

CHAPTER III.—Forests.

38. *Forests.*—The forests of most of the States are under the Forest Adviser of the Agency, Mr. Mooney. Sonepur, Talcher, Sakti, Sarangarh, Seraikela and Kharsawan are the exceptions. Forest policy has thus been under control for many years now. Most of the States have now working plans, either already prepared or under preparation. Though States like Sakti and Sarangarh have little forest they consult the Forest Adviser specially. In States where there are zamindaris there are some with forest rights who manage their own forests. In Surguja as well as in Gangpur or Kalahandi the zamindars have created their own reserve forests; in Kalahandi, the zamindars compound forest offences without reference to the State and this is probably done in other places also. In Surguja, eighteen villages are held by a '*maih*' in Gaya and in these villages, a portion of the forest has been constituted a reserve.

Generally speaking the forests of the States are divided into 'A' class reserves, where the reservation is absolute, 'B' class reserves which are meant for the *nistar* of the villagers and are worked on the coupe system, and village forests known in Orissa as *khesra* and by names such as *katait* or *grami* elsewhere. In some States like Nandgaon there are no 'B' class reserves but only 'A' class and village forests. A and B class forests are generally demarcated but village forests are not, and in most States, all waste land in the village is included in the term 'village forest'. Indications are that in the recent past, particularly in the Chhattisgarh States, village forest meant land recorded as village forest in the records and the inclusion of all waste land is a practice not many years old. For example, the Khairagarh *wajib-ul-arz* and forest rules do not include all waste land in village forest. A further extension to be found in the latest forest rules is to include even individual groups of trees in village forest. Village forest is thus an area covered by forest rules and managed by forest officials whose jurisdiction extends to even cultivated holdings. Only in Jashpur there seems to have been a move to place the management of village forests under a *panchayat* but the proclamation does not appear to have been given effect to.

39. The position in respect of trees of reserved species has been mentioned already under ryoti tenure. There were not many trees available to the cultivator even though he paid a cess but in the years since 1938 the number of reserved species has been reduced considerably and varies from about nine to sixteen. The reserved species are usually the timbers and some fruit and lac bearing species. In addition, in certain States, trees above a certain girth, of whatever species are regarded as reserved. The reservation applies throughout the State to cultivate fields, to waste land and village forest, as to reserve forest. The reserved species may not be felled or appropriated anywhere without permission and payment. Usually the fee charged in cultivated fields and village forest (and B class forest) is half the royalty which would otherwise be paid, to *nistar* or forest cess payers. There is probably uniformity in respect of reserved species in the zamindari forests as well but it is difficult to be certain of this.

40. *Nistar.*—In return for the *nistar* or forest cess cultivators are entitled to take unreserved species free of charge for their own purposes from village forests or from B class forests. In some places there are no village forests or B class forests within easy reach of the village and, in Gangpur, after the agitation, the cess was abolished in a number of villages and made optional in others. Such conditions prevail to some extent elsewhere as, for instance, in Kalahandi or Athgarh. In addition to free fuel, cess payers can take reserved species on payment of half royalty and, in some States, timber for agricultural implements, is allowed free. Grazing, as already stated, is not charged for agricultural cattle in village forests and B class forests except in some States. There has been a general increase in the facilities which ryots enjoy in the forest since 1938.

41. *Boundary lines.*—Boundary lines are at present maintained sometimes by hired labour but in some States the villagers are paid rates from Rs. 2 to Rs. 4 per mile for keeping the lines clear every year. In a few States (Narasimpur, Athmallik or Baramba) the villagers are required to keep B class boundary lines clear without payment. In one or two States

like Narsingpur there are separate village forests in addition to those, if any, within village boundaries. The payment of Rs. 2 per mile provides only a nominal payment for each cultivator. While the clearance of forest boundaries adjoining villages may be regarded as in the interests of the villagers as much as the administration, ryots seem sometimes to be taken considerable distances from their villages to clear boundary lines, on nominal payment.

42. *Reservation*.—At the present time the position as regards forests while containing scope for improvement, does not appear to work hard upon the cultivator, I would point out that to a large extent it has been one-sided, that is, there has not been an adequate stress of the opposite view. I do not indeed suggest that they are entirely ignored and, in fact, as far as Mr. Mooney is concerned, his inspection notes show that he has not neglected the interests of the cultivators. What I mean is that in many places it seemed to me that decisions had been taken without an adequate consideration of objections, and the forest department generally decided according to its own judgment. Reservation of forests have so far been made with little consideration for the interests of cultivators and probably by summary orders. Only in rules framed in the last two or three years have any principles been laid down (even these are inserted as a note) and rules other than the latest, such as Daspalla, do not contain any provision for consultation with revenue or land records officers. None of the rules contains provisions for previous publication of intention to make a reservation similar to those contained in the Indian Forest Act. As all, or nearly all, reservation has already been made the new provisions are not likely to be of much practical use. The feeling I had in this matter was strikingly confirmed in Jashpur where forest boundaries had been altered, considerably reducing village forest on the whole, and actually the forest officer was taking action for illicit grazing while the objections filed by the villagers had not even been examined by the Superintendent and many were still supposed to be under enquiry. The Superintendent was unaware that the forest officer was already dealing with forest offences, and of course there had been no proclamation or announcement even after the reservation. In making the working plans, the concurrent examination of the matter by a Revenue Officer to which so much importance is attached in the Central Provinces is absent in the States. In the States where Mr. Mooney does not regularly advise, it is likely that there is still less representation of the cultivators' interest, and before agitation forced the matter upon every body's notice I think little account was being taken of the cultivators' interests. In Talcher, the villagers were complaining about new demarcation reducing their right and I felt that the administration was extraordinarily unsympathetic even to complaints that cattlepaths were affected by the adjoining forest being reserved (because of strays being dealt with as illicit grazing). In Nilgiri the advice of the Forest Adviser that certain areas should be converted into class B forests was not heeded till nearly eighteen months afterwards when I was able to point it out.

43. *Forest Rules*.—Forest rules exist in almost all of the States. Some of these have been recently drawn up under Mr. Mooney's guidance. In Sonpur there have been no rules till my visit (the forest officer had just drafted some) and in Bastar the position is similar; in Athgarh the rules are a dead letter and it does not appear that much importance has been attached to them in Dhenkanal. Some of the rules have been examined in the individual reports. In a few State like Sarangarh or Sakti there are no special forest rules and Indian Forest Act is said to be followed. I do not know why the Indian Forest Act could not be adopted in other States and the need for special rules does not seem clear.

44. *Monopolies*.—In connection with forests must be mentioned the leases, such as lac, cocoons, *tendu* or *kendu* leaves, *harra* or myrobolams, hides and skins as affecting the cultivator. Lac is propagated on *palas* and *kosom* trees the former of which may often be found in large numbers in village waste and cultivated holdings. *Tendu* leaves which are used for making *biris* are often found growing on cultivated holdings. *Harra* is occasionally found on fields. Hides of village cattle are also included in

the monopoly. All these commodities are leased out to contractors who get the sole right to purchase or collect or export them. The lac contract is occasionally varied by a system of licensed vendors, and in one or two States by departmental collection.

In all the recent lac leases drawn up under Mr. Mooney's approval, minimum prices payable are fixed in the lease and if these are strictly enforced the propagator should not lose much, though he will certainly not get as much as in the British districts where there is no monopoly. In Athmallik the terms of the lease make it applicable only to forest area but in practice it is held to apply to cultivated holdings also. In parts of Udaipur a check is exercised by the ryots who compare the prices paid to them with those prevalent in adjoining British territory, and take one anna per seer less. In Seraikela State, a tax may be levied upon trees on which lac is propagated; at present an export duty is levied. In Udaipur there is a heavy tree-tax as well as a monopoly which means that the propagator (ryot) is doubly taxed. In Surguja, lac is propagated upon *palas* and other trees by the contractor's men, a caste known as Pondo, and tenants are not allowed to propagate lac upon trees even in their own holdings. In other places also the contractors are sometimes high-handed and cultivators are prevented from making use of their own trees. In Udaipur also a similar state of affairs exists. The lac monopoly vests the rights in the contractor to get all lac whether propagated in the areas classed as forests or on cultivated holdings. Consequently if a cultivator wishes to sell the lac he has propagated on his own holding he has no advantage over a person who propagates it on trees in the forest. Generally the propagator gets little more than labour charges. If on the other hand the cultivator had full rights in trees on his own holding and was not obliged to sell the produce to a monopolist he would get a much better price. The present position is that except where the contractor brings his own men, it is the villagers who propagate lac in the village forest as well as on their own holdings. If it is desired to give the cultivator full rights in his holding it is necessary to make a distinction between lac produced on holdings and in the forest areas. Mr. Mooney's inspection notes show that payment of extremely low rates to the propagators is not at all a rare occurrence; even under departmental collection payment has been very low.

The *tendu* leaf monopoly is similar. In some places the wording of the lease does not give any right to leaves from cultivators holdings but like other violations of the written word in the States, the lease in practice is taken to cover cultivated holdings as well. In some States payment of a fixed rate is prescribed which of course is nothing more than a rather meagre wage for collection, as the contractor has the right, and is allowed to do so by the State. Even this rate is often not paid as enquiry shows. In Athmallik a separate order apparently contravening the terms of the lease was passed requiring one-fourth anna for four hundred leaves as it was found that the contractor was paying a negligible rate. Even so it does not appear that the order is everywhere followed. The Dewan has recorded some instances in Rairakhol where a negligible rate was being paid and pointed out that Sambalpur rates are much higher. If this monopoly like lac were strictly restricted to forest, the villager would get a better price for this commodity if it comes from his own field. The *tendu* leaf monopoly is one of the prominent grievances of cultivators.

The *harra* monopoly is not of great importance as few *harra* trees are to be found in cultivated areas and the question will be dealt with at the time of making proposals.

The hide monopoly will require a little more description. By this monopoly which is now prevalent everywhere except in Gangpur, Raigarh, Kankar and Kawardha and in some other States like Nandgaon or Khairagarh where it has been 'commuted' into a rate included in the land revenue (see individual reports) the contractor obtains the right to take all hides of animals dying in the village. The monopoly seem to include hides and horns derived from forests also. In Kanker and Raigarh there are export duties, and in Changbhaker also a duty is levied as a contractor could not be found. The Raigarh practice deserves mention as it provides

that if the owner of the animal does not make arrangements for the disposal of the carcass, the *kotwar* of the village will do it, in which case, the *kotwar* will be entitled to the hides and horns. What happens is that dead animals in the village are appropriated by the chamars or others and the *thekedar* (contractor) buys the skin from these for a small payment of two to four annas per hide; the owner of the animals gets nothing. In some States the lease prescribes a rate. The owner of the dead animal cannot keep the hide in most States but in some like Jashpur this is permitted in the *wajib-ul-arz* (in practice the skins are sometimes taken away by the contractor or his servants as enquiry in the villages shows). In the States where the right to the hides has been "commuted" the settlement report shows that organised poisoning of cattle was being practised by the contractor and the chamars. In the States where the monopoly still exists villagers have told me of how they are bullied by the chamars if they fail to report the death of any animal and there have been cases of fine too. (See reports on Talcher and Tigiria). In Udaipur and Sarangarh the hide contract has been given out in violation of the *wajib-ul-arz* and in Surguja the introduction of this monopoly seems to be recent. (In Surguja there was formerly a tax). In some places (mostly Orissa States) the villagers, on account of caste scruples, do not care for the hides but most cultivators feel it as a grievance that they are compelled to surrender the hides of their animals without any return. Usually it is only the chamars who get the payment. Hides are useful for the purpose of making shoes, thongs and ropes for the ploughs. What the chamar or *kotwar* gets from the contractor is hardly an adequate return for the labour involved in skinning. It is surprising that this monopoly against which there is so much feeling and which has resulted in serious malpractices should have continued so long, particularly as it is extremely difficult to see what right the State can have in the hide of an animal belonging to a cultivator and paid for by him. The practice does not exist in the provinces except in the estate of Angul (which of course was one of the Orissa States) and though here the question was agitated in the Orissa Assembly it appears that it has been retained on the understanding that the whole of the amount would be utilised for the benefit of the villagers. The monopoly however is difficult to justify as it amounts to a denial of the full right of property of the owner of an animal and the strong feeling against it in the villages is easy to understand.

Generally speaking, in all cases of monopoly even where prices are prescribed in the leases it is very difficult to enforce payment of a proper price, but even worse than this is the bullying to which ryots are often subjected. A moderate export duty is in my opinion far better than these objectionable monopolies.

Other monopolies which have existed in the States but have been abolished since 1938 are sugarcane mill, *pan*, and several others. An extraordinary prohibition exists in the State of Narsingpur; by an order passed in December 1937 old bullock carts may be sold only to tenants of the State and the order shows that formerly the restriction was of all sale.

45. *Export Duty and Ban on Export*.—It is convenient to consider here the various export duties levied in many of the States, particularly as in some States the export duties are levied by the forest department, and the ban on the export of agricultural produce for sale outside. After the Bowstead enquiry it was decided that the Rulers should be requested to abolish the export duties as well as the ban on exports. In some of the States like Surguja the zamindars levy their own export duties; it is proposed now in Surguja to persuade the zamindars to let the State alone recover these duties a share of the income being given to them. In Serai-kela the duty is imposed on traders only at present though the position is susceptible of change. Ban on export of rice and other grains is imposed in several States like Bonai, Rairakhol, Kanker, Ranpur, Chhuikhadan on the ground that there is a shortage, though in Bonai I was told that it did not prevent the Ruler exporting grain. Mr. Bowstead wrote that some of the export duties such as on cattle are imposed more to discourage export than as a source of revenue. In Surguja for instance there is an import duty on cattle as well and this can hardly be with a view to discourage import. In the list of commodities liable to export duties under the forest rules in Talcher are items like hens, rams and so on in addition to horned

cattle. The levy of export duties on agricultural produce and the ban on export in these diminutive States can, I think, find no justification whatever. In a large State or province such duties are not likely to have appreciable effect on account of conditions over large areas tending towards uniformity. In large areas like, say, the Central Provinces, or Hyderabad, there is enough scope in the way of large cities and towns, markets and bazars and a ban on export or export duties will have practically no effect on internal prices. Of course under abnormal conditions such as scarcity in a neighbouring province there may be a tendency for export and a difference in price levels on either side of the frontier. Even in such circumstances in view of the modern tendency to price control it is not likely that there will be much difference. In the case of these small States, however where the most important place is often a large village, compulsion to sell within the State itself amounts to denying the cultivator the facilities of large markets and communications which the State itself is unable or unwilling to provide. It is obvious that the smaller the State, the more backward its condition, the less is the scope available to the cultivator to get the best price for his produce. In some of the States (Athmallik, Ranpur) export is allowed for the purpose of obtaining money to pay the land revenue, *i. e.*, during the recovery season. Of course the cultivator exports during this period all he desires to sell and his purpose is served but the pretence of protection disappears. The argument that a ban on export is necessary in order to prevent shortage is, in my opinion, completely fallacious. I do not lay claim to any great study of the problem of movements of agricultural produce and scarcity, but it seems to me that the best safeguard against scarcity of the common type (*i. e.*, caused by local failure of crops,) we have now-a-days in India is the facility with which produce in an area where there is no scarcity can be moved to affected areas. If there was a ban on free movement of produce in such times, famines would be difficult to relieve. The States, in believing that prohibition of export tends to preserve them from scarcity, seem to have completely overlooked the consequences of retaliatory action by the provinces and surrounding States when there is scarcity in the State itself. In such an event the plight of these small States would be deplorable. These are the aspects of the policy which present themselves to me and the actual question of whether a ban is justified at any time or not must be left to persons more competent to express an opinion. Whether at any time export should be prohibited or not, the effect, in these small States, of export duties and bans, is undoubtedly to act as indirect addition to the cultivator's land revenue, and unless there is a compensatory advantage, I am of opinion that the duties and restrictions on agricultural produce should be abolished. I find myself unable to agree that the duties are not imposed for the sake of revenue or that it is normally necessary or desirable to discourage export. It is of course true that when there is scarcity in a neighbouring area, and export is not prohibited, prices tend to go up in both places unless controlled. For the cultivator, this is an advantage rather than a disadvantage, and usually, the agricultural labourer and other classes are not likely to be affected except in actual scarcity over large areas. If the States are too small to levy export duties without imposing a burden on the cultivator, it is obvious that this is much more so in the case of their zamindaries and the levy of export duties by zamindaries is most objectionable.

46. *Crop Protection*.—A matter usually coming under 'forests' and affecting the agriculturists is shooting. Mr. Bowstead reported that cultivators are allowed to shoot animals damaging crops in most States. The Resident, the Forest Adviser and the Governor agreed that a cultivator should have the right to protect his crops and, in view of the position that the Forest Adviser was assisting the States to prepare shooting rules, no orders were passed. I have examined the position in the States and some of the new rules framed. The position at present seems to me far from satisfactory. Even before the present new rules were framed there were rules in many States which conceded the right to protection to some extent but these were completely ignored and in practice even pigs could not be shot in some cases and cannot be shot to this day in Seraikela and a few other places. The policy being followed in framing the rules is to permit shooting while the animal is actually in the crops and, in some States,

certain animals cannot be shot even while damaging the crops. For example, elephants cannot be shot in Dhenkanal and other States, where there are elephants. In Bastar bison, buffalo, black buck and barsinga are prohibited though, except black buck, these animals seem to be a nuisance. In Bamra, (see also Changbhakar) the rule prohibits the shooting of females of certain species and specifies the length of horn of a sambar which may be shot. In some States like Athmallik, Kharsawan and Khairagarh only pigs may be killed. In Ranpur the licence conditions prohibit the shooting of animals in day-light even if found on crops. In the States of Dhenkanal, Pal-Lahara, Keonjhar and Bonai elephants are an absolute scourge and do much more damage than all other animals but cannot be shot at or killed. With this position may be contrasted the fact that in the Indian Act for the protection of elephants protection, while damaging crops or property, is not contemplated. In States where there are elephants any protection granted against other animals is quite useless. As *keddahs* are not being held these days the damage done by these beasts is immense and real. Now, as regards shooting only while the animal is actually within the crop, in the first place I feel that there is no reason why animals should actually be permitted to damage crops before being shot at, secondly in a thick paddy crop, beasts like pigs, particularly small animals, are far from easy to see at night, and of course in a crop like *juar* which is grown in some of the western States it is impossible to see them even in daylight, thirdly, no case for the protection of pigs which exist in large numbers and do enormous damage can be made out and only by permitting their killing in an organised manner outside reserves and even in reserves when they adjoin cultivation can their numbers be kept down. Much difficulty is caused to cultivators by the rules requiring them to report killing of animals in protection of crops and take the carcass or hides to the forest subordinates and police, who are often tyrants of the worst description; where the cultivator has never really known what is permitted and what is not, such a procedure is an effective prohibition of shooting or killing even in defence of crops. To give an example of what the rules are like, in Korea, the rule prescribes that the skin, horns and flesh must be deposited with a forest official in twenty-four hours; if the flesh is desired to be retained it should be paid for at rates varying from Rs. 15 to Rs. 4 for various kinds of deer; in some States payment is prescribed for the mere shooting of an animal. In Bastar till recently the person killing an animal was required to produce the skin, cured and dried, within a week. Much is made in arguments against the grant of adequate protection of peaching and destruction of game and sale of flesh. I see no reason why these arguments should be applicable in any greater degree to these areas than to the provinces and why the cultivator in general should suffer on account of a few poachers. I do not think that poaching can be prevented whether the cultivator is restricted in his right of crop protection or not and my experience does not show that the cultivator with a gun is ordinarily a poacher. It would in any case be easy for a cultivator to shoot an animal in the reserve, convey it to his field and pretend that it was shot there. As regards the argument of preservation of game, the position in most of these densely wooded States is hardly such as to call for any preservation. The preservation of animals is surely not to be done at the expense of agriculturists, and there is plenty of scope in most of the States for game sanctuaries. The worthy object of game preservation seems to be forgotten when animals are shot from motor cars and attempts are made to set up records, or when shikar excursions result in organised slaughter. In the Central Provinces where there is an Act for the preservation of wild animals the cultivator is permitted to shoot animals in crops or in their vicinity and animals which are considered vermin, like pigs, are not given any protection and may be killed anywhere. I do not find any restrictions like those in the States in Bihar, Bengal and Orissa. So far, I have dealt with the protection of crops but in these densely wooded areas people suffer much in other ways from the depredations of carnivora without being able to shoot them. I came across an instance of a village headman being fined Rs. 50 for killing a panther last year though the animal had killed three cattle in the village (Udaipur). The protection of cattle is quite as important as the protection of crops. The general question of protection of life may be considered outside the scope of my examination though a man-eater may do much harm before the Ruler is fetched to kill it.

Connected with the question of protection of crops and cattle is the question of the issue of gun-licences for this purpose. In some States the fees levied have been far too high and few cultivators can afford all the expenses necessary; in Chhuikhadan a fee of five rupees is levied for a licence. There has been a general reduction and some of the new forest rules prescribed free licences but still a fee of Rs. 2 or Rs. 2-8-0 must be regarded as high for a muzzle loading gun. Except in a few States the number of licences issued seems small in view of the jungly nature of the country, and in most of the States the guns are held by headmen and similar persons more as an enhancement of their prestige than any real use in view of the position regarding shooting. In Keonjhar, a State full of wild animals there were only seven gun licences for crop protection and in Korea, an equally jungly and large State there were only 22 such licences last year, there are other States also where the number of licences is inadequate and these are mentioned in the individual reports or later. In Seraikela, Kharsawan and Sakti no licences are issued.

47. *Shifting Cultivation*.—Shifting cultivation of the type known as *bewar* or *dahia* (in which trees are felled and burnt or burnt while standing, after ringing, and seed is sown in the ashes or the ashes are ploughed into the ground) is now permitted in regular manner only in the juangpir of Keonjhar and in tracts of Bamra, Bastar, Pal-Lahara, Bonai, Ranpur and Kalahandi. In other States it is either non-existent or is occasionally done clandestinely and is liable to be treated as an offence against the forest rules. This is the position in some portions of Surguja where the Pahari Korwas have not yet taken up settled cultivation. In Rairakhol there are some Kondhs, in the forest area who have been brought down from the hills (some are being brought down) to a new settlement in the State and it is proposed to teach them settled cultivation. In areas where shifting cultivation is permitted a plough tax or house tax or poll tax is charged upon the cultivator. The juangpir was the only area in the States where shifting cultivation is practised which I could personally visit. I could observe small areas under settled cultivation here as well but though it is likely that the tribes may be gradually coaxed to take to settled cultivation, they are addicted to *dahia* and will not give it up easily. Most of the areas in which shifting cultivation is practised are totally unsurveyed and while there seem to be no disputes regarding the area of each man within the village, disputes between neighbouring villages are known to occur and develop to serious proportions. Laying down the boundary of each village by traverse seems to be a necessity. In Bamra shifting cultivation is assessed by measurement every year. Formerly when shifting cultivation was much more common than it is now, assessment used to be made at so much per axe. I have not been able to make much of an examination of the relative merits of these methods by consulting the villagers. In the juangpir the cultivators seemed to have no objection to the method of assessment and the other methods also seem to cause no trouble. Measurement of area annually may not be convenient but it does not seem necessary to recommend a different system. As regards discouragement of shifting cultivation, with the exception of keen anthropologists, others are agreed that it is desirable to discourage it. It seems essential to proceed slowly and cautiously with this. The Kondhs who had been made to come down from the hills in Rairakhol do not seem to have taken quickly or kindly to their new surroundings from what I read in the tour notes of the tahsildar. In the South Mahanadi States there are Kondhs who have taken to settled cultivation, speak only Oriya and seem to be in no way inferior to their neighbours. These Kondhs are known as 'desua Kondhs' as distinguished from their primitive brethren who still remain in the hilly areas speak Kui and practise primitive methods of cultivation and are known as 'malua Kondhs'. This seems to indicate that it is really wrong to encourage seclusion and segregation of these tribes though they need protection in a different form. In the Abujmar tract of the Bastar States, there is a sort of seclusion of them, the benefits of which, apart from the creation of a sort of anthropological sanctuary, seems to be doubtful. In this tract a poll tax is levied (see note on Bastar).

47-A. *Composition of forests offences*.—In nearly all States forest officers are permitted to compound offences upto a limit of Rs. 25. The cases compounded are not usually reported to a magistrate or the Dewan

except in one or two States. In Sarangarh; forest *darogas* are permitted to compound cases upto a limit of Re. 1, *prima facie* a most undesirable practice. In view of the fact that forest officers in most of the State are persons of the rank of rangers it is questionable whether they should be permitted to compound offences at all. In any case I do not think composition of cases without reporting them to a Magistrate should be permitted.

CHAPTER IV.—Survey, Settlement and Land Records.

48. *The Need for Survey.*—To some extent settlements in the States have been considered in dealing with the revenue history of the States and the position in the States has been briefly mentioned. Whether land revenue is regarded as a tax upon agricultural income or as a rate for the privilege of cultivation under the protection and facilities provided by the State, it has, throughout India except where shifting cultivation is practised, come to mean an acreage rate and according to most or all modern methods of settlement, is supposed to bear relation to the productive capacity or income from the land. An agricultural income tax has been imposed recently in Bihar but the object of this Act seems to be to get round the permanent settlement and the assessment takes into account the land revenue paid on the land. Land revenue then, is primarily an acreage rate, and its proper assessment is bound up with an accurate measurement or survey of the surface of land so as to give the area cultivated, or in the possession of individual persons, or persons acting jointly. Survey is also necessary for the determination of areas of land likely to be cultivated in the future, for the determination of areas which may not be cultivated and are required for other purposes such as the common purposes of the villagers, for residential use and for the assessment of revenue on such lands as well. Smooth administration also depends on it and in areas without survey disputes between individuals or communities may commonly arise. Generally, it may be said that for proper revenue and civil administration, survey is one of the most important desiderata. These prolegomena are meant to show that in a number of States, this primary requisite of sound revenue administration is missing altogether or exists only in an unsatisfactory condition. In several States like Bastar, Udaipur, Bonai, Keonjhar, Ranpur and Kalahandi, large unsurveyed areas exist while practically the whole of Udaipur and Korea is yet to be surveyed. In some States, notably Ranpur, Athgarh and Dhenkanal the survey made is very unsatisfactory and unreliable.

49. *Boundary Marks.*—In practically all the Orissa States there is no agency for the maintenance of land records in an efficient manner and I have no doubt that survey marks in most places are defective or missing altogether in the absence of proper supervision; this is admitted in places like Dhenkanal or Hindol. In the States of Chhattisgarh where there is a land records staff of patwaris, as in the Central Provinces, the conditions may be better though in most of them the number of patwaris is quite inadequate; in States like Kalahandi, Udaipur or Changbhakar the patwaris have impossibly large charges. In Raigarh, the patwaris do a village once in two years. Even in the Central Provinces the maintenance of land records and boundary marks often lacks efficiency on account of the field work and physical exertion involved in supervision and the position in the States can certainly not be better. In the Orissa States, *sarbarakars* are required to look after boundary marks but nobody sees that they discharge this duty. In no State in the Agency has the survey except of the boundary of the State been done by theodolite but survey by less expensive methods can, if done with proper care, produce records sufficiently accurate for most practical purposes. With the exception of the States mentioned above, and probably a few others like Sonapur and Rairakhol, satisfactory settlement maps seem to exist, of surveyed areas. Defects have however been found occasionally as stated by local officers but it has not of course been possible for me to examine this matter except superficially. In many cases, a considerable time has elapsed since settlement, and disputes arising from defects in survey and record have mostly been settled, and it is not possible to give a definite opinion without a special examination. Instances of *prima facie* unsatisfactory conditions have been commented on in the