

Conclusions. Looking back and looking ahead

Retrospect

By mid-1973, the Amazon region had still hardly been colonised. Until then it had never held the interest of the Brazilians for long, because there was still room for colonisation in the more attractive parts of the country. Until shortly before 1973 there was no serious government intervention to stimulate development in the vast Northern region.

In the few years before 1973 a marked change came about in this situation. The government, in particular, was more than ever interested in the integration of the North and took various measures to achieve that end. A free trade zone was created around Manaus, a development body was established, financial incentive measures were declared applicable to Amazônia Legal and spectacular road building projects were started. The universities were also involved through making use of their know-how in the Rondon project. Last but not least, we should mention the colonisation activities begun in 1970.

Up to mid-1973, the results of the various measures were modest, nor could spectacular successes be expected in the short-term from a policy relating to a very extensive and still little developed region. It was therefore still difficult, in fact, to judge whether the development plans were not too ambitious. The future had to show whether Brazil would be able to realise its plan. Volume 2 of this book will give an answer to the question whether it has been successful.

The advantages for the South East

Even if the process of economic development were speeded up during the years after 1973, it was still by no means certain that the population would become more prosperous as a result of the integration. It was not at all unlikely that the mass of the population would not benefit from the economic progress in the North, but that the advantages would go chiefly to entrepreneurs from the Centro-Sul or from other countries. The expansion of economic activity during the past years had been the concern mainly of owners of capital from the more developed South East of Brazil and of foreign firms. It was mainly these categories who had benefitted from the system of *incentivos fiscais* and the other support measures. With the aid of tax monies from the state they had been able to establish capital-intensive enterprises which offered little employment

and so produced only limited direct advantages for the community. Some of the enterprises, i. e. those concerned with livestock farming, had taken possession of large areas of land. The profits made in these enterprises flowed largely to the economic heart of Brazil or abroad. This process would probably continue in the future, since the government was still trying to arouse more interest in the North among the business community in the South and South East. In the spring of 1974, the Brazilian Minister of Agriculture declared that the integration of the North would have to be realised, not with small farms, but mainly through large enterprises.

Up to 1975, the business community had shown the greatest interest in the exploitation of natural riches which could be easily utilised and yield good profits in a short time. Mining, forestry and extensive livestock farming were the activities most capable of ensuring rapid economic growth. It was therefore likely that these sectors would continue to play a dominant part in the development process in the future, in which case the North would acquire an increasingly neo-colonial status, both within Brazil and in relation to other countries.

The advantages for the North East

While *Operação Amazônia* had so far brought benefits to the more developed South East, the advantages for the poor North East, on the other hand, had been limited.

When the Programa de Integração Nacional (PIN) was launched in 1970, funds had to be made available quickly for the realisation of this programme. It was then decided that, during the period 1971–1974, 30% of the tax monies available under the *incentivos fiscais* for investment in the development projects of the SUDAM or SUDENE, or in the sectors of tourism, fishery or reafforestation, should be reserved for the PIN.

In the following year, 1971, the federal government also determined that 20% of the taxation funds should be set aside for the realisation of the Programa de redistribuição de terras e estímulo à agro-indústria do Norte e do Nordeste (PROTERRA). This was a programme of measures aimed at improving the agricultural sector in the North East and North (Morais *et al.* 1970, 58 f.).

Both measures, which had meanwhile been declared in force until the end of 1976, gave rise to a great deal of criticism in the North East. Although the government immediately emphasised that this other purpose would also be advantageous to the North East and that the funds would be considerably augmented through rising incomes and better tax collection, these arguments by no means convinced all influential *nordestinos*. Many considered the measures to be disadvantageous to the North East. The spectacular road building programmes were also received with less enthusiasm in the North East than in the South East. A joint statement by the bishops of the North East observed that the region still received only a quarter of the money that it could receive within the framework of the original financial incentives. In their view, this was slowing down industrialisation (Câmara *et al.* 1973, 9).

An important question in this connection was to what extent the spectacular road building projects and colonisation activities yielded benefits for the North East. As has appeared from the foregoing, there was unfortunately little benefit until 1975.

Road building was highly mechanised and had consequently provided work for only a few thousand *nordestinos*, while the contractors responsible for the road con-

struction all had their headquarters in the Centro-Sul region. In comparison with the plans from 1970, the colonisation programme had been greatly slowed down, so that migration from the North East to the new colonisation fronts had been on a limited scale during the past few years. In 1973, a total of only 5000 to 5500 colonist families had found a new livelihood in the colonisation projects being realised by the INCRA in Pará and Rondônia. Moreover, by no means all these families originated from the North East. Consequently, the rural and urban problems of the North East had not yet been eased by these colonisation activities and it remained to be seen whether they would be in the following years.

A further point is that advance was only very limited for a great many colonists. Although they now occupied a holding and could look forward to becoming owners in the future, they did not enjoy a reasonably prosperous existence, free of serious worries. In the Altamira I colonisation zone it appeared more as though many had exchanged the poverty and privations of the North East or other regions for those of the North. A continuation of this situation would confirm the view of Ricardo Gontijo that the Transamazônica might equally well be called the "Transmiseriana." It would be no more than a "ligação de terra entre a miséria sôca do Nordeste e a miséria úmida da Amazônia" (Morais *et al.* 1970, 101). If such were the case, there would have been little justification for the extensive and expensive road building programme.

It appeared initially that the primary aim of the road building and colonisation plans was to alleviate the problems of the North East. They were announced immediately after the period of extreme drought at the beginning of 1970, while express reference was made in the publications in which the plans were later explained and elaborated to the problems of the relatively over-populated North East and to the possibilities for settling large numbers of Brazilians in the vast Northern region.¹²⁰

In 1975, several years had passed and it was easier to make an assessment of the motives and success of the Brazilian government's integration policy. On the basis of the developments since 1970, the present writer concluded that a lessening of the social problems of the North East was not the primary motive.¹²¹ The following are some of the arguments in favour of this view:

- The fact that use was made not only of nordestinos, but also of other population groups for the realisation of the road building and colonisation projects. Many local people were also recruited to help in building the Transamazônica and this would again be the case in building the Perimetral Norte. People from all parts of Brazil were settled in the colonisation projects. In the Altamira colonisation zone *nordestinos* even accounted for less than half of the total number of colonists;
- Only in the official Brazilian publications which appeared in 1970 and 1971 was a clear connection made between the colonisation projects in the North and the problems of the North East. In the somewhat more recent publications, however, it

¹²⁰ See, especially, Andreazza (1970).

¹²¹ H. Jon Rosenbaum and William G. Tyler remarked in this connection that it was very improbable that the revolutionary opposition believed that the Brazilian government had started Operação Amazônia in order to weaken the position of the semi-feudal landed proprietors in the North East (1971, 433).

was stated that colonisation had to contribute to the solution of rural problems in those parts of Brazil that were characterised by social tensions;

- Relatively little money per family was invested in the colonisation projects.

It soon became clear that the primary aim of the Brazilian government in setting in train the process of opening up and colonising the Amazon region was to stimulate the country's economic growth, increase the prestige and popularity of the government, secure the occupation of the region and be better able to realise imperialistic ambitions. This means that the problems of the North East, in general, and the consequences of the last extreme drought, in particular, were seized upon only as a pretext for launching the plans for opening up and integrating the territory. They were used in order to ensure the necessary support for the plans and to justify the siphoning of money from special funds.

It should be remembered that the plan for opening up and colonising the Amazon region was, in fact, not new. Eliseu Resende had already referred in 1969 to the desirability of road construction, but he admitted that there was insufficient money to be able to realise the plans in the short term. A special situation had to arise, therefore, that would allow funds to be found as a result of a reordering of priorities.

Naturally, the Brazilian government had first to let the ideas presented in 1969 be further worked out before it could proceed to their realisation. It could have drawn up alternatives, while the cost-benefit analyses of these alternatives could have resulted in a well-considered choice. It could also have prepared detailed colonisation plans. The catastrophic drought, however, which made it possible to justify the integration plans, or at least make them more acceptable, had already arrived in 1970. The government was faced with a choice: either to act somewhat hastily and seize on the disaster of 1970, or wait for the next drought.

The extreme droughts in the North East, however, occurred irregularly. It was therefore by no means impossible that the next *sêca* would not occur until about 1980. Years of waiting had many disadvantages for the Brazilian government, which did not wish to delay its economic growth policy and also needed to increase quickly its prestige and popularity. Obviously, something also had to be done for the drought-stricken North East. Immediate opening-up and colonisation of the Amazon region, therefore, seemed to it to be the most obvious measure.

Yet another possibility is that it had originally been the intention of the Brazilian government to make, in the first place, a contribution towards the reduction of the social and economic problems of the North East by means of the road building and colonisation programme, but that it overestimated the adequacy of its plans and also did not sufficiently recognise the difficulties of realising them. Arguments in support of this proposition include the following:

- Shortly after the launching of the colonisation plans a programme for the agricultural development of the North East and North (PROTERRA) was also announced. Important elements of this programme were land reform, irrigation projects, modernisation of the sugar sector and the colonisation of thinly populated areas within North-East Brazil. This might indicate that the government became aware at an early date that the colonisation projects in the North would not lead to a dras-

tic reduction of the rural problems in the North East, but that these problems required to be tackled chiefly within the North East itself;

- The fact that solution of the social and economic problems of the North East was at first greatly emphasised as an objective, but given much less emphasis in later government publications;
- The fact that the INCRA did not show a preference for some time for colonists from the South and South East of the country with a higher level of general and agricultural education.

We incidentally do not wish to suggest by the above that there were absolutely no social motives underlying the Brazilian government's policy for opening up and integrating the Amazon region. The desirability of solving the problems of the North East and other parts of Brazil and, particularly, of the countryside, was thoroughly recognised. We were only commenting on the impression given in 1970 that social motives were the mainspring of the integration policy announced at that time. In our view, economic, political and imperialistic considerations together weighed heavier than the social motives. This may have been so from the beginning, but it is also possible that a change of emphasis occurred later.

Since 1970 the problems of the North East have been the subject of further studies. The SUDENE concluded in a 1972 publication that it would be possible to provide a living by means of colonisation for 953 000 families on the as yet unregistered lands of the North East during the period 1971–1990 and so achieve a considerable increase in employment in the agricultural sector. 550 000 families would be able to find a living on public lands known to be still available for colonisation, while the other families would have to be settled on other non-registered lands. The authors were thinking here, in particular, of the extensive areas still available for colonisation in Bahia, Maranhão and Piauí (Apote *et al.* 1972, 84–87). Colonisation had already been intensified in Maranhão and it was now better supervised. Among the sources of finance for this were the funds of the World Bank (Tavares *et al.* 1972, 83).

Although ample possibilities had therefore been proved still to exist for further colonisation in the North East and were being increasingly used, the SUDENE concluded in its publication that it would nevertheless be necessary to find a livelihood outside the North East for about 10,500 families annually during the period 1971–1990, in order to combat unemployment and keep abreast of the population growth (Apote *et al.* 1972, 85). The Brazilian government accordingly considered that reasons existed to continue the colonisation activities in the Amazon basin in the future.

Whether the colonisation projects in the North would really lead to a lessening of the social and economic problems depended upon the manner in which the occupation process was realised. Bearing in mind the course of events up to 1975, one is bound to conclude that there was a great danger that colonisation would again provide for the population groups involved an existence characterised by a low level of prosperity.

As far as the *nordestinos* were concerned, many of them had made possible the progress and further colonisation of Brazil through their cheap labour in the past, without having derived much advantage themselves. The advantages had gone mainly to a small group. There was the danger that history would repeat itself. The possibility existed that the colonists from the North East would contribute to a growth of the population of Amazônia Legal, help to ensure its security, raise its agricultural production,

expand the exploitation of its forests and intensify its mineral production, while the level of prosperity of the majority would remain low.

Panagides considered it by no means unlikely that large numbers of poor farmers would be living along the new highways in the future, farmers who would be greatly dependent upon the production of simple food crops grown by shifting cultivation. Their activities would contrast sharply with the livestock, forestry and mining enterprises run on modern lines, which had been established or would shortly come into operation with the aid of capital and know-how from the South East and from other countries (Panagides and Vande Lage 1973, 25).

Apart from pointing in these concluding remarks to the danger that the serious social and economic problems would be solved inadequately or not at all through the development strategy of the day, we should refer to two further dangers, i. e. the threat to the natural environment and the further threat to the already decimated Indian population.

The dangers to the natural environment

In various places, including Rondônia, a number of areas had already been deforested by mining to such an extent that erosion and dust storms occurred. If mining were to increase in the future, these unfavourable side-effects might also increase greatly in extent.

Exploitation of the forests near the larger centres had already resulted in valuable species of timber becoming scarce. The SUDAM was aware that this might happen increasingly when the Amazon region was made more accessible. Road building might even lead to exploitation on such a scale that a serious loss of forest might occur. The SUDAM wished to prevent this and pointed out to the timber firms that tropical rain forests could also be unrenovable resources when they were incorrectly exploited. All undertakings which used the forest as raw material or as a source of energy, such as the iron and steel plant at Manaus, were legally obliged to replant. Agricultural and livestock holdings were also bound to leave the forest standing on half of their land. There were various other provisions in Brazil to protect the flora and fauna. A further favourable factor was that reforestation projects could profit from the *incentivos fiscais*.

The SUDAM had already begun, in cooperation with other bodies, to study more closely various ecological aspects of the Amazon jungle. Foresters were now also being trained. The SUDAM wished to be alert in every way to the dangers threatening the tropical rain forest through incorrect exploitation methods in order to prevent the occurrence of serious disturbance to the ecological balance.¹²²

It was still difficult to judge in the 1970s, however, whether the SUDAM would indeed be able in the long run to prevent serious damage to the environment. Reviewing the history of colonisation in Brazil and thinking, for example, of the serious deforestation and erosion which occurred in Paraná and Santa Catarina after 1930, many people were not optimistic about the Amazon region. It had already been noted in any event that the Instituto Brasileiro de Desenvolvimento Florestal still had insufficient

122 A review of a number of measures is to be found in Pandolfo (1972b).

qualified personnel to enforce observance of the protection regulations and to encourage the satisfactory exploitation of the natural resources.

It had also appeared that, up to 1975, the SUDAM had been unable to exercise supervision over the projects it had approved. This applied particularly to those being realised in the still poorly accessible areas. SUDAM officials often had to let themselves be taken there by an aircraft belonging to the firms carrying out the projects, which meant that the latter were already aware beforehand of the arrival of the government officials. Partly because of this, a great deal of timber could be felled undetected and the regulations concerning the *reserva florestal* were not always respected. 300 000 hectares were already being deforested annually in Amazônia, a state of affairs that could lead to catastrophe in the long run (*Relatório à Superintendência...* 1971, 115–116; *Amazônia – integração e marginalização* 1973, vol. 2, 24, and vol. 1, 13).

Destruction of the vegetation was to be feared, not only from the timber firms, but also from the arable farmers. Shifting cultivation was a normal form of arable farming in the Amazon Basin and the colonists who had settled along the new highways were also trying to gain a livelihood in this way.

If the population grew, there was a good chance that, in particular zones, serious disturbances would occur in the natural situation and a similar development would take place to that in the zone of Belém-Bragança. In the latter area, the great population growth, partly stimulated by attempts at sponsored colonisation at the beginning of the century, had already resulted in a continual pushing back of the virgin forest and in an increasing occurrence of *capoeira* and *cerrado*, forms of vegetation which are clear signs of soil deterioration. Some of the land had become virtually unsuitable for arable cultivation and was now fit only for the production of malva, a fibre crop (Sioli 1969a, 314–316). The vegetation along the Belém–Brasília highway had also already become seriously degraded in a number of places and the soil fertility had been reduced.¹²³ Similar phenomena could also be observed on a rather more modest scale along the road from Cuiabá to Porto Velho.

As far as the new colonisation zones along the Transamazônica were concerned, the reclamations were still of very recent date, but the farming methods were, in fact, the same. In 1975, it was still by no means certain that better exploitation methods would be introduced here in the near future, so that it was also uncertain what would be the ultimate fate of the *reserva florestal*, which had to be retained officially on every colonist's holding. Would it be respected under all circumstances, or would it first be eligible for reclamation when the farmers had succeeded in introducing forms of permanent land use, such as tree and bush crops, on the other fifty hectares of their holding? Or would the government eventually simply be forced to give permission for reclamation of this land in order to give the farmers sufficient room for rotation in the practice of their shifting cultivation?

Incidentally, in the event of shifting cultivation remaining the dominant agricultural method, there did exist possibilities of improving the system. In 1971, Valverde pointed out that the harmful effects of shifting cultivation could be limited by adopting the “taungya forestry system” as employed in various parts of Africa and Asia. Under this system, the valuable trees are felled before the ground is cleared, the plots are then laid out and young trees planted on the fields at the same time. These trees can

123 See, especially, Paula (1971).

then be felled when it is time for the next reclamation, after about 20 years. An important advantage of this system is that it is quite easy to increase the number of specimens of these varieties of timber which are in demand (Valverde 1971a, 5 f.). Its success, however, depends upon the cooperation of the cultivators, the availability of plant material, fairly long rest periods to enable the trees to develop properly and, last but not least, a good market for the timber. In Brazil, no effort had ever been made to introduce the "taungya forestry system," in spite of the widespread occurrence of shifting cultivation in large parts of the country. Large quantities of timber were lost every year as a result of shifting cultivation. It was unfortunately unlikely that there would be a change in this situation in the near future.

A threat to the natural environment was certainly not least to be feared from the practice of livestock farming. In the years before 1975, large areas of land had been taken over for this purpose, resulting in a great reduction in the forest area in the livestock farming zones. This development would undoubtedly continue in the years to come, certainly if the Brazilian government made a serious effort to turn the Amazon region into a great exporter of meat. The floods which occurred in March and April 1974 in the lower part of the Tocantins valley (Marabá-Jatobal district) may be partly connected with the extensive deforestation that had taken place along the lower courses of the Tocantins and Araguaia rivers for the laying down of pasture land.

The increasing economic activity might also create a further threat to the fauna. The hunting of certain species of birds and of animals with valuable furs had already assumed undesirable forms in spite of various prohibitions. Such hunting would only increase as the country became more accessible, unless the government acted firmly to prevent it.

The Brazilian government recognised the problems and the dangers. As it said, serious disturbances of the ecological balance should be avoided as far as possible. There was still no reason for serious alarm in the short term. The various forestry, livestock and colonisation projects, in fact, still occupied only a small part of the Amazon region. There was reason to fear, however, for the more distant future. Forms of exploitation would have to be found in good time which could be harmonised with the natural environment so as to prevent the loss of abundant natural wealth. The future would show whether the organs of the Brazilian government were able to make a major contribution to the realisation of this aim.

The dangers for the Indigenous population

The further threat to the some 120 000–150 000 Indigenous living in Amazônia Legal was certainly not the least of the dangers attached to the integration policy.

The government wanted from the beginning to prevent the building of roads being accompanied by numerous conflicts between the road builders and Indigenous people and so it called in the Fundação Nacional do Índio (FUNAI). The latter created, within the sphere of influence of the Transamazônica, 13 *frentes de atração*, where teams, consisting of *sertanistas*, nurse and interpreter, would be able to make contact with the Indigenous tribes and prepare them for the coming events (*Boletim Informativo* 472, 15 June 1973). By this means it was hoped to prevent the Indigenous being unexpectedly confronted with the road builders and the latter experiencing obstruction from the

Indigenous. During the period of road construction, experts and, sometimes, acculturated Indigenous were present to prevent or sort out difficulties and to ensure the protection of the Indigenous. If necessary, the latter were persuaded to move their settlements. As far as the workers were concerned, they had been instructed, at all costs, not to provoke conflicts with the Indigenous, to avoid contact with them as far as possible and not to behave aggressively, even if the Indigenous should attempt to remove certain objects. According to officials of the FUNAI, contacts had always been particularly friendly as a result of these precautions and no serious problems had arisen.

The FUNAI was also brought in in connection with the construction of lesser roads. Along the road from Cuiabá to Santarém one of its chief tasks was to make contact with the very isolated Kreen-Akarore, living in the Serra do Cachimbo. At the beginning of 1973 contact was indeed made by two experienced *sertanistas*, the Villas Boas brothers (*Boletim Informativo FUNAI*, Ano II, no. 6, p. 36). Such contact was considered necessary, because the road from Cuiabá to Santarém would run across the Serra do Cachimbo.

The government not only took measures to limit conflicts, but also took care to prevent the road builders passing on diseases on a large scale to the Indigenous, who possessed absolutely no resistance to certain forms of infection. One of the measures was the requirement that the employers should sign on only workers in the possession of a *carteira de saúde* (a declaration of health) and who had been properly immunised. In order to prevent the Indigenous becoming infected, they had to avoid contact with them as far as possible. The FUNAI also set up a medical *equipe volante* to help the Indigenous.

The same body drew up a support programme in connection with the construction of the Perimetral Norte. 52 tribes lived in the sphere of influence of this highway who still had little contact with civilisation. The total number of Indigenous was estimated at about 20 000 (*Boletim Informativo FUNAI*, Ano II, no. 5, pp. 6–8). In mid-1973, however, it was still uncertain whether the FUNAI would be able to obtain sufficient resources to enable it to realise its programme completely. If not, the FUNAI hoped that the road construction contractors themselves would take supplementary measures, since the prevention of undesirable delay in the construction of the road was very important for these undertakings.

In addition to all this, the FUNAI had already been engaged for several years in demarcating areas for the Indigenous in order to ensure for them permanent possession of certain parts of the Amazon region. It was also studying the creating of two further “Indigenous Parks” to supplement those already existing (*Boletim Informativo* 359, 29 September 1972). The fact that such measures nevertheless by no means fully guaranteed the rights and security of the Indigenous was shown some time ago when the Brazilian government decided to allow the road planned to connect Brasília with Manaus (BR-080) to pass through the Xingu reserve. This would not only create a more direct link between the two cities, but would also enable a number of *fazendeiros* to dispose more rapidly of their livestock products (Filha 1971b, 75).

Although various measures had therefore been taken in the interests of the Indigenous and calamities had so far been avoided during the course of road building, many people nevertheless viewed the future of the Indigenous population with concern.¹²⁴ Now that a serious effort was being made to open up the country, the contacts with

124 More information about these problems is to be found, inter alia, in the Dutch *WIZA-bulletin*, a publication of the Werkgroep Indianen Zuid-Amerika (especially issues 12, 16–17 and 20).

farmers, cattlemen, miners and other population groups would unavoidably increase. It was by no means unlikely that these Brazilians would behave aggressively towards the Indigenous and their property as soon as the Indigenous began to be felt as a nuisance. The past had already provided many examples of this. Those who had little confidence in the ability of the FUNAI to prevent this already feared that the end of the Indigenous culture would soon become a fact.

Conclusion

We have tried in the foregoing to give a picture of the attempts up to 1975 to integrate the Amazon region more into the national economy, of the difficulties encountered in these attempts and of the dangers attached to them. Volume Two of this study will give a picture of the development policy pursued from the 1980s up to the present. Has Operação Amazônia been a success economically by contributing to a considerable increase in production in the primary sector and to a significant growth in the national economy? Has it become a success socially through resulting in a sufficient expansion of employment and a sufficient improvement in labour conditions, thus permitting large numbers of people to find a reasonably prosperous existence in the Amazon region? Have the rights of the Indigenous been respected sufficiently? And have the Brazilian authorities tried – as much as they could – to limit deforestation and to propagate sustainable land use?

Up to the mid-1970s it seemed more likely that the policy as pursued in the preceding years would result only in the further geographical extension of the socio-economic structures and processes that had led to the underdevelopment of the more populated part of Brazil, so that they would also become typical of what was once the still largely unoccupied portion of the country. Volume 2 of this book will show what happened in reality.