

27 Immigration in the Sakay District, Madagascar

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Although lying within 200 km. of Tananarive and the more thickly populated areas of the Malagasy Highlands, the Sakay District is still today rather thinly populated, and seems to exhibit the characteristics of recently occupied 'new lands' (Figure 27.1). Yet it already offers the student of population movements a complex and varied field, in which are mixed together different types of immigration and space occupation. In the following pages, the emphasis is on the variety of such situations and on the historical environments and the methods of land development which account for them. The objective is to draw conclusions that may influence a policy of development more comprehensive and varied in its methods.

REASONS FOR A SPARSE AND BELATED SETTLEMENT

An unusual 'no-man's-land'

The Sakay District is mainly a part of the 'sub-prefecture'¹ of

Tsiroanomandidy, in the province of Tananarive (Figure 27.2). For the sake of convenience we shall confine our study to this 'sub-prefecture', the 9,388 sq. km.² of which constitute a convenient statistical unit. Strictly speaking the Sakay District is only a limited portion of the sub-prefecture, roughly corresponding to the rural 'commune' of Fanjakamandroso (575 sq. km.), in which important developments have taken place for nearly twenty years. But these developments have had indirect effects on the evolution of human settlement and the development of the larger part of the sub-prefecture. In the following discussions we shall consider the problems of 'Greater Sakay' as well as those of the smaller district bearing this name.

The sub-prefecture of Tsiroanomandidy is, in the main, made up of a series of bevelled plateaux seldom reaching higher than 1,000 metres, with an average height mostly between 850 and 950 metres. The plateaux slope from east to west and from north to south. They result in fact from a series of bevellings chiefly formed in the 'migmatites' above which rise the residual massifs of Ambohiby and Bevato, composed mainly of granites, syenites, and gabbros. These ensembles are broken up by a great number of valleys of the 'oak-leaf' or 'reindeer horn' types, varying in size according to local base levels and incessantly cutting the landscape, producing a multiplicity of steep slopes and low marshy valleys which nevertheless have marked gradients.

This region, about which we possess historical evidence extending back about 150 years, seems to have been throughout the period a vacant area, regarded as a 'no-man's-land' between the Merina kingdoms of the Highlands and the Sakalava kingdom of the west. To the Merina people the existence of this vacant zone afforded relative protection, but also made the Sakalava safe from pursuit after the profitable raids for men and cattle upon the Highlands.

It seems, however, that the natural state of this 'no-man's-land' has changed: early travellers described it as a 'prairie' of extremely tall grass (up to six or seven metres high) where trees could be found only in valleys. However, it is difficult to accept that this tract of land has been totally void of trees for all time: rainfall is heavy (1,500 mm. at Babetville, in the centre of the Sakay, 1,711 mm. farther west at Belobaka), though distributed according to season; the monthly rainfall is less than 25 mm. from April to September. This has permitted the development of a deciduous forest. Some occasional traces of an ancient forest resembling the eastern rain-forest have been preserved. It is believed that the double effect of a recent climatic disturbance, combined with man's action in the form of pastoral land fires, soon resulted in the destruction of an unstable vegetation at a time when it was not quite adapted to the climate and lacked species able to resist fire.

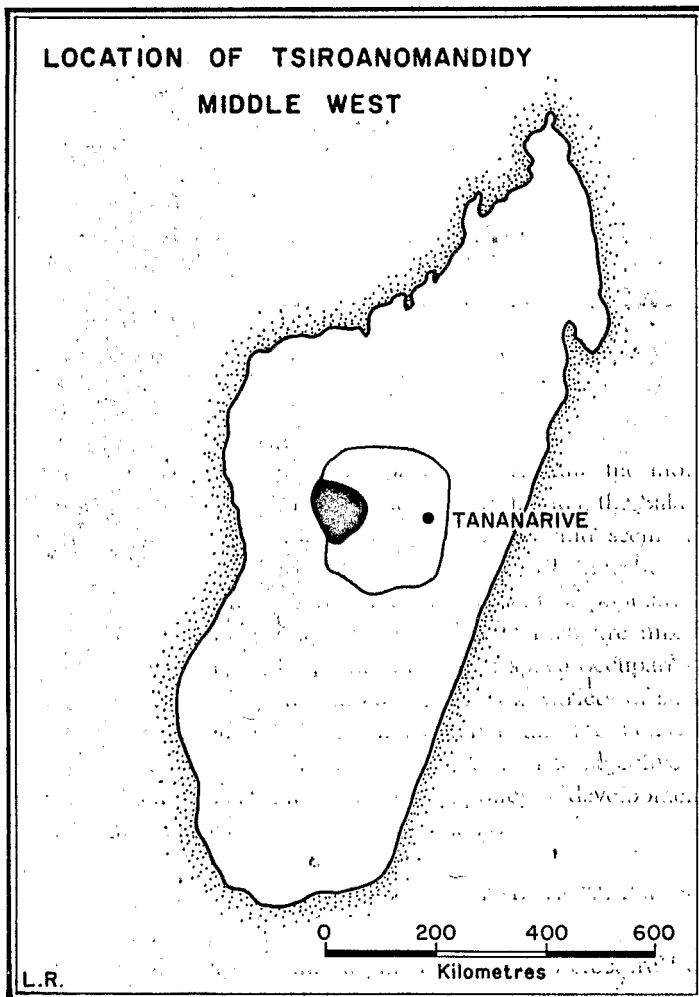


Figure 27.1 Location of Tsiroanomandidy Middle West

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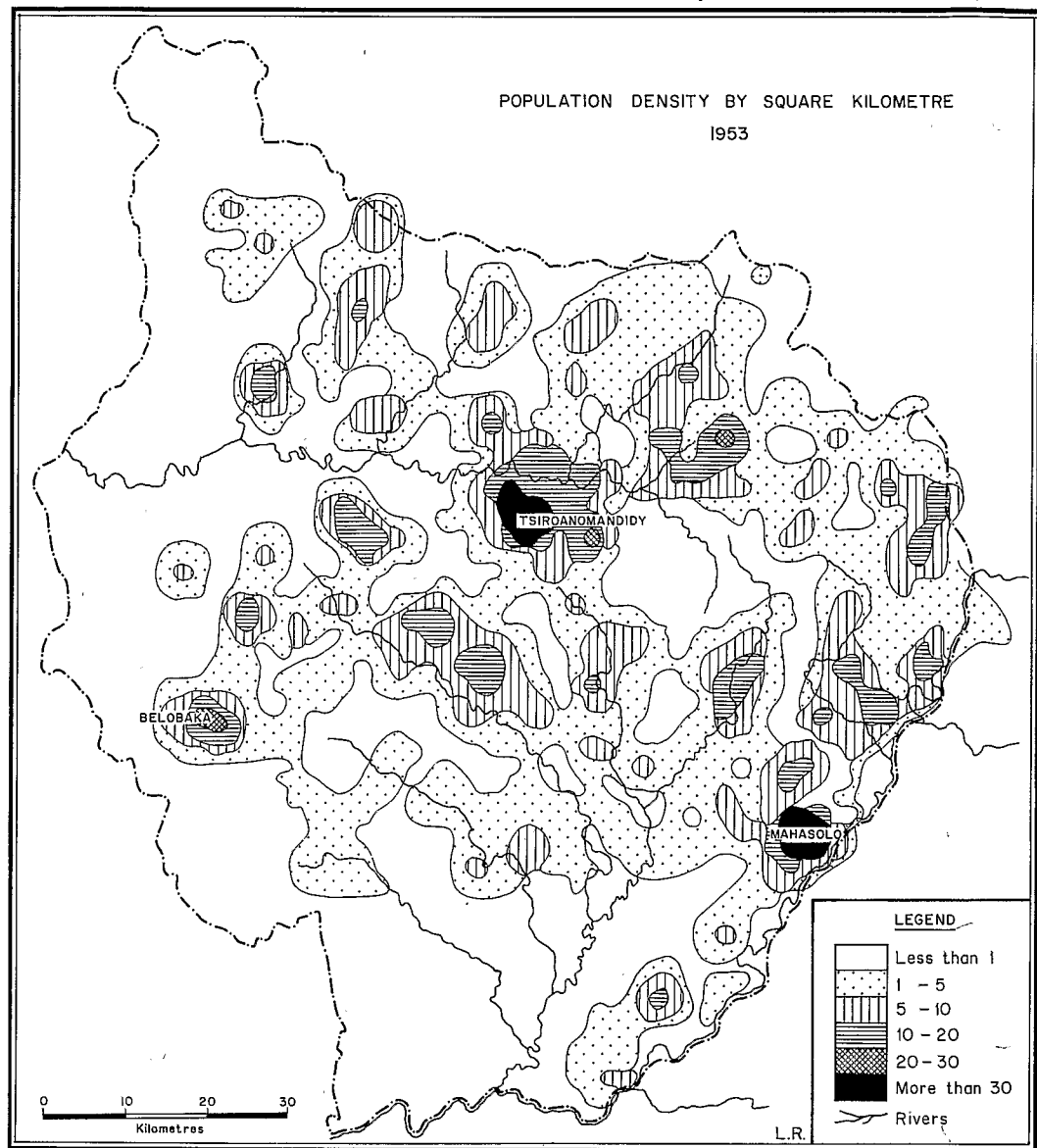


Figure 27.2 District H of Tsiroanomandidy: population density 1953

For a time the monarchy of Tananarive, hoping to turn it into a marginal pioneer zone which would be occupied by Merina peasants, erected a range of forts running north and south in order to protect them, but a political change occurred a little before 1850. The occupation of the land by peasant settlers was no longer the policy pursued, but an attempt was made to secure it as a grazing area for the benefit of the queen and the dignitaries.

East-west relations became important: cattle were bought from the Sakalava and entrusted to royal petty-officials. Groups of Sakalava rallied to the monarchy took part in protecting the border; their unruly traditions were rather an advantage. If they did occasionally rob the property of small peasants on Imerina's marginal lands, they contributed to spread an atmosphere of insecurity which was profitable to bigger cattle-owners who were able to defend themselves and thus to enjoy extensive grazing without much trouble.

Had any other political and economical alternative been adopted, there would have been little to impede an early expansion of the peasantry of the Highlands. The climate is not

very different from that of the more populous regions of the east. The only slight differences are a rather higher temperature, especially at the end of the dry season, and the scarcity of mist and dew at this time of the year. But the downpours of the rainy season are advantageous for un-irrigated cultivation. The valleys, although very much parcelled out, are numerous and a flourishing paddy cultivation is possible. Health conditions are not bad: it seems that malaria is perceptibly more significant than in the higher regions, but lung diseases are far less frequent. Grasslands are first-rate for cattle, a fact which, with the presence of paddy land, is the foundation of the Malagasy way of life. The soils are definitely better than those around Tananarive. It is true that the topography is very much dissected, but what is a drawback for a modern mechanized type of agriculture is on the contrary an advantage in the traditional land use. Within a limited area, a variety of soils with different possibilities occur. The main natural hindrance to the settlement of the peasants is the type of topography. The region lacks comparatively large basins in which important communities might have fixed themselves and found opportunities

for political organization and defence. Moreover, unlike the Imerina and Betsileo regions, the Middle West has no heights that might be used for defence. In times of trouble, groups of peasants could settle only in scattered places, thus becoming easy targets for raiders. The socio-development of the land, therefore, was for long of an aristocratic or middle-class character, which has left a deep mark on the present social structure of the people in the area.

THE SLOW PROGRESS OF SETTLEMENT DURING THE COLONIAL PERIOD

The French conquest at first resulted in depopulation of the district. The herds of the great personages were dispersed and some of the chief keepers left the area with their cattle, to go and settle themselves in Sakalava land while the slaves ran away. For a long time the colonial administration seemed to accept the sparsely populated state of the district (in 1906 the region had but 1,850 inhabitants, that is, one for 5 sq. km.). This, however, made relations difficult between Tananarive and the western coast. In 1934 there were no more than 13,500 inhabitants giving a density of 1.4 per sq. km. This can be first explained by the attitude of colonial officers towards spontaneous immigration, which seemed to them the act of uncontrolled, hostile, and dangerous individuals. Tax-collecting was far more difficult in the almost empty regions than in populous areas, and owing to cattle fattening, peasants could earn money without being drawn to work for wages on European land concessions. The more favoured movements were the temporary movements to concessions, or at most, migration of Highlanders towards the rich deltas of the west, which the Sakalava were neither able nor willing to cultivate. The tendency towards a pastoral way of life in the prairies of the Middle West was then opposed to the accepted concept of agricultural advancement. Immigration was in any case most strictly controlled. People had to make do with grouping themselves into villages in close proximity to administrative stations. On the other hand the forest officials tried to oppose the deforestation of valleys, which was necessary to make paddy fields.

Besides, it was not until after a long time that the Europeans became interested in the district. It is surprising that not until the thirties did the cattle-fattening companies become interested in its great grassland potentialities. Previously the settlers had not gone beyond the volcanic massif of Itasy, where they had unsuccessfully attempted groundnut cultivation. The cattle market of Tsiroanomandidy, now the most important in the island, was only founded in 1929, and the 'Société Rochefortaise' acquired pasture-lands for fattening only in the years after 1925. The reason was that cattle trade and fattening, especially for exportation, seemed to be better suited to the

regions bordering the western coast. Under these circumstances cattle-ranching essentially remained for long in the hands of Malagasy people, Merina from Tananarive as in the old days, but Betsileo as well, a fairly large number of whom owned herds of more than a thousand head kept by hired men.

In the nineteen-thirties the situation was changed owing to the establishment of limited companies and private European ranchers. This renewal of interest in the Middle West seemed to have been stimulated by the decrease of the Malagasy livestock, which made purchasing far more difficult and prompted meat-packers to fatten cattle themselves. Following the 'Société Rochefortaise' there came the 'Société Industrielle et Commerciale de l'Emyrne'; furthermore, several stock-breeders of Greek origin started selling their cattle to these large companies, which succeeded in controlling vast areas mostly by renting rather than buying the land. In 1940 the 'Rochefortaise' occupied 100,000 hectares (about 246,914 acres) with 10 to 15,000 head divided into three ranches; the S.I.C.E. had 80,000 hectares for 8 to 10,000 head; the first three Greek stock-breeders had 5 to 6,000 head fattening. The greater part of these European-owned grasslands lay to the south of Tsiroanomandidy District, between Belobaka and Mahasolo, well away from the main Tsiroanomandidy-Tananarive road.

The European companies employed wage-earning keepers for their herds; the 'Rochefortaise' had 150 Malagasy men for 15,000 head of cattle. The Malagasy breeders, who at first did the same, gradually took up a form of 'metayage' system, the 'dabok'andro', according to which, on selling day, farmer and owner received half the profit each, generally after three years' fattening. In these different ways the development of cattle-ranching stimulated population increase. But the newcomers were not pioneer farmers: they were wage-earners or 'metayers' who were rather narrowly dependent on owners. A large number of them did not bring their families, and some came only for a limited number of years. The settlement was racially diverse. A number of people came from the south and south-east. These south and south-east elements were less numerous in other parts of the Middle West.

The fattening companies experienced some real difficulties from 1947 onwards, the year of the rebellion in Madagascar. The disturbances took the form of recurring brigandage, while the labourers became more unruly. A number of Malagasy stock-breeders were ruined by robbery and stagnation of business. The companies reduced their stocks and the control of grazing lands became less strict. At the same time, the occupation of the land by peasants advanced. At first, around the hamlets of cattle-keepers whose fields had before been limited, crops began to spread; unsalaried new immigrants arrived to

swell the population of the hamlets. Unlike what occurred in other regions, this immigration was not necessarily based on family connections; relationship did not count so much as the patronage of an old man of the village, very often a former chief-herdsman. Even today the social structure of stock-breeders' villages is not fundamentally based upon family organization, but rather on the basis of patrons and clients. At the beginning there is often only one 'patron' but as the village reaches some importance several leaders emerge who contend with one another for power. If the quarrels get worse the village splits up into several sharply separate units of homesteads. The economy of these villages is based both on paddy-growing and cattle-breeding, each activity having its own particular field.

The main part of the cultivated areas is concentrated in valleys and on hillsides. There the paddy-fields lie, often quite large and poorly cultivated. Some of them are hardly levelled and have no mud walls; transplanting is not always practised and villagers are sometimes content with scattering paddy-seeds. Normally there is no digging of the fields, but a large number of bullocks are made to stamp about them—40 to 50 animals on one hectare for two days.

In spite of the primitive methods of agriculture, rice-crops are satisfactory. In 1960, in the Sakay District, the average yield was 3.298 tons of paddy per hectare (2.471 acres);^e in 1969, after a slight technical improvement, we reckoned an average yield of 3.667 tons^e. In the same area further west, at Ambarinanahary, in what is still a backward village, the yield in 1968 was 3.143 tons.³ Un-irrigated farming is also practised in the valleys, on the deposits lying at the bottom of hillsides. By far the most important dry crop is cassava, cultivated along slope-wise ridges, the 'voka-voka'. The purpose of this practice is to prevent rotting caused by excess of water, and to make weeding easier, for the grass grows tall in low grounds. As a rule one or two small valleys are left uncultivated and without paddy-plots: they are for the pigs and cattle during the dry season. These valley-fields, devoted to agriculture except after the paddy-harvest, are sometimes enclosed with tree-hedges and fences in order to be protected from the devastations of bullocks. On the plateaux, called 'tanety', the fields are traditionally quite small, and in close proximity to the village there are plots of maize, sometimes tobacco and groundnuts, or even coffee bushes. This often enclosed aureole-like tract of farm-land is a zone of fairly well-tended fields fertilized by cattle manure and household refuse. If peasants wanted to cultivate hill-fields farther from the village, fencing would be obligatory.

Indeed the 'tanety' are the domain of cattle. The quality of grasslands, mainly made up of *Hyparrhenia rufa* and *Heteropogon contortus*, allows exclusive fattening on grass; in the

rainy season especially, the cattle enjoy much freedom, only coming back to the pens for the night. Nightly penning only becomes necessary when the density of the population increases appreciably, but this extra work is not favourably regarded. Fattening bullocks generally remain close to the village, while cows and younger beasts will be placed on farther-off grasslands. The difference between the two kinds of herds becomes clearer in proportion as the population increases and the anxiety to get ready money grows. Fattening beasts or 'omby [oxen] dabok'andro' are penned up every evening and sometimes get some additional food in the form of cassava; on account of the care they require, they are usually placed in herds of no more than thirty head, by the peasants themselves, in the charge of farmers who take a half share of the profit.

Immediately after World War Two, therefore, this type of rural economy developed and evolved, owing to an increase in population which remained, nevertheless, moderate. There were 13,500 inhabitants in the sub-prefecture in 1934; 16,400 in 1948; 24,794 in 1954; giving a very low density of 2.6 per sq. km. Locally a reduction of grassland areas and the necessity of an added proportion of cassava became more obvious.

As the paddy-fields now occupied a large part of the valley lands, where it is also necessary to provide for dry-season grasslands, the development of the share-cropping system resulted.

These premonitory signs, indicative of deep changes, were more obvious in the east of the sub-prefecture, in the vicinity of the Sakay, and it was in this region that areas of planned settlement were to be attempted, the commencement of which greatly undermined the stability of the existing régime.

THE ATTEMPTS AT PLANNED COLONIZATION EUROPEAN AND MALAGASY

The 'Sakay réunionnaise'^{f, l, n} (Figure 27.4)

The first planned colonization undertaken in the Sakay District was meant for the settlement of immigrants from Réunion Island, who were to be gathered in small settlement areas, consisting of farms on plateaux, 15 to 20 hectares in size. This experiment, typical of the post-war colonial period, is still interesting as it has outlived Independence and served as a model for new experiments of planned immigration or agricultural extension for Malagasy peasants.

In the early fifties, this enterprise was justified first by the existence of a serious demographic problem in Réunion, where, in 1955, 290,000 inhabitants were crowded into one area, at an average density of 116 persons per sq. km. Furthermore, the Malagasy population was then thought to have reached a fixed level. Population growth became evident only after World War

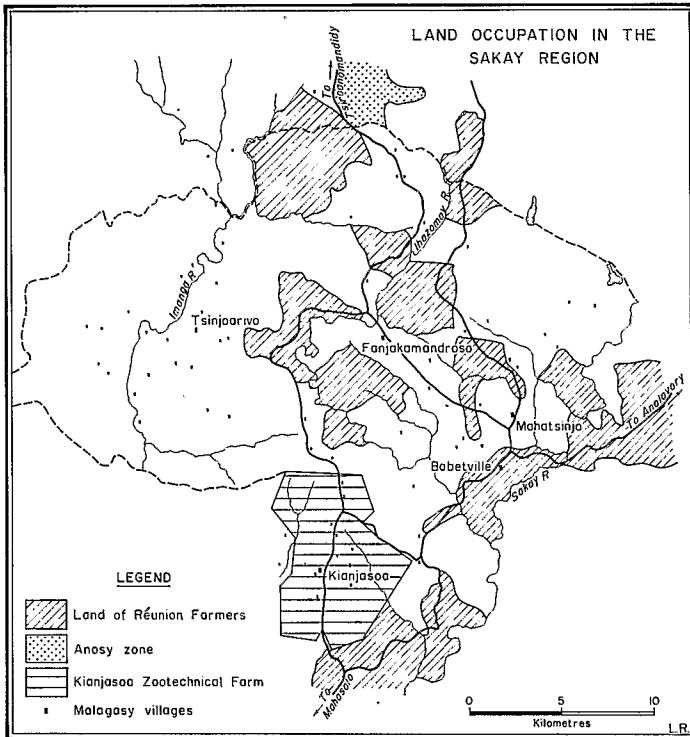


Figure 27.3 Land occupation in the Sakay region

tion scheme was only one of the projects which were then planned, but it is the only one which has been completed.

The new colonists were people from the 'Heights' of Réunion, i.e. 'poor whites', very rarely intermixed, who at home practised a very primitive shifting cultivation, lived in miserable conditions, and were most often illiterate. The scheme was difficult to carry out; it did not belong to the classical type of colonization by Europeans with a minimum of material and intellectual means at their disposal.

Field operations started in 1952, and in 1953 Babetville was created. A 15,000-hectare area of concessions under French state registration was gradually opened to the Réunionese colonists, and 220 farms were established. Some 200 of them are now occupied, and this represents the highest number ever reached. The instability of the colonists has been noticeable, but not excessive, since out of the 510 families who settled in Sakay, 208 are still living there.

The technical originality of the enterprise was remarkable. It consisted in setting up a system of cultivation based on the permanent tilling of the plateaux, whose products would be transformed into meat. The system is based on the use of anti-erosional processes, consisting in a series of contour ditches for

Two, and even then seemed to be obscured by the 1947 events, so that it was not yet perceptible in the early fifties.^b And, finally, after the troubles in the preceding years, the Government turned to encouragement of French colonization and to insistence on the permanence of the colonial presence, to ensure safety and increase of production. The Sakay coloniza-

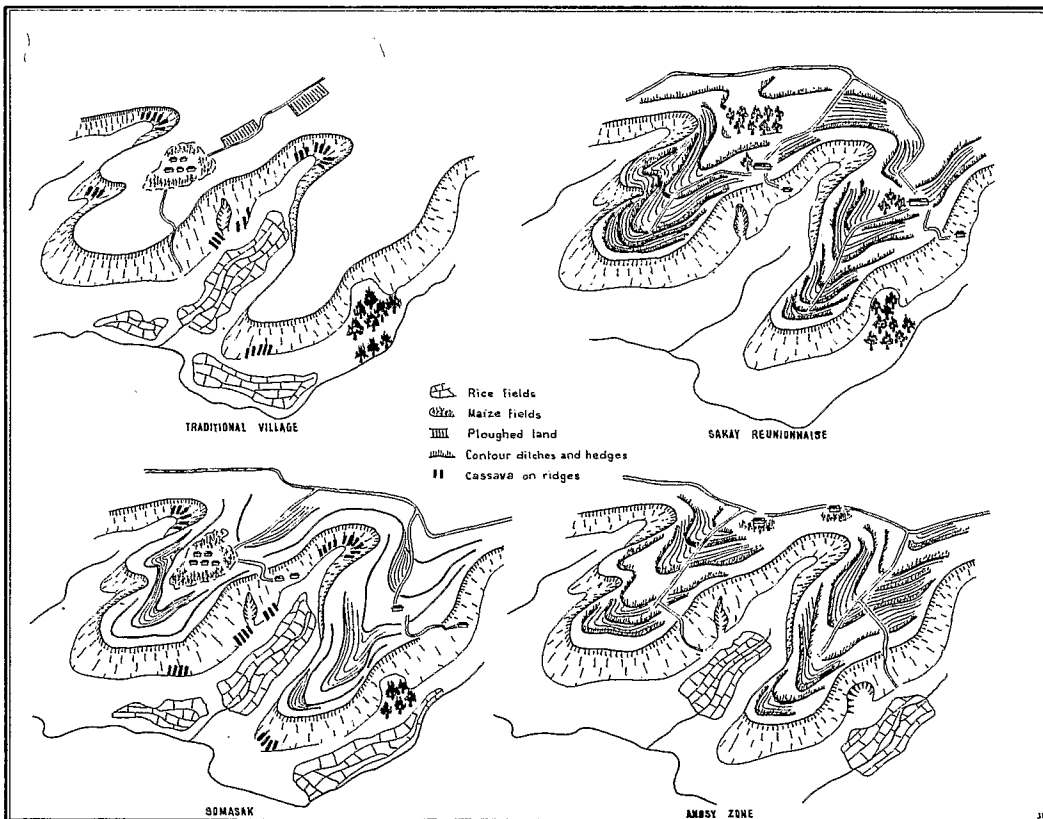


Figure 27.4 Types of Landscape

preventing erosion. As soon as the slope exceeds 1 per cent, ditches are dug, and slopes exceeding 12 per cent must not be tilled. On slopes varying from 1 to 6 per cent, a ditch is dug at each metre of decreasing height; from 7 to 9 per cent a ditch is dug every 1.25 metres, and from 10 to 12 per cent every 1.50 metres. The lower edge of the ditch is planted with elephant grass. Little by little the slope is reduced and terraces appear behind the hedges.

The Réunionese holding was to include 14 hectares of tillable plateaux and 1 hectare of low grounds. As the plateaux whose slope is under 12 per cent cover only 30 per cent of the total area, the establishment of a Réunionese farm needed an average of 47 hectares. The crop rotation that was originally proposed was as follows:

Maize and muskat pea: 1 year

Green manure crop: 1 year

Cassava: 2 years

Natural prairie: 3 years

Each year, then, a farmer was to plant 2 hectares with maize and 2 hectares with cassava. The agricultural products were to be changed into pork or into beef, or milk. In fact, the farmers, apart from fattening pigs, have supplied Tananarive mainly with milk, for apparently the production of beef through this system has not so far been very profitable.

Over the years the holdings have evolved in different ways. First of all the generalized use of manure, or even of chemical fertilizers, has allowed the reduction of fallow: the three years' period of natural prairie has disappeared. On the average, each year maize is grown on 3 hectares, cassava on 2 hectares, and upland rice on 1 hectare. The more advanced farmers till their whole land each year, and when they work deserted grounds or the lands of less active farmers they can grow maize on a surface up to 20 hectares. The output is high: yields of 6 tons per hectare of maize have been quoted, and very often more than 2.5 tons have been recorded. With manuring it is possible to obtain 60 tons per hectare of green cassava. The fattening of pigs, facilitated by the existence of a remarkable central *porcherie*, is fairly well managed, and the risks of losses by disease are low today. On the other hand, the dairying output is low (the average yield is 3,000 litres of milk per cow per year). The net annual income in 1967 was 416,000 Malagasy francs⁴ for advanced farmers, and 300,000 Malagasy francs for average farmers.

The second fact to be noted is the great diversification of holdings. The farmers produce either milk or pork, and rarely deal with both at the same time; some of them are cassava producers above all; others, the majority nowadays, produce mainly maize. The rotation system originally set up is now very

seldom observed. The scheme has certainly not been a very great success. Even today many farmers barely subsist and will never be true entrepreneurs; subsidies from the French Government are still needed. For two years, however, more farmers have shown signs of success. Some of them have been very successful, and are seeking to develop their activities either by expanding their holdings, or by taking up complementary activities, such as transportation, tractor-tilling, or even trading. Moreover, this experiment, which cannot now be extended further, has to some extent directly encouraged regional development. It has served as a test case for a whole series of approaches, which can be applied in other circumstances, and has allowed the development of the urban centre of Babetville—Ankadinondry and its endowment with small plants for the processing of agricultural products. These included a rice mill, an animal-food plant, and a milk and cheese processing plant. With closer co-operation between Malagasy and Réunionese peasants, the centre could become a focus for development. But this has not been achieved yet, for the Réunionese colonization of Sakay has aroused many serious and unsolved problems in the surrounding Malagasy villages.

The first problem is that of land alienation. An area 15,000 hectares in size was taken from the Malagasy villages, which consequently lost a good deal of pasture-land.^h Moreover, these plateaux often had the better soils, and the subsequent development of unirrigated farming in Malagasy holdings was thus made more difficult. At first, however, the Malagasy were more sensitive about the reduction of their grazing-grounds. Cattle-owners, who are the local notabilities, were the first to be concerned. It had become difficult for them to keep their herds, which constituted the basis of their social status, on the village lands.

Bitterness was the greater as nobody knew how far the Réunionese colonization would go because it was established in stages. The peasants were continuously afraid of more alienation to the benefit of foreigners, whom they often scorned. To them, these were white people of a new kind, less educated than many natives, deprived of the social prestige pertaining to the well-dressed Europeans who do not work with their hands, and obliged to run up debts, a practice which the natives of the region generally disliked.

For several years the Malagasy villagers drew very little benefit from the Réunionese settlement. The latter had to practise family farming and could employ no labourers. Within Babetville the rate of employment was rather low. At the beginning, undoubtedly, there were exchanges. Young pigs or cattle were brought from the Malagasy, but these purchases rapidly fell off in number. On the whole, the techniques the Réunionese were obliged to use were so different from

traditional practice that their imitation was difficult. The most spectacular innovations only, which are not necessarily the most efficient and often the most costly, have been adopted: this is the case especially in tractor-tilling, which has caused a quick increase of plateau cultivation and worsened land problems.

Only one Malagasy village, the Mahatsinjo village near Babetville, was chosen at the beginning to be an experimental ground for the extension of the new techniques. The village lands were divided into allotments following contour lines, and efforts were made to extend the new techniques to these areas. But as those operations were effected without payment, the inhabitants were inclined to take them for granted, and the neighbouring villagers expected to receive the same favour without any financial or material effort on their part.

At the time of Independence (1960), the situation had to change. Réunionese colonization could not be supported without similar advantages being offered to Malagasy villages; an operation of the same kind was then hastily set up, rather as a copy of the former. We shall examine its failure in the light of the more settled and strongly marked social structure of the Malagasy people, who were already upset by the Réunionese experiment.

THE EXPERIMENT AND THE FAILURE OF THE 'SOMASAK' (MALAGASY SOCIETY FOR THE IMPROVEMENT OF SAKAY)

The political motives we have just mentioned were not the only ones to account for the rapid establishment of the new Society, the Somasak. There was another factor: the competition between two planning and improvement societies. One was concerned with the Réunionese; the other one intended to show that it could rapidly carry out such a scheme for the benefit of Malagasy people by keeping close to the techniques already pioneered, but attempting to be quicker and more 'modern', despite any clash with local usage. To the obvious problem of the relationship between Réunionese and Malagasy was added the open hostility between the two societies. Their actions towards development were independently carried out, although they would have achieved a greater chance of success and economy given close technical co-operation.

The Somasak project dealt with 33,000 hectares; among them there were plateaux of 6,500 hectares which could be worked in contour ditches. In the area 39 'hamlets'⁵ existed, including 950 holdings and 3,450 inhabitants. The density was already fairly considerable: 10.4 per sq. km. Under the circumstances each farmer could not possibly be given the same plateau plots as the Réunionese. The average was 6.7 hectares of plateau at the disposal of each farmer. Actually, several sizes of plot had been planned: 54 per cent were between 5 and 11

hectares, 27 less than 5 hectares, and 19 per cent between 11 and 14 hectares. The distribution was to take into account the number of people in each family and the technical and financial resources of the farmer.

The basic principles of the Somasak were very close to those of the Réunionese Sakay: here too, stress was laid on the development of plateau cultivation, while the slopes and valleys, at least at the beginning, were left in their previous state; the same type of anti-erosion measures were to be adopted. But the emphasis in production was on pork. They did raise cattle, but these were essentially meant to produce manure. On more reduced areas, the rotations were to be much more intensive:

<i>1st type</i>	<i>2nd type</i>
Cassava (2 years)	Cassava (2 years)
Maize	Plateau rice
Groundnuts	Maize
Ley pasture (1 year)	Groundnuts
Cassava (2 years), etc. . . .	Fallow, or beans, or tobacco
	Cassava (2 years), etc. . . .

The development of pork-fattening implied the establishment of cement-floored pigsties like those of the Réunionese. Likewise, they could not be built near the village but on the hillsides so that valley-head springs could provide water. Each farmer was to have his own pigsty and a byre for manure. To carry out these works relatively high investments were needed, and this was met by middle and long-term loans. For a 7-hectare plateau holding, loans were to amount to 217,000 Malagasy francs, i.e. at least four times the annual income of the peasants in the region. We must note that in this total, the protection of the soil from erosion, the most important operation undoubtedly, cost only a small sum, 58,000 Malagasy francs, while the pigsty alone demanded 100,000 Malagasy francs.

The project, very new for the Malagasy peasants, was bound to meet with vigorous opposition which was not all sentimental or partisan, but often showed, rather, a correct apprehension of reality. The Malagasy, imitating the Réunionese, had begun, in their turn, to plough the plateau, but they had done it according to a system proper to village society, which was disturbed by the arrangement proposed to, and then imposed on everybody. Plateau cultivation implies individual allotment instead of communal grazing-ground; cattle could no longer be bred without organizing a tighter control over them. In fact, plateau cultivation was bound, in the more or less near future, to oust traditional cattle-breeding, and many important owners had to send their beasts farther west. Such a revolution could be carried out only through successive and delicate adjustments, which the village communities or their chiefs supported.

Moreover, they were no strangers to pig-fattening; they bred

a kind of pig called swamp pig, very coarse and needing little care. However, a serious epidemic of 'Tesch disease' (a kind of poliomyelitis) had, during the preceding years, made the peasants rather distrust that activity. The new system seemed to be profitable only with high-grade pigs, or at least a cross-breed, more susceptible to disease, demanding more constant care and less rudimentary shelter. To devote a great deal of means and continuous work to an activity which appeared to be uncertain might well seem to be imprudent.

The achievement of the project implied, in general, a considerable increase of activity. The peasants, who did not by any means intend to leave their low-ground cultivation, had suddenly to consider cultivating four or five hectares more, in short, often to quadruple their dryland cultivation. Tilling could be done by tractors, but the use of these machines, which only increased their debts, demanded further care.

Above all, they feared economic consequences: enrolment with the Somasak meant heavy debts. In Madagascar peasants are certainly often in debt, and usury is a frequently denounced scourge. However, life in the Middle West had allowed most immigrants to escape from heavy debts, which prevail in the Highlands, to make savings in the form of cattle and even sometimes to send money home. The new development meant that they had to borrow heavy sums, and consequently to enter a market economy. Neither the significance nor the impact of these new expenses were really understood: the peasants thought that they would not have to pay for the improvement of their plots, but that they had to buy the land they already possessed. They believed they would gradually be able to modernize their pigsties for less expense, whereas technicians saw in their immediate modernization an indispensable condition for the project's success.

What the peasants ignored was the very risky basis on which the scheme was built: the assumed existence of a stable market for fattened pigs. But the Réunion market, which had favoured Sakay colonization at its beginnings, was quickly satiated, and high-breed pigs, with meagre flesh, do not correspond to Malagasy taste. After a very short time marketing problems increased the difficulties of the Society.

The scheme was a great risk in many ways. However, more careful policy would perhaps have been more successful if it had succeeded in establishing a serious technical framework, and in laying down the bases of modern agriculture, adapting its productions to marketing conditions. But, almost immediately, the staff came into conflict with the peasants.

The main reason for this psychological failure was, undoubtedly, the excessive swiftness with which the scheme was launched. The intention was to involve the whole zone within six years, and the programme of work was extremely tight.

This can be partly explained by the active, though unrealistic, temperament of the European technical staff; but one must also take into account the demands of the financial backers: the European Development Fund, which financed Somasak, wanted to see spectacular changes, and a more progressive financing was not to be considered. Such a situation, which is altogether frequent in development schemes, accounts for many failures.

Hence, attempts at persuasion did not last very long. In spite of the hesitation of the peasants, it was decided to begin with the allotment of plateau lands, with or without the villagers' agreement. The A.M.V.R.⁶ Act, passed in 1962, provided for the simple expulsion of those who refused to meet the new obligations. This harsh action was justified in a doubtful way: the refusal to co-operate was thought to be a result of intrigues by great cattle-owners, who were anxious to keep their pastures, and who, it was supposed, were oppressing a majority of small peasants who otherwise would have willingly enlisted in Somasak. The action of the Improvement Society was then considered as a liberating action, which had to be continued in spite of the strength of superficial resistance. Nevertheless, obstacles multiplied: in several villages peasants lay down in front of tractor wheels, and several incidents were brought to court. As a matter of fact, though from one point of view small peasants recently settled are really dominated by yeomen, rural societies provided a genuine union against the new scheme; though oppressed, the 'smaller' ones preferred submission to a society they knew, the values of which they acknowledged, rather than submission to European technicians, with their changing projects, who would not necessarily be there tomorrow to back them.^{7, 8}

This accounts for the small number of people who agreed to take plots. To use the parcelled-out lands and to amortize its investments, Somasak then decided to resort to organized immigration, and called in the worst possible sort of immigrants, that is, the urban unemployed. Very arbitrarily chosen, these people were rejected by the village communities as soon as they arrived, and forced to settle apart, isolated on their plots or in new villages especially created for them. Reluctant to face country life and work, they hoped to live for a time on the subsidies they got, and more often than not they showed themselves absolutely unable to run a farm. In 1966 there were 109 urban migrants out of 409 members of Somasak. This migration scheme, which cost a lot in subsidies, food allowances, housing, technical assistance, and so on, had practically no effect on production. It only worsened land problems in an area already fairly densely peopled. So, in 1966, two categories of farmers lived in the Sakay region: the members of Somasak, a minority (409 out of more than 1,000), a fair proportion of whom enlisted only from fear of judicial action, and the non-

members, a majority, who lived from day to day as, legally, they could be instantly evicted from their villages, but who in fact continued, just as in past times, to farm their rice-fields and their valley plots, having often sent a good part of their cattle farther west.

This accounts for the very poor development of cultivated acreages; the majority of the members cultivated little and badly. Official records reported that about 1,700 hectares were worked at the beginning of 1967, that is, 26 per cent of the 6,500 hectares which were to be capitalized and 35 per cent of the 5,400 hectares actually capitalized; but these official data are undoubtedly overestimates. Now Somasak had to repay its debts, and could do so only if the peasants sold their products to it; with a low level of agricultural production and a large proportion of the pigs being sold on the black market, bankruptcy was bound to result. Somasak desperately attempted to get the peasants to produce pigs, even at the expense of cultivation itself, by fattening them with imported animal foods, which was illogical but brought in ready cash quickly.

The marketing crisis, and poisoning of pigs by bad food, hastened the breakdown, as did also a rash policy of 'gifts' by which it was hoped to gain the peoples' good will. At the end of 1966 there was a virtual collapse: assets which could be realized at short notice, the recovering of which was generally doubtful, represented about 74 million Malagasy francs, when the short-term debts were about 87 million Malagasy francs. Moreover, technical failure was absolute: as an official report stated, 'there was no point in equipping so many hectares with such heavy investments (112 million on the 31st of December, 1966) and end up rearing young pigs, bought outside, with industrially made animal foods'.

How does the balance-sheet of the Somasak scheme stand? Assets are rather meagre and mainly consist of infrastructures. The most important one is undoubtedly the tarmac road which links Babetville to the Itasy mountains and farther on to Tananarive, which was completed in 1965. This road will soon be continued as far as Tsiroanomandidy. The journey from Sakay to Tananarive does not now take much more than two hours; although the building of this road does not seem to have altered the regional economy greatly, its effects are beginning to be experienced: the Sakay region will have the means to export fresh produce, such as vegetables, if urban markets develop; the transportation of milk and dairy produce is considerably helped. Still more clearly, the existence of this high-quality road-link focuses the interest of international experts on this region and substantially helps in getting credit.

On a local scale contour plantings of plateaux remain, though they are often uncompleted (hedges were rarely

planted). Therefore the soil is quite well protected against erosion: 1,000 hectares were reafforested with eucalyptus. On the other hand, the network of tracks, often too quickly built and not properly maintained, is quickly deteriorating. Pigsties, cattle-sheds and the lanes which lead to them are no more than ruins now; Somasak, unlike the Réunionese Sakay, created neither agricultural industry nor breeding farms; it left few agricultural infrastructures.

The scheme had only a limited effect on population. A very small number of local peasants opposed to it went away, but immigrants from Tananarive often left or moved to Babetville. In a sense the Somasak scheme mainly provoked a growth of urban population. Indeed, Babetville was created by the Réunionese Sakay and established on a French State concession, but with the inflow of wage-earners, the presence of a Malagasy technical staff, and the creation of an embryonic administrative infrastructure, urban expansion was speeded up. In 1969 Babetville and its satellite Mahatsinjo, where the buildings of Somasak were placed, accounted for 1,804 inhabitants:⁸ this population is more mixed than in the whole of the small region. Foreigners account for 7.3 per cent of the total population, which includes 15 per cent of Southerners (Antandroy) who are absent in the remainder of the zone, and 24.6 per cent of Betsileo; Merina people are only a small majority (50.6 per cent). Babetville-Mahatsinjo has the functions of a small town: it is a trading centre (twenty-four traders, two modern hotels, an important market where visitors can find their food in sixteen cook-shops), a rather important centre for agricultural industries, a technical support centre for building and mechanical repairs, and lastly, an education centre. On the other hand, its administrative functions are almost nil, as the town is not a chief town of the canton and, officially at least, it is not even the seat of a rural commune. This is, in a way, the consequence of a long-lasting distrust on the part of the Malagasy Government of this Réunionese foundation, and secondly, it is due to the fact that land planning and development zones always remain apart from the usual type of administration of the country.

The negative effects of Somasak's action, resulting from its conflicts with rural population, are far more important. There is, first, a psychological 'blockage' which is felt far beyond the frontiers of the zone. The Middle West is a region where people travel a good deal and news travels very quickly; in the whole of the sub-prefecture the term 'Somasak' is applied in a derogatory way to any attempt at agricultural modernization, and the fear of a similar scheme is general in the whole of the Middle West. Then, the status of landownership is very complex and needs to be clarified. Finally, the traditional economy has been greatly disorganized, and especially the old

IMMIGRATION IN THE SAKAY DISTRICT, MADAGASCAR/207

TABLE 27.1. POPULATION INCREASE 1959-68

Canton	Population 1959	Population 1968	Increase (%) ¹⁰
Ambalanirana	2,522	3,958	+57
Belobaka	4,295	5,026	+17
Bevato	3,979	5,253	+32
Mahasolo	9,612	15,522	+61
Tsiroanomandidy	12,626	21,472	+70
TOTAL	33,034	51,231	+55

system of cattle-fattening. All these points are far more important than the financial collapse, which only involved relatively small sums.

SCHEMES PARALLEL TO SOMASAK: THE COLONIZATION ZONES OF B.D.P.A.

However, during the six years of Somasak action other experiments were also made. Proper colonization zones such as the Anosy and Andriambe were created and run by B.D.P.A.⁸ The first one was very near, on the north-western fringes of the Somasak perimeter, and the second much farther away, to the south of Tsiroanomandidy. These schemes have some common points with Somasak, but also some considerable differences.

The B.D.P.A. used, for plateau cultivation mainly, techniques which were perfected elsewhere: parcelling according to contours, with ditches and hedges, individual allotment, and cassava and maize cultivation for animal feeding. This set of techniques, now common in the Middle West, creates a rural landscape rather similar to that of neighbouring regions, but there are some important differences.

The first basic difference is in the type of settlement. Being established on previous ranching concessions which were not developed, these small zones (4,000 and 10,000 hectares) were really empty when B.D.P.A. parcelled them out. Therefore true immigration operations could be realized there by attracting real peasants. In Anosy zone nearly all the immigrants came from the Highlands. Andriambe first received a majority of Antandroy who were already settled in the region.⁹ There was neither land problem nor conflict between old settlers and newcomers; settlers were not concentrated in villages but scattered on their holdings, with a tendency to form groups of two to three houses.

The agricultural staff were concerned with the creation of well-balanced holdings, and took as much care in the layout of the valleys, and especially of the rice-fields, as in the allotment of plateaux. Peasants were urged to build their rice-fields first. The rural landscape therefore differs from that of Somasak zones in some details. It combines contoured plateaux, fields, and rice-fields laid out in the middle part of the valleys, the creation of fields on slopes being practically avoided.

The B.D.P.A. approach also tried to safeguard peasants from indebtedness. Costly works such as tractor ploughing were avoided and settlers had opportunities of employment as wage-earners. They bought or hired what they needed with the money thus earned, while a technical aid centre hired tools and

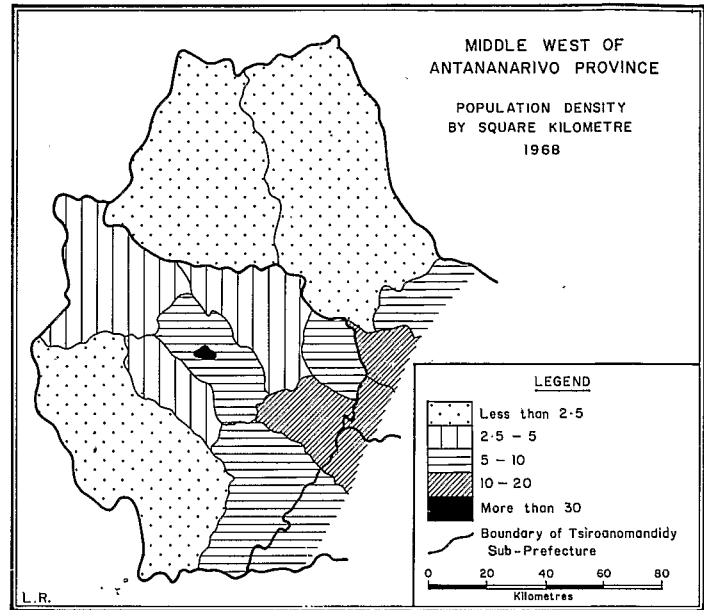


Figure 27.5 Middle West of Antananarivo Province: population density, 1968

draught cattle. Stock-rearing was introduced very slowly: there has been no pig-rearing and only senior settlers get cattle for fattening.

There are also other perceptible differences between the two zones: Anosy has a rural economy rather similar to that of Sakay, while in Andriambe rice-producing valleys are few and the zone is mainly devoted to plateau cash-crops such as groundnuts and sunflowers. These B.D.P.A. experiments, which were partly conducted as a response to the Somasak scheme, are of assistance in the definition of a new development policy for the Middle West.

PRESENT TRENDS

A rapid development of spontaneous immigration and the multiplication of public enterprises

For less than five years, with a lack of co-ordination that may be regretted, but with an undoubted dynamism, there has been an increasing conquest of the land in the whole of Tsiroanomandidy sub-prefecture, far beyond the limits of 'Smaller Sakay'. This very speedy occupation, which is not necessarily synonymous with rational land development, forces us to realize that in the near future all easily accessible free land will have disappeared. This rather surprising fact results from the combination of an increasing spontaneous immigration with varied public efforts. Table 27.1 indicates the population changes between 1959 and 1968.

The very heavy increase of Tsiroanomandidy canton is mainly a result of urban development itself. Tsiroanomandidy had 9,956 inhabitants in 1969 for 3,285 in 1959. Even if this expansion is partly the result of changes in communal boundaries, it is, nevertheless, very considerable, and the analysis of the relationship between urbanization and development of new lands, which is not our present topic, is obviously important. The rural parts of the canton are but slowly peopled (in ten

TABLE 27.2. RURAL POPULATION INCREASE AND DENSITY 1963-68

Rural Commune	Population		Increase		Density 1968 by sq. km.
	1963	1968	Numbers	%	
Ambalanirana	2,763	3,358	595	+21	7.5
Belobaka	4,923	5,253	277	+5	2.2
Bevato	4,483	5,253	770	+15	4.7
Mahasolo Canton					
Fanjakamandroso	5,485	7,612	2,127	+38	13.2
Mahasolo	5,592	7,910	2,318	+41	7.5
Tsiroanomandidy Canton					
Tsiroanomandidy Town	7,081	9,956	2,875	+40	388.2
Ankotsaka	4,765	5,200	435	+9	6.0
Fierenana	2,754	3,431	677	+24	3.1
Miandrarivo	2,345	2,985	640	+27	4.9

years their population increase was only 21 per cent). The lowest growth is that of Belobaka canton, the remotest of them all. The more useful parts of the canton have for long been comparatively well peopled. Bevato canton too has experienced only a moderate increase. Finally, the highest increases among rural regions were those of Mahasolo and Ambalanirana. The first one includes 'Smaller Sakay', the second is on the border of it. The influence of the development schemes on the growth

of settlement is obvious. For the period between 1963 and 1968 a more discriminating analysis is possible on the basis of the rural communes as shown in Table 27.2.

Even if we take into account the moderate birth-rate and still high death-rate that characterize the Middle West, some rural communes appear to be at a standstill, or even seem to have declined as a result of out-migration. Such is the case of Belobaka and Ankotsaka, in the south and the surroundings of Tsiroanomandidy. Ambalanirana and Bevato, in the north of Sakay and in the east of Tsiroanomandidy, show moderate increase in absolute numbers as well as in percentages (Table 27.2). In the north and south of the sub-prefecture chief-town, Fierenana and Miandrarivo have proportionately a rather important increase, but their population remains small (densities are only 3.1 and 4.9 to the sq. km.). Excluding Tsiroanomandidy city, the highest growths are those of the communes of Fanjakamandroso and Mahasolo (Figure 27.3). The first one practically corresponds to the planning zone of Sakay and its population increase is not surprising, but Mahasolo commune, which has not been concerned with the schemes so far, has grown even faster.

The present immigration is rather diverse, as it was before. The sub-prefecture is far from being purely Merina, which is in contrast to the other surrounding parts of Tananarive province. Merina are only 63 per cent of the total population, when in Miarinarivo sub-prefecture they are 80 per cent, and more than 90 per cent elsewhere in the Province. Betsileo are 19.6 per cent of the total, Antandroy 5.9 per cent and Bara 2.3 per cent (both being ethnic groups from the south), and natives from the south-east 3.8 per cent.

An explanation of the pattern of immigration and its recent trends, which are still not clearly shown by the data available, is necessary. The influence of the lines of communication seems weak if not negligible, except in the case of Sakay. Many rapidly growing regions are poorly served. Isolation appears to be a factor rather propitious to immigration. It may be asserted that many settlers are shifting to avoid the enforcement of technical and administrative control in the Highlands. On the other hand, one would guess that people would mainly colonize the lands of large ranching societies, now largely abandoned. This is the case in the west of Mahasolo commune where

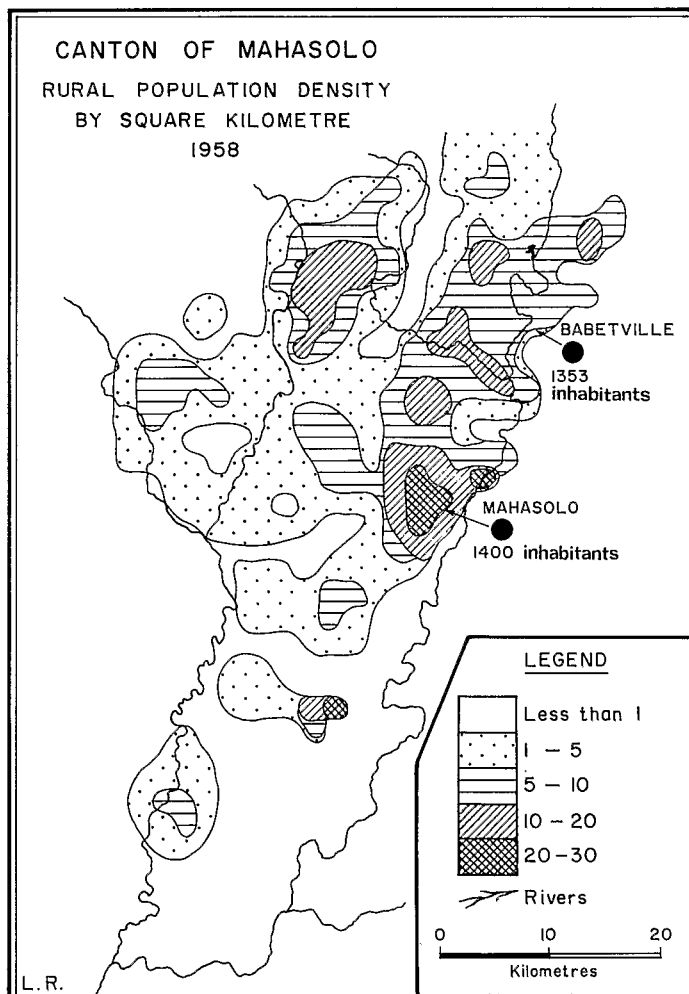


Figure 27.6 Canton of Mahasolo: rural population density, 1958

immigration is significant: but by contrast, the wide pastures of Belobaka are still quite free from inhabitants.

It is possible to arrive at a clearer explanation by considering one of the main motives of immigration, which is still cattle-fattening with grass, and the policy of those who control this type of activity. The slackening or the disappearance of the European ranching firms has made way for a much more important role for the Malagasy cattle-traders who supply Tananarive. Up to now, these merchants have generally found in the markets cattle from the West mature enough to be sold in town at once. But the size and weight of western cattle seems to be declining. The traders are therefore led to encourage the development of peasant cattle-fattening in the Middle West, which can guarantee a steady supply. This cattle-fattening should preferably be carried out close to the markets, but at the same time on sparsely settled lands. These two demands are often contradictory.

It is fairly easy to calculate the normal human density for a region devoted to cattle-fattening with grass: the reasonable cattle load for pastures is 15 head per sq. km.; 'dabok'andro' herds, entrusted to one keeper, being of about 30 head, two sq. km. are needed for one family. If the average family is of five persons, and this number seems the maximum in the Middle West, the normal population density will be 2.5 per sq. km: beyond this level overstocking progressively occurs, and a food complement becomes necessary for fattening beasts, which involves an extension of cassava cultivation on slopes and, next, on plateaux. But even with such an improvement of fattening, when cassava is given to the animals, especially in the dry season, one would need a minimum of 4.5 hectares of cassava fields (such a surface being very rarely attained in fact) and about 60 hectares of pasture. The maximum human density would then be 7.5 per sq. km. According to the customary modes of cattle fattening, the population optimum would be quickly attained.

Fortunately enough, some zones, though close to the markets, have been thinly peopled up until now; such is the case in the western and southern parts of Mahasolo commune, a portion of Miandrarivo commune (the average density is 4.9 on its 607 sq. km.). Fierenana commune counterbalances its relative isolation by an abundance of pastures (density 3.1). Such should be the case with Belobaka (density 2.2), but it is a more insecure area because of the presence of Bara cattle-herders, who still make a practice of thieving, a fact which prevents the Highlands' cattle-herders from settling there.

Another factor may explain the quick population growth in Mahasolo. Inhabitants of Somasak zone probably sent a considerable part of their cattle there, which was often consigned to the care of 'dabok'andro' share-holders; some settlers found

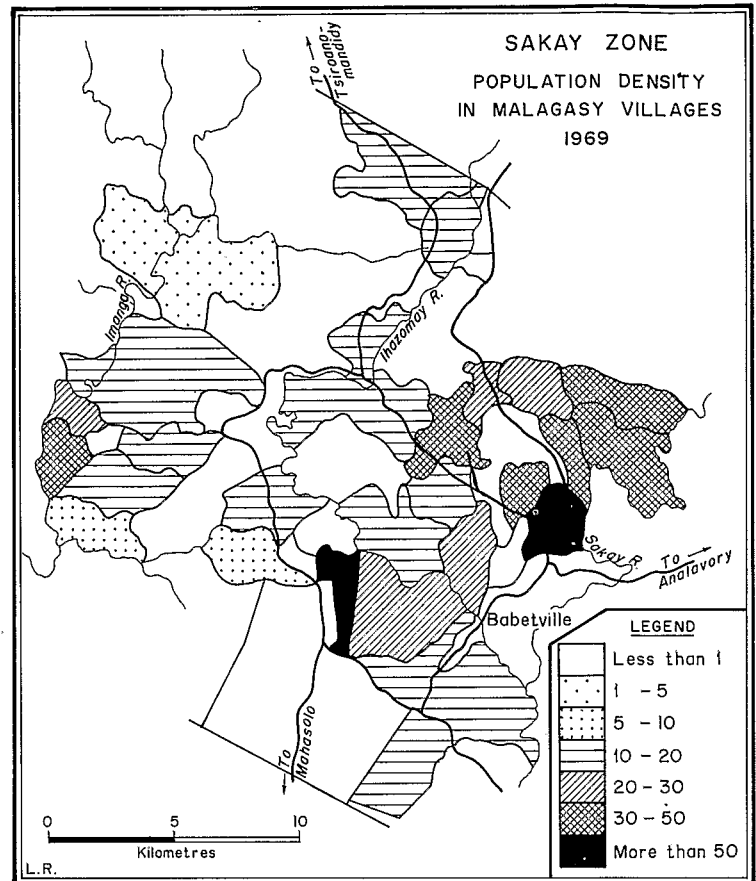


Figure 27.7 Sakay zone: population density in Malagasy villages, 1969

by this means an employment which was of some help for their establishment.

However, the population increase is obvious even in the regions already rather well peopled: in the course of a piece of fieldwork begun in January 1970, we noted 43 persons who had arrived since January 1966, out of 247 farmers in 3 villages. The Betsileo people were the most numerous among them.

On the other hand, it is necessary to find reasons why the emigration of people from the Highlands to the Middle West is accelerating. Detailed fieldwork is still continuing on this topic. Psychological motives, as shown previously, are obviously not negligible; but the quick population growth in these regions causes an overpopulation which cannot always be relieved by local intensification of agriculture or movement to the towns.

PLANNED DEVELOPMENT ENTERPRISES: A DEVELOPMENT OPERATION AND PARALLEL SCHEMES Since 1967 and the Somasak failure, the development of the Middle West Region in Fianarantsoa as well as in Tananarive province has been given over to a Government Corporation, the Odemo, which we deal with later. But this organization is not the only government corporation to have an interest in the region. Two other development programmes are in progress: the 'tilling operation' of the 'Syndicat des Communes' of Itasy Prefecture, to which Tsiroanomandidy belongs, and the State Farm for cattle-raising and fattening. It seems better to analyse

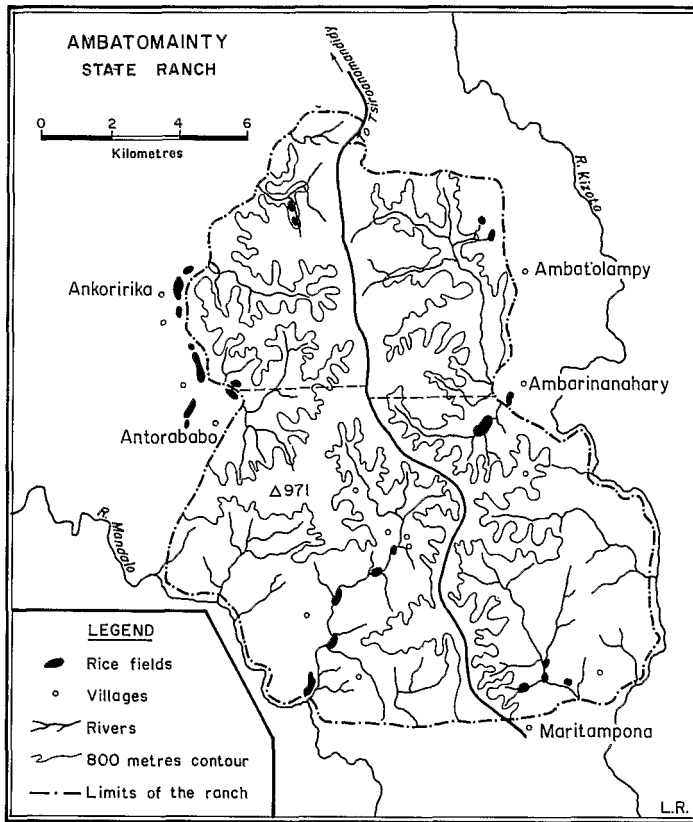


Figure 27.8 Ambatomainity State Ranch

these two schemes first, since their problems are of concern to Odemo and may compel it to change its long-term aims.

The 'Syndicats des Communes' are corporations created in all the prefectures of the island; they group together all the 'rural communes' and most of the 'urban communes' both for a co-operative effort in the acquisition of machinery and buildings used for development works such as road-building or cultivation, and for trade and the processing of agricultural products. In Itasy the Syndicate has mainly worked on 'tilling' operations: a dozen tractors are used for this purpose. On plateau areas, previously surveyed, the group of tractors till plots for the peasants. The acreage which can be left to each of them is unlimited, but the beneficiaries must work the land they get by themselves, so that their area would be limited to one or two hectares. The crops in these fields, which are mainly groundnuts here, are bought by the Syndicate, which then deducts the cost of tilling. The fields do not become the personal property of the farmers: tillings are made on different lands from year to year, and the ground remains a State property, which is let free of charge. In fact, these regulations are not strictly applied: many local notabilities get the more important plots, which they have cultivated by wage-earners, and some of them hope that these lands will be the basis of small 'concessions'. This, of course, will worsen the land problem, the more so because such cultivations are most common in quite densely peopled areas.

Moreover, the 'tilling operation' is rather a short-sighted one: one hopes that it will allow a quick increase of production, but very little care is given to agricultural techniques. The very appearance of the Syndicate fields shows this indifference to

truly rational techniques; they are of a geometrical form, great rectangles divided into one-hectare squares, and with no anti-erosion measures, which would imply permanent cultivation. As it speeds up the conquest of the plateau by agriculture, this operation aggravates the problems of land tenure and, by entirely neglecting the techniques that other Corporations try to teach to the peasants, it creates some mental confusion.

The State Farm for breeding and fattening cattle is a large-scale scheme, which is still at its beginning, and which seems to rest on a much surer technical base. Loans have just been granted by the I.B.R.D., which make rapid development possible. The aim of the scheme is to counterbalance the activities of the fattening companies, and to give a new impetus to the exports of beef, by quickly producing high-quality cattle. On short terms until the production is sufficient for export, it is hoped to supply a part of the Tananarive market, a project which has led to protests from the cattle-traders, and will probably affect the interior trade network.

Six ranches are to be created in the region, two of which will be devoted to fattening, and four to raising cross-breed animals. Each ranch is a unit of large size—the average being of 30,000 hectares; three of them are already in process of equipment, and the one of Ambatomainity (Figure 27.7), south of Tsiroanomandidy, which specializes in fattening, is already partly functioning. The ranch is a great rectangle fenced with wires, divided into smaller units of 240 hectares, designed to receive 60 head under the supervision of one keeper. For the moment, fattening is achieved only by grazing, but haystacks are made at the beginning of the dry season. Ten hectares out of 240 are to be devoted to ley pasture. Each ranch will be expected to carry 7,500 head, but in May 1969 Ambatomainity had only 700 (Figure 27.8). For the moment, cattle are bought on Tsiroanomandidy market, but future supplies are expected to come from the cattle-raising ranches.

The establishment of these ranches has not been without problems. The first difficulty, and not the least, is the scarcity of large continuous empty areas. This government enterprise would normally have replaced the private societies without delay, but such was not the case. Peasants had already begun to settle on pastures, and still more in the valleys. For psychological reasons, it seemed difficult to oust them. The plan is for compromises whose application will probably be difficult. The ranch is fenced, but peasants are allowed to till the valley plots they had reclaimed before. In spite of the risks of crop destruction by the cattle of the ranch, this *modus vivendi* could eventually be practicable, but peasants wish to drive their herds as they did before in the lowland pastures, which are rather rare and very precious during the dry season. There is fear of the introduction of diseased wild animals, and of cattle thefts. A

parallel evolution of peasant and State livestock raising would probably solve some problems, but the technical bases of the two types of development are decidedly different, and this disparity will undoubtedly come into light in the coming years.

THE OPERATION FOR THE DEVELOPMENT OF THE MIDDLE WEST (ODEMO) AND ITS PROSPECTS

The Operation for the Development of the Middle West was created and established progressively in 1967, to control the whole of land development in the Middle West.¹¹ For the first years the main task of this State operation was to settle the disputes inherited from the late Somasak, to better relationships with peasants, to carry on the feasible operations among those already begun, especially in Anosy and Andriambe zones,¹² and finally, to perfect a new strategy. After two years it was able to map out a programme of action.

The Middle West was to produce beef mainly, as it did before, but now with up-to-date techniques. In doing so, the idea is to keep to a traditional specialization, so that one has a chance of reaping profit from long-established practices, and from the empirical but real knowledge of the inhabitants of the region. It seems certain, anyway, that the physical conditions of the Middle West are especially convenient to cattle-fattening.^k Finally, Madagascar is faced with the threat of a shortage of beef, while this product is easy to sell on external markets. But this choice implied a risk in the near future and in the long run. There is no hope of interesting cattle-raisers in the programme if the price of beef paid to producers does not rise appreciably,¹³ or if (and this would take longer) the yields of fattening cattle are not radically improved, which would imply better selection and cross-breeding as well as feeding. Stress must undoubtedly be put on this second point, because compared to that of other countries, Malagasy meat is not particularly cheap. The raiser's benefits are low because the Malagasy zebu is of small size (it weighs little more than 300 kilos at its maximum) and takes 6 to 8 years to mature.

The second basic principle is flexible action, with different orientations according to each particular case, either in the spontaneous immigration sectors, or the late Somasak zone, or B.D.P.A. colonization zones. In fact there is now an opinion that at the moment, considering the increase of spontaneous immigration, organized colonization is becoming out-of-date, and that the main problem is to enrol the settlers, and to progressively introduce them to new techniques. We shall now try to sketch the variety of possible strategies in the three cases that have been noted. These strategies are working hypotheses, which form the basis of a piece of fieldwork for 1970.

The simplest case seems to be that of the immigration zones created by B.D.P.A. They are populated by immigrants of

recent origin who accept advice readily. Individual allotment is accepted and social organization is still in process of creation and can still adapt itself to the production system. But these immigrants lack personal initiative and are content to follow, more or less successfully, the technical advice they are given. They have arrived there without any kind of assets, and have little to spare as they sometimes send part of their profits to their native country where a part of their near family often still live. In order to meet their present needs they frequently look for wages paid by Odemo. This means that much time is lost which might be spent on the development of their holdings. It is difficult for these colonists to get a fattening herd without borrowing (and we saw the problems this system gives rise to).

In the late Somasak zone, the situation is very different. The previous inhabitants, or at least some of them, had large herds, which often went farther west, and this region now has a fairly low cattle density. Those of the senior inhabitants who accepted plots of plateau land now work on three different domains which seem to have only very loose economic links with one another. The plateaux are only partly cultivated: tilling and planting are performed quite regularly, but weeding is rather neglected. Yields are still pretty unsatisfactory in general and very similar to those of traditional agriculture, when, as a result of high population density, cattle-fattening requires large quantities of supplementary food. Low-lying areas remain the domain of a traditional rural economy, in which Somasak took practically no interest. Rice-field acreages are important and their care takes up a very large part of the inhabitants' activities, to the disadvantage of plateau cultivation. There seems to be no relation between the two sectors: the farmers do not invest the profits made from their valley crops on plateau cultivation; when willing to apply Odemo technical advice, they seem to be as lacking in capital as recent immigrants. Indeed, it is probable that a great part of their savings is devoted to their third area of activity, often geographically dissociated from the two others, that is, the pastoral sector, which can be farther west, where cattle are left to sharekeepers. The relations between cattle-raising and agriculture are thus rather obscure: we can only note that the farmers buy more cattle than they sell under their name, some of the animals being re-sold by metayers later on, the profits being re-used for new purchase of cattle, as any other investment, even in household improvement, is quite negligible.

The problem of this zone—to which a solution is difficult to find—is the re-introduction of cattle-fattening. Some European technical officers have partially induced peasants to drive out cattle from here, but some others want to bring some in again: such an apparent lack of logic will obstruct a cohesive approach. Moreover, land is lacking for extensive fattening.

More sophisticated, labour-intensive techniques are needed. Natural pastures are few and farmers mainly have to use fallow contoured fields, but the excessive subdivision of these plots makes cattle stall-feeding necessary. If a true 'bocage' were established it would change the conditions of use of a space which was not intended for cattle pasture. As a compromise solution, one wonders if it would not be better to establish permanent stalling at once, with a development of fodder cultivation and of valley meadows. Still further, a spectacular change would be the complete reversal of the traditional use of plateaux and flats. A few years ago rain cultivation of rice on plateaux was introduced: yields are quite satisfactory (about 2 tons per hectare) and fairly steady. The peasants adopted this new crop willingly and therefore one might envisage the abandonment of valley-rice for plateau rice, the former rice-fields becoming high-yielding meadows. Economically speaking, this is an adequate solution, but it is doubtful whether Malagasy peasants would agree with this in the short run. It is at most reasonable to expect that the development of plateau rice cultivation will allow a diminution in the creation of ricefields, in favour of dry-season meadows, which are already too scarce.

Thirdly, the regions concerned with spontaneous immigration should not be faced with any further abortive planned colonization schemes: Odemo schemes will now apply to those who will settle by themselves and to village communities as they were created. Forced allotments, such as those that were made by Somasak, must of course be avoided. The process which is in view is an agricultural extension with on-the-spot demonstration, which would stimulate genuine physical planning in a short time.

As a first stage, contracts will be made with farmers, and preferably with village communities, for the lease of a small valley field to be planted with irrigated Kizozzi,¹⁴ the planting of some hectares of cassava on plateaux, and the constitution of an experimental herd of about 20 head of cattle, which will be fed with an adequate ration of Kizozzi and cassava in addition to natural grass. At the same time a sanitary infrastructure will be established against ticks, anthrax, and fluke-worm. Except in the case of technical errors, or of sudden epidemics, the results would be good enough to allow the conclusion of individual contracts with a good number of farmers, after one year of experiment.

However, such a process is not so easy to put into practice. To whom will agricultural extension be mainly offered? Who will mostly benefit from it? One must take into account the existence of an aristocracy of cattle-feeders, which must be interested in the scheme if a quick increase of production is to be carried out; but it is not certain that agreement is so easy to reach with them, since, more than any others, these people

are attached to a traditional system which they have found satisfactory. Moreover, their influence is great enough to hinder a scheme which could take away from them their usual clientele of metayers and small peasants, since in the long run it is at the expense of these big cattle-holders that modernized cattle-fattening would develop.

This modernization implies a reduction of the number of cattle, a giving up of quantity for quality. At the present moment the number of cattle owned is a determining element of social prestige; a large herd allows one to have a network of clients, for, in spite of the lack of links between cattle-raising and agriculture, oxen are useful at least for the work on rice-fields. In the most backward regions rice-fields have been neither ploughed nor dug up to the present. One who digs his rice-fields is one who lacks cattle and who is not backed by a powerful 'boss'. Work on the field often consists of two or three stampings, for which oxen are borrowed from the boss if necessary. This creates very strong links between boss and clients, as the latter depend on the former for the production of their staple food, rice. But in a modern system, fattening cattle would no longer be available for the preparation of the rice-fields, so as to avoid any loss of weight. The big cattle-owners would then be deprived of an essential means of social control. A theoretical solution is the adoption of ploughing and harrowing of rice-fields, but apart from psychological difficulties technical obstacles may be encountered; some fields are probably too marshy, too roughly established to allow efficient ploughing and harrowing; the evolution of cattle-fattening can then lead to a modernization of rice cultivation as well.

In the short term, after two or three years, consideration would be given to the improvement of rainy-season pastures, on plateaux especially, by planting of *Stylosanthes gracilis*. Plots should be divided for rotational grazing. What will be the legal status of those fields? Will it be possible to establish collective pasture? Or will an individual allotment of land be necessary? And, in this second case, who will take the profit of this land-consolidation? Difficult choices will probably be met with.

Lastly, there is the problem of the relationship between State ranches and peasant cattle-fattening. In all cases ranches will form a barrier against the progress of peasant settlement, as they are more or less situated on a north-south line which separates Mahasolo region in the east from that of Belobaka in the west: the progress of frontier settlement is altogether barred. Again, the ranches will bear much lower cattle and human densities than the neighbouring peasant lands; in the mixed farming system, associating agriculture and cattle-rearing seems more sophisticated, in many ways, than what is planned in State schemes: so these cannot, then, introduce the technical im-

provements that might have been expected, when at the same time they impede peasant settlement.

CONCLUSION

The developments outlined above appear to give rise to several general remarks. Firstly, one must stress the difficulty of operating planned colonization in a region where spontaneous immigration, even though it is fairly moderate, is already in progress. Even when densities are very low, really free land is scarce; people have to work in with groups who have already settled, and though recent immigrants are generally welcomed as new human material likely to carry out modern and profit-earning activities, actual picture is one of hastily structured societies grafted on to an existing base with a longer history than is generally appreciated. An analysis of these groups, prior to action, does not necessarily facilitate such action: mass reaction to a scheme which is proposed by technicians from a different social background has to be taken into account.

Secondly, it should be noted that if great prudence is needed, combined with appreciation of the peasant's slowness as far as human relationships and agricultural progress are concerned, it is at the same time necessary to be able to make quick choices, and to avoid transitory periods, such as that of the replacement of private fattening societies by Government ranches, for the state of settlement changes very quickly.

Finally, a great diversity of cases, due to various types of migration, and to the inheritance of successive development schemes, accounts for the necessity for a wide diversification of strategies. For a long time the main object had been to stimulate immigration, which was attempted without great success; this is no longer a difficulty: the real problem now is how to make a comprehensive approach to the immigrants, which presupposes a combination of great empiricism with a high degree of co-ordination between schemes. On this last point one must admit there is still room for progress.

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¹ Madagascar is divided into six provinces, each of which includes about three 'préfectures'. Each 'préfecture' is formed of four to seven 'sous-préfectures', which themselves include a various number of 'cantons'. A 'commune rurale' may cover a whole 'canton', or only a part of it.

² 1 sq. mile = 2.599 sq. km.

³ Conclusions of an unpublished personal inquiry. In all three cases the yields are potential, i.e. estimated on the field, which does not take into account losses subsequent to transport and threshing.

⁴ One Malagasy franc is worth 0.02 French franc.

⁵ An administrative term for small villages.

⁶ *Aire de Mise en Valeur Rurale*, that is, Area of Rural Development.

⁷ ROY, G. (note *l*) gives an excellent description of these peasant reactions.

⁸ Bureau for the Development of Agricultural Production.

⁹ In January 1967 there were 37 farmers at Anosy and 33 at Andriambe.

¹⁰ For the same decade, the increase of Madagascar's population was of about 25 per cent.

¹¹ But it has practically no control on the activities of the 'Syndicat des Communes' and the State Farm.

¹² In these two zones, on 1 January 1969, 88 and 48 farmers were settled respectively; the contoured areas were of 1,610 and 2,020 hectares, the afforested areas were of 313 and 365 hectares, while 504 new hectares were planted in the late Somasak.

¹³ For the moment it is of about 40 Malagasy francs per live kilogramme.

¹⁴ *Pennisetum purpureum*, var. Kizozi.