areas of plots were extracted and entered in the records. *Khatians* were arranged alphabetically under the proper *khewats*, and some check was done of the records, including a scrutiny of the *bahel* and *bajyasti* areas and lands of public bodies. The *milan khasras* and crop statements of the villages were written up. In the first blocks a combined *terij* and rent schedule was prepared showing last settlement rents and *jamabandi* rents, with areas, but from 1926 this was abolished and a rough *terij* only was written for purposes of comparison of areas (*anka milan*). At first too many *badars* used to be written during check, but later this was discouraged and apparent errors were for the most part merely marked for the attention of the Attestation Officers.

106. *Method of attestation*.—In the attestation camps the method of *bujharat* and attestation was as laid down in the Technical Rules. In temporarily-settled areas the Attestation Officer had to see that the proportion of *rakhit* plots was sufficient, to cancel those that were unsuitable, and to try to persuade the landlord to reserve more plots if the area was insufficient. In particular he had to see that at least one tank was reserved in each village. He also did some work in preparation for the rent settlement and revenue settlement stages, by writing up the assessment notes of each village, and enquiring into *sairat* collection. (In some permanently-settle estates also assessment notes were written up to afford guidance in dealing with rent problems). He also had to submit a report containing an estimate of the damage done by floods and their frequency. The policy of giving these miscellaneous tasks to the Attestation Officer is justified by the fact that this officer can obtain a very thorough first-hand knowledge of his circle in the course of six or eight months in it. I think, however, that if too much additional work is given to him it tends to be hurriedly done, as the officer is mainly interested in keeping up with his programme of attestation.

107. *Progress of attestation*.—Attestation work was started in Block A in the field season of 1923-24 and finished in Block G in that of 1929-30.

The work done in each season and the number of disputes entertained are as follows :—

Block.			Season.	Plots attested.	Disputes.	Percentage.
1			2	3	4	5
A	...	...	1923-24	1,525,302	21,606	1'4
B	...	...	1924-25	2,140,917	21,743	1'0
C	...	...	1925-26	2,040,926	30,383	1'5
D	...	...	1926-27	1,597,361	17,501	1'1
E	...	...	1927-28	1,802,881	18,657	1'0
F	...	...	1928-29	2,063,902	24,290	1'2
G	...	...	1929-30	177,881	1,543	0'9
Cuttack town	...	...	1929-30	28,565	2,425	8'4
Total			...	11,377,735	138,148	1'2

In Block A the attestation programme was completed within the year. The staff were mostly inexperienced and required careful training.

In the next season there were 28 camps for Block B, 5 in Balasore and 23 in Puri. At the beginning of the season a sufficient number of *munsarims* could not be sent out to the camps as men had to be kept in headquarters for recess work. Many new men had to be taken on and trained, and their work was at first very slow and unsatisfactory. The attestation staff was mainly Oriya, but in this year some Biharis were taken on from the Chota Nagpur Settlement, and were found more efficient than the Oriya in spite of their unfamiliarity with the language. In this Block the system was introduced of paying *munsarims* according to outturn in order to improve progress. This was not found to have an adverse effect on the quality of the work.

In Block C, there were many petty estates to be dealt with, and a considerable number of partitions after *khanapuri*, which involved much laborious work in correcting the records. Some improvement in the efficiency of the staff was noticed. The system of payment of *munsarims* according to outturn was continued, and this year the practice was introduced of paying the men by monthly advances according to the recommendations of the camp officers and adjusting the accounts at the end of the year. This was necessary as men employed in big villages often had to wait a long time before receiving any payment. The attestation programme was completed in the year except one village of which *re-khanapuri* had to be done.

In Block D the work was disposed of more quickly due to the smaller number of disputes and remeasurements.

In Block E there was very slow progress in the two camps in Kanika estate (Cuttack district), where the work was much delayed by illness and by detailed enquiries having to be made into the legality of the rents.

In Block F there were as many as 2,068,209 plots attested. Four and a quarter lakhs of plots were in the permanently-settled estates of

Kujang, Harishpur, Marichpur and Bishunpur. No previous record had been prepared in these estates with the exception of Bishunpur.

Block G only contained 177,887 plots, and five small camps completed the work in an average of four and a half months. There was some delay at the start owing to important general problems about *debottar* and *brahmottar* properties in Patia Estate and transferability of occupancy rights in Ekhrajat.

The average outturn of the attestation camps excluding Cuttack town, was 10,000 plots per month, and the average time taken by a camp to complete its work was 6½ months.

In Cuttack town, one mauza, Sutahat, was attested in the hot weather of 1928 in order to discover the difficulties. The other mauzas were taken up in the hot weather of 1929 but the work was extremely slow and intricate and was not finally completed until November 1930.

108. *Remeasurement.*—The general apathy of the *rai-yats* at survey and *khanapuri* led to frequent demands for remeasurement of plots at later stages. The progress of attestation was seriously hampered by this, and at section 116 and section 123 stages applications were still received in large numbers. To prevent unnecessary remeasurement, the rule was made that a remeasurement already done at attestation should not be repeated at a later stage unless it could be shown that the procedure at the previous remeasurement had been defective. In 1927 the fees for remeasurement at section 116 and section 123 stages were raised to Re. 1 and Rs. 1-8 0, respectively, whereas previously they had been 12 annas at all stages.* But the volume of applications still remained large.

The total sum received in remeasurement fees was Rs. 1,51,740. In the attestation camps of Blocks A, B, D and E the average amounts received per camp were between Rs. 800 and Rs. 900. In Block C it was as high as Rs. 1,177 owing to the litigious character of the people in Jajpur and Dharamsala and to the frequent subdivision of plots at partition after *khanapuri*.

109. *Objections under section 116.*—The work of deciding objections under section 116 of the Orissa Tenancy Act was taken up for Block A in 1924 after the attestation and draft publication of the records. The volume of cases filed was unexpectedly large, being 28,956 in the first block. Many of them were applications to record transfers as recognized after the purchasers had obtained the consent of the landlords. The disposal of these cases delayed the commencement of rent settlement rather seriously. Most of them were disposed of by the Attestation Officers themselves, but where they were appeals against their own orders they were given to the Assistant Settlement Officer of a neighbouring camp for disposal. This system was not found very satisfactory, as the transferring of cases from one camp to another involved waste of time. From the next year therefore special camps were started for disposal of section 116 cases, only a small proportion of the simpler cases being disposed of by the Attestation officers. The system was introduced from 1925 and was found better and more economical.

In Block B the number of cases rose to 36,299. In Block C they were as many as 53,706, and the disposal of these contributed largely to the retarding of recess work in 1926. Nearly half the cases of Block C were left for disposal in the next year. In Block D 33,691 cases were filed, and progress was better. In this block the practice of disposing of some undisputed cases at attestation was abandoned, as it had been found to handicap the Attestation Officers and to lead to some confusion in the registering of cases. The new system worked satisfactorily but led to slight delay in the supply of records to recess office.

The volume of cases continued about the same, there being 34,221 in Block E and 42,433 in Block F. In these blocks the important cases

* These were the fees for four plots or less. For plots in excess of four, one quarter of these amounts was charged per plot, i.e. 3 annas, 4 annas and 6 annas, respectively,

about the right of Government to the bed of tidal and navigable rivers in the permanently-settled estates were taken up under this section. In Block G only 2,742 objections were filed.

In Cuttack town there were 1,248 objections which were for the most part strongly contested.

The total number of objections under section 116 was 226,731 of which 84,338 were allowed and 142,393 disallowed. The proportion of allowed cases is thus 37 per cent.

110. *Settlement recess*.—In Block A *janch* or check of the records in recess after draft publication, was taken up after settlement of fair rents. This worked unsatisfactorily, as the records were much delayed in the rent settlement camps pending disposal of objections under section 123. In subsequent blocks *janch* was done immediately after disposal of objections under section 116.

The draft rent rolls of the temporarily-settled villages were then prepared in office and checked, after which rent settlement was taken up in camp. After rent settlement was disposal of objections under section 123 some further check had to be done, particularly to see that the orders passed at rent settlement and section 123 stages had been properly carried out, and the fair rents correctly entered in the working records. At the same time some re-check was done to test the efficiency of that already done in *janch*. This stage was known as *re-janch*.

The working records of permanently-settled areas were fair-copied immediately after *janch*, and those of temporarily-settled areas immediately after *re-janch*. Three fair copies were made. The copy intended for binding and preservation in the Collectorate as the official record was first prepared from the working record. A second copy was made from the Collectorate copy, to be given to the proprietors and tenure-holders, and a third copy of the *khatians* was made from this second copy, to be given to the *raiya*s. Each copy of a village record was made by a different *munsarim*. The fair-copying was checked by comparing the third or *raiya*ti copy with the original working record, and on discovery of a mistake the other copies were examined to see if the mistake occurred in them.

The recess work done after fair-copying consisted of *mukabila*, or comparison of the fair copies with the working records, *moina* or a further check of the record, and preparation of the plot index. The check done at *moina* stage was directed to seeing that no unauthorized cuttings or interpolations appeared in the records, but also included some check of *janch* and *re-janch* badars, of the totalling of shares in the *khewats*, and of *goswara* and *terij*. The check done at this stage was reduced after Block E to the minimum necessary.

111. *Cases under section 130*.—The number of cases filed under section 130 was 7,050 in all. Of the 6,664 cases disposed of up-to date 2,399 were about possession, 993 about rent, and 3,272 about other matters.

Appeals were brought before the Special Judge against the decisions of the Assistant Settlement Officers in 98 cases. The orders of these officers were upheld in 59 cases and reversed in 13 cases, while in 6 cases they were modified, and one case was remanded. Nineteen cases are still pending with the Special Judge.

112. *Application of section 67* —Camp officers were instructed to report any cases of failure on the part of the landlords to grant rent receipts in proper form, and information of such cases was forwarded to the Collectors for action under section 67 (4) of the Orissa Tenancy Act. The number of cases thus sent up was 62. In 57 cases the landlords were fined a total amount of Rs. 1,415 and in 5 cases they were discharged. Magistrates were at first disposed to inflict inadequate fines, but after the attention of the Collectors had been drawn to this tendency, they became more severe on the offenders.

In one case the Subdivisional Officer of Bhadrak accepted the landlord's plea that his agent had not "refused" to grant a receipt as he intended to do so when he had leisure. This was brought to the notice of the Collector who disapproved of the action of the Subdivisional Officer. Another question that was raised in the course of the settlement was whether a landlord can be proceeded against for failure on the part of an agent to grant proper rent receipts. The Government pleader gave the opinion that the landlord could not be held responsible. The wording of sub-section (3) clearly indicates that this view is correct. But it would be more just and also more convenient if the landlord were made liable to fine conjointly with his agent.

The number of reported cases does not convey an adequate idea of the extent to which the landlords habitually neglect to give proper rent receipts. The Attestation Officers especially in the early stages did not as a rule devote sufficient attention to the matter, and when they did they had to overcome the reluctance of the Oriya *raiya* to make open complaint against his landlord. It was indeed observed in the later seasons that some landlords had begun to grant proper receipts through fear of proceedings under this section. But it is unlikely that they should continue to do so after the fear of detection by the settlement authorities has passed. In the petty estates it is unusual for receipts to be granted with all the particulars required by the law, and it is almost unheard of in any estate for proper receipts to be given for produce rents.

113. *Use of sections 136 and 137.*—It was the policy of the settlement to encourage the use of sections 136 and 137 of the Tenancy Act by parties. Under section 136 a Revenue Officer in the course of settlement operations must give effect to any lawful compromise between landlord and tenant. Under section 137 a Revenue Officer specially empowered may give effect to any compromise about fair rent even if the terms would not ordinarily constitute a valid contract under the Act (e.g. where an enhancement by more than two annas in the rupee is agreed to). These facilities for an inexpensive settlement of the rent question were used in Sukinda, Kalkala, Ekhrayat *mahal*, and part of Kanika Estate (the details are given elsewhere), and might with advantage have been used by other estates. In Harishpur Estate the parties compromised with much additional trouble and expense, after section 128 cases had been filed, and got ready for hearing. In Block F the Attestation Officers were instructed to suggest to the landlords and tenants of revenue-free estates that these sections might be taken advantage of, but the response was quite negligible. The Sakhigopal estate entered into compromises along with the Ekhrayat *mahal*, and effected an enhancement of the rents of 321 holdings by two annas in the rupee.

114. *Number of copies of maps reproduced.*—In the matter of fixing the number of village maps to be printed various formulæ were adopted in different blocks. In the permanently-settled area of North Balasore one copy was given free to each party and in addition ten copies were printed for administrative purposes and five for sale. Thereafter they were sold at 4 annas each, but the price was raised to 6 annas in December 1928, when also rule 355(d) of the Board's Miscellaneous Rules was amended so as to allow parties to obtain maps at the Collectorates by direct payment. In the earlier blocks of Cuttack district the formula was 5 per cent of the number of plots, and 15 for administrative purposes and margin. This was found to result in an excessive number being printed. Eventually the formula was reduced to 2 per cent of the plots (1 per cent in some permanently-settled areas), plus 10 for administrative purposes and margin, subject to a maximum of 40.

The copies intended for administrative purposes were 5. They were meant for the Collector, the Subdivisional Officer, the sub-inspector of police and the Chakala *kanungo*, and one for general purposes. In irrigated villages a sixth copy was given to the Irrigation Department and from February 1931 two copies were given to that Department.

The maps were sold in the camps at the time of distribution of *khatians*, and also in the headquarters office. In 1931 the Collector of Cuttack intimated that there was no space in his offices for the storing of the large number of maps being made over. From January to April 1932 a *kanungoe* was specially employed to sell maps in the *mufassal*.

115. *Deposit of records*.—The records were deposited in the Collectorates by thanas after noting of decisions in cases after final publication. The deposit of Balasore records was done from 1927 to 1930, that of Puri records in 1929 and 1930 and that of Cuttack records from 1930 to 1932. At first the Collectorate staff in Balasore showed a tendency to make an unnecessarily minute check before taking delivery of the records but later the check was confined to the matters prescribed in the Settlement Manual.

116. *Improvements in procedure*.—The efforts made to introduce simpler and less expensive methods of procedure have already been mentioned. The most important innovation was perhaps the abolition of the second reading of the rent rolls. In September 1929 a conference of settlement Officers was called by Mr. Mansfield as Director of Land Records and Surveys at Ranchi and various ideas for simplifying the procedure were discussed. Most of the suggestions approved at this conference could not be applied in the Orissa Settlement as it had already reached its closing stages. One important innovation was, however, introduced in attestation of Block G—that of not reopening at attestation disputes that had been decided at *khanapuri*.

In my opinion the improvement of settlement procedure has to be looked for first in simplifying the processes leading up to draft publication. The present practice is for the draft to be written up in the first field season along with survey or immediately after it, leaving aside questions of status and rent. This is called *khanapuri*. The drafts are arranged and checked in recess, and in the next field season they are completed, read out by a *munsarim* to the assembled parties (*bujharat*), again read out by an Assistant Settlement Officer (attestation), checked by camp *peshkar* and again read out at draft publication. The statutory opportunity for bringing objections is of course after draft publication. But disputes are also heard at *khanapuri* and attestation. The idea of not reopening *khanapuri* disputes at attestation is a sound one. When the *raiya*s are more fully educated in settlement matters it should be possible to prepare the draft record by a much less elaborate procedure and then hear all objections in one stage as expressly provided in the Act. The present tendency is for *khanapuri* to be done in an unsatisfactory manner, leaving the shortcomings to be made good at attestation. This gives rise to lengthy mistake lists at attestation and these in turn increase the volume of items requiring check at later stages. Thus if the preparation of the draft record could be done carefully in one stage much time and labour would in the long run be saved. One of the reasons why *khanapuri* is unsatisfactory is that the *raiya*s take little interest in it, feeling that it is unnecessary to waste time and trouble at this stage when they will have ample opportunity to do so at attestation. If they did not have this feeling they would make every effort to get their interests recorded at the outset.

A careful systematic check of the record before its final publication is essential. In this settlement the draft record was checked by the attestation camp *peshkar* before draft publication. The check in recess office (*janch*) was done after disposal of section 116 objections, and in the case of temporarily-settled villages there was some re-check (*re-janch*) after rent settlement. After fair-copying some further check was done along with the comparison of the fair copies with the original (*moina*).

In the course of this settlement a definite effort was made to establish an improved system of check, placing the main check in the earlier stages and dispensing with unessential items of check and clumsy procedure. In *janch* the *munsarims* were always inclined to raise unnecessary points and this was discouraged by issuing instructions as to the types of mistakes requiring notice. At first the practice was for the *janch munsarim* to write

in his "mistake list" a description of all mistakes detected. They were later allowed to make certain obvious corrections without any entry. In 1929 the experiment was tried of dispensing with the writing out of mistakes and the *munsarims* were simply told to make a note of the *khatians* and plots where the mistakes occurred, and put them up to the officer of the section for orders. This system worked well and in my opinion it is based on a sound principle. A great deal of labour is wasted in writing out detailed description of mistakes, and it is more satisfactory for the officer who passes the order to do so after scrutiny of the record itself and not blindly on a perusal of the *munsarim's* entry. It was thought that this method would take up more of the officers' time but in fact this did not appear to be the result.* Unnecessary and over elaborate check in *janch* was discouraged. The check done at *moina* stage was reduced to a minimum, and at *re-janch* it was also reduced in the later blocks. The detailed check of old and new areas was done in cadastral recess instead of in attestation camps. In the *khassra* section of cadastral recess also the comparison of names between the *khassra* and the *khatian* was abolished, and a system was introduced of marking the draft record with red or green pencil instead of writing out *badars*.

117. *Operations in Cuttack town.*—The Cuttack municipal area, excluding some part of the Kathjori bed in villages of Killa Patia, was taken up as a separate unit for the purpose of the operations. It included 652 acres under petty revenue-free estates, 6,747 acres under temporarily-settled estates and 2,372 acres under various public departments and the Railway Company. Of the temporarily-settled area, 621 acres are in the Town *khass mahal*, tauzi no. 2616, and 374 acres in the Cantonment *khass mahal*, tauzi no. 5458. The rest is under private landlords.

Correspondence was started by Mr. J. A. Hubback as Director of Land Records and Surveys with the Board of Revenue in December 1924 as to whether the settlement of the municipal area should be done under the Municipal Survey Act (I of 1920). Mr. P. W. Murphy as Commissioner of Orissa recommended that the settlement should be done under the Municipal Survey Act, and Mr. A. D. Tuckey as Director of Land Records and Surveys suggested that it should at least be done under that Act for the area vested in the municipal commissioners. But as the municipal commissioners did not apply for survey and preparation of record-of-rights under the Municipal Survey Act, being unwilling to bear the cost, this project was abandoned and the Board of Revenue approved of the Survey and Settlement of the whole of Cuttack town under the provisions of the Orissa Tenancy Act. The sanction of Government for this had already been given in the notifications issued for the district as a whole.

The traverse was done in the hot weather of 1927, the scale adopted being 64 inches to a mile, except for the river bed, which was on 16 inches to a mile.

As the survey was done under the Orissa Tenancy Act the plot unit was the area held by one tenant or set of tenants under one landlord in one right. The details within a plot, such as buildings, were shown on the maps, but their boundaries were crossed with 'f' marks to show that they are not plot boundaries, and they were not given separate numbers.

In *khanapuri* a special form of *khassra* was devised for the urban area, the ordinary form being used for the rural area within the municipality. But only one plot serial was maintained in each village.

In the last settlement, *khass mahal* plots were given a separate serial in English, but in this settlement all plots have been given one serial in the vernacular.

The areas of plots have been recorded to three places of decimals at this settlement.

* The results were most satisfactory. P. T. M.

Pukka holdings have been shown on the maps with hatching. They are described as *makan* or *kotha*, and *kutch*a houses as *ghar*. Land used as "house gullies" as defined in the Municipal Act have been shown on the maps if broad enough to be plotted separately. If too narrow for this, a note of the right of entry of the municipal sweeper has been made on the record in those cases in which the sweeper passes through the holding in order to reach a latrine or cess pit in another holding.

Many roads and drains of the municipality were recorded at last settlement under private landlords as "settlement *minha*" in favour of the municipality. All such lands have now been recorded in the *khata* of the municipality under *Bharat Samrat*, except in the case of such lands in the *khas mahals* where the municipality had made an agreement with Government that the latter should retain the proprietary right.

118. *Statuses in Cuttack town*.—In recording tenants in the town care was taken to distinguish mere renters of houses from parties who held an interest in the land. The former, who are known as *bharadars*, have not been recorded at all, as the record was prepared under the Tenancy Act and is only concerned with rights in land.

A large number of unintelligible statuses were recorded at Provincial Settlement and such terms as *pattadar*, *bajyasti* and *chandnadar* seem to have been used rather loosely and indiscriminately. In this settlement we had to make careful enquiry to determine which tenants were entitled to *chandna* status under the Tenancy Act and which were holding under terms of a contract subject to the Transfer of Property Act. In the *khas mahal* areas the tenants hold under written leases and their rents are fixed only for the term of the leases; they are clearly *pattadars*. A proposal to change their status to that of *chandnadars* by agreement in order to enable their rents to be settled by Revenue Officers at time of settlement was rejected by Government. In the temporarily-settled area it appeared from enquiry that most of the urban tenants are really *chandnadars*. Their description in the last settlement *khatian* or *teri*j generally includes this term, and they were also found to be so described in the revenue assessment reports. Their rents had been fixed for the period of the settlement. Even leases granted after last settlement generally show the rents to be liable to alteration only at a new settlement. Such tenants come under the definition of *chandna* in the Tenancy Act.

It was generally found that tenants who had taken leases since last settlement had been given permanent right. Those who specially claimed this and proved it were recorded as *istimarari chandnadars* or *pattadars*. But the absence of the term *istimarari* does not necessarily imply that the tenant is holding on a temporary lease.

A few tenants even in the urban area were found with status *sthitiban*. Even when inappropriate to the present nature of the holding this status was maintained, as no action had been taken to cancel it.

Under-tenants in various degrees are recorded as *daripattadar*, *daradar*, *pattadars*, *darchandnadar* and *daradarchandnadar*, etc.

119. *Bajyastidars in Cuttack town*.—The term *bajyasti* is found in the status of many holdings at Provincial Settlement. The question whether these holdings are real *bajyasti* according to the definition in the Tenancy Act had to be decided after considering the evidence available. The result was that 678 holdings were recorded as *bajyasti sthitiban* and 75 tenures as *bajyasti madhyasatwadhikari*. The status of *bajyastidar* was not recorded at all in the town *khas mahal* and was only given to a few tenure-holders in the Cantonment *khas mahal*. The expression *purba lakhiraj bajyasti* is found in the Provincial Settlement record of some holdings but in the *khas mahal* settlement of 1913 this status was deleted. In a case between the *kaas mahal* and a leading tenant. Babu Priya Nath Chatterjee, the latter claimed to be a real *bajyastidar* with permanent rights and obtained a decree in his favour in the original Court, but the case was compromised on appeal.

to the High Court and this point was left undecided. At this settlement no tenant claimed *bajyasti* status in the town *khas mahal*. Some revenue-free lands recorded as such in Register D, Part II, were found to have been recorded under *khas mahal tauzis* at last settlement. This mistake has been rectified and the revenue-free lands recorded under the *khewats* of the *baheldars*.

120. *Government and railway lands*.—Much trouble was experienced in determining the boundaries of Government lands and of lands under the Bengal Nagpur Railway, and in reconciling the present survey with old maps and land acquisition plans. In the case of railway lands the problem was made much more difficult by the failure of the Railway authorities to maintain proper boundary marks.

121. *Village notes*.—In permanently-settled areas the Attestation Officers wrote up village notes describing the agricultural and economic facts of each village. The customs regarding jungle in these estates were only treated in some selected villages. I think that this work would have been of greater value if a regular procedure had been adopted, with issue of notice to the interested parties. Some attempts were made to induce landlords to apply for protection of the forests under the Forest Act, particularly in Sukinda and Marichpur, but these were not successful. The Raja of Pachkote as lessee has applied for protection of his tenure in Dalijora. Protection is also being taken up in the Ekhrayat *mahal*, where jungle *khatians* are being specially prepared by the settlement staff. In several places, it is desirable that some such measures should be taken to save the forests. It is particularly necessary in the sea-coast *killas* where the jungle fringe serves as a natural barrier against salt water floods, and in Sukinda.