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COLONIZATION AS AN ALTERNATIVE TO LAND REFORM

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to

LAND REFORM

by

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COLONIZATION AS AN ALTERNATIVE TO LAND REFORM

To the unqualified question, "Can new land settlement programmes do away with the need for agrarian reform?," the only possible answer is negative.1/ The reasons are both economic and political. However, if the question is "Can new land settlement programmes effectively supplement land reform efforts?," the answer is a qualified affirmative. The question is taken here in the broader sense.

Some of the issues raised can probably be resolved by agreeing on definitions. Others, however, are substantive and serious. To clear the ground, we need to distinguish among three types of land settlement programmes. The first category is the putting into cultivation previously uncropped but accessible lands which require a minimum of new infrastructure to become econimically productive. Lands of this sort are relatively plentiful in Latin America, including the Argentine Pampa, portions of most traditionally managed estates and the reserves of large-scale plantations. Such areas are also available in Africa, often subject to tenure problems associated with nomadic or tribal management. In Asia, with a few notable exceptions such as the large estates of Philippines and Thailand, there is relatively little immediately accessible land of this sort.

1/ We take as a point of departure for these remarks the need for redistributive land reform as a complement to, and part of, the overall development strategy in most developing countries.

The second type of settlement incorporates new farmland through irrigated and drainage. Historically, irrigation has been important in Asia and the Middle East and it is becoming increasingly significant in Latin America.2/ These projects typically require substantial new on-farm investments -ranging upward from $800 per hectare- in addition to investments required to put the settlements onto a viable economic footing.

By putting into production these two categories of lands --that is, the presently uncropped and the irrigated or reclaimed lands-- the reform process can bring about rapid increases in output and have wide impact on rural incomes. The project which aims to incorporate fallow land, or upgrade existing water distribution systems will normally be cheaper and have a quicker payout than the irrigation project that beings from bare ground. Decisions about which of these should have priority can be resolved within a reform-development framework, and should not detain us here.

On the other hand, land settlement on the tropical frontier forms a distinct category of project, of greatest relevance to the development of Latin America's Amazonian heartland, Africa's tropical plateau, and limited areas in Southeast Asia. Virgin land projects typically entail large lumpy infrastructure investments (roads, principally), affect little "private" lands and have only a long term pay off. For the most

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2/ There were 72.5 million ha. under irrigation in the developing regions in 1962, according to the FAO Indicative World Plan estimates, of which 44.1 million were in Asia, 16.7 million ha. in the Near East and Northwest Africa, and 10.6 million ha. in Latin America. (See FAO Document C/69/4, Vol. 1, p. 58).

part, governments tend to favor frontier-type settlement for reasons other than to create economically and socially viable communities, e.g. to achieve a national integration, to secure borders, or to satisfy regional economic interests. In other cases, they are promoted to divert political pressures away from the land reform problems in the already settled areas.

Good land for settlement programmes, although increasingly scarcer and more expensive to get to, does exist, but is disproportionately distributed among the developing countries. By crude measure, the amount of land of all sorts which is cultivable but unused is as great as the area already under cultivation. (See Table 1) All but a small part of this land is in Latin American and Africa, concentrated in such tropical basins as the Amazon and the Congo. In terms of prcductive potential, we are assued that "although the environmental conditions of the tropics ... differ from those of the temperate regions, it does not appear that these differences result in inherently inferior production potential,"3/ and that "some day the most productive agriculture of the world will be mostly of the tropics."4/ Tropical land specialists argue that the tropics can be conquered if available production technologies are put fully into effect and if more research is devoted to the discovery of suitable techniques. Adequate studies of the resource base to determine land use capabilities and commercial potentials for agriculture are also needed to avoid costly errors.

3/ W. W. McPherson and Bruce F. Johnson, "Distinctive Features of Agricultural Development in the Tropics." In H. W. Southworth and B. F. Johnston Agricultural Development and Economic Growth, Cornell Press, 1967, p. 221.

4/ Charles W. Kellog in "Comment, ibid, p. 232.

USES OF POTENTIALLY ARABLE LAND IN DEVELOPING COUNTRIES, 1962

(million hectares)

Region	Arable area	Area Harvested	Uncultivated area potentially arable	Estimated area suitable for agriculture
Africa, South of Sahara	152	64	152	304
Asia and Far East	211	211	41	252
Latin America	130	71	440	570
Near East and Northwest Africa	70	39	NA	(70)
TOTAL	563	385	633	1.196

Source: FAO, Provisional Indicative World Plan for Agricultural Development, Rome. (Doc. C 69/4) August 1969, Vol: 1, pp. 44, 49

NA - not available. For countries in each region see Annex A.

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ANNEX A

FAO INDICATIVE WORLD PLAN

Regional Groupings of Countries

For purposes of the IWP a grouping or classification was drawn up which distinguished three zones as shown below:-

		Population 1962 (thousands)	Percent of World Population
World		3 159 978	100.0
Zone A	Developed market economies	698 964	22.1
	— Region A1 North America	205 261	
	— Region A2 Europe	364 761	
	— Region A3 Other	128 942	
Zone B	Centrally Planned economies	1 066 833	33.8
	— Region B1 Western	321 217	
	— Region B2 Eastern	745 616	
Zone C	Developing countries	1 394 181	44.1

The 64 countries included in the IWP regional studies account for 84 percent of the population of the Develping Countries (Zone C).

The countries included in the four regional studies are listed below, together with the total population of each region:-

Latin America — Population 1962: 225 309 thousand.
Countries included in regional study (90.0 percent of regional population) Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela.

Africa South of the Sahara — Population 1962: 201 173 thousand.
Countries included in regional study (84.2 percent of regional population) Cameroon, Central African Republic, Chad, Congo (Brazzaville), Dahomey, Democratic Republic of the Congo, Ethiopia, Gabon, Gambia, Ghana, Ivory Coast, Kenya, Madagascar, Malawi, Mali, Mauritania, Niger, Nigeria, Senegal, Tanzania, Togo, Uganda, Upper Volta, Zambia.

Near East and North West Africa — Population 1962: 135 115 thousand.
Countries included in regional study (96.1 percent of regional population) Afghanistan, Algeria, Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, People's Republic of South Yemen, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Republic, Yemen Arab Republic.

Asia and the Far East — Population 1962: 832 584 thousand.
Countries included in regional study (80.5 percent of regional population) Ceylon, China (Taiwan), India, Pakistan, Philippines, Republic of Korea, Thailand, West Malaysia.

In terms of population the coverage of the regional studies thus ranged from 80 percent of the region in Asia to 96 percent in the Near East and North Africa.

Note

The expression 1962* is used in the headings of many tables and also in the text in some cases. The asterisk indicates that 1962 means the average of 1961-63.

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Native forests can provide the initial incomes and subsequent capitalization for most project areas. Livestock is another enterprise with excellent commercial potential, or one of the small volume, high value tropical products such as pyrethrum, essential oils, palm hearts, avocado, spices, chicle or gourmet and specialty foods.

The livestock and forestry enterprises provide capital for future production activities, reimburse the government for infrastructure investment and permit time for the area to become gradually developed. Land in many tropical regions, particularly in Latin America,is being cleared and settled "spontaneously" or without much deliberate planning 5/ at very rapid rates. This unorganized settlement gives urgency to the development of well conceived, comprehensive projects in order to avoid serious loss and misuse of the land resource.

The practical obstacles to successful settlement programes are considerable. Nelson points to the extremely high, usually indivisible infrastructure costs; most of there would need to be financed from government sources, at least initially.6/ The land resources in many tropical areas can deteriorate rapidly under leaching rains, extremely high temperature and the effects of erosion. World markets for most

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5/ An illustration was provided in Nicaragua where the Instituto Agrario Nacional sponsored a study of the potential for new land settlement in the Rigoberto Cabezas region -an area of about 300,000 hectares in eastern Nicaragua. The first discovery of the investigators was that the place was full of people and there was almost no possibility of fitting in new settlers (See J. R. Taylor Agricultural Settlement and Development in Eastern Nicaragua, University of Wisconsin, Land Tenure Center, Research Paper No. 33, February 1969).

6/ Michael Nelson, Public Policy for New Land Development in the Humid Tropics of Latin America. Resources for the Future and Latin American Institute for Economic and Social Planning (Santiago), March 1970 (mimeographed draft), p. 64-73 and passim.

tropical products --assuming the freight barriers and storage problems are soluble-- are already overburdened. The history of the administration of capital-intensive settlement projects by public agencies has been catastrophic. Yet, some measure of public control and direction is needed. When frontier areas are opened without regulation of entry and land use, the forest and soil resources are rapidly lost through misuse.7/ Meanwhile, opportunistic or politically influential operators establish claims to the more valuable tracts with danger of serious land concentration in later period.

A major issue deserving serious debate is whether the countries with large, unsettled land areas should assign a high priority and channel major parts of their development budgets into projects for opening new lands ("external margin"), or use their resources to execute and consolidate land reform programmes at the "internal margin". The options are hardly ever, of course, self-exclusive but a matter of relative emphasis. In some countries, there may even be resources and spirit enough to execute a frontier land settlement programme concurrently with the land redistribution activities. Frontier settlement strategy may interact with land reform in the following ways: (1) influence the rate at which the basic land reform programme is carried out and

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7/ Cooperative community operation of forestry exploitations are feasible in many areas where other forms of exploitation create serious hazards to conserving the resource base. Uncontrolled commercial exploitation of forest reserves in many parts of tropical Latin America has not only deprived the countries of a valuable resource -in exchange for a few dirt roads, abandoned logging shacks and eroded hillsides- but has weakened the few efforts at public forestry management and control. (See John Menz "Alternative uses of Forest Lands and the Role of Agrarian Reform and Colonization". Paper for FAO Conference on Agrarian Reform and Forestry, Brasilia, November 1968).

consolidated; (2) affect the process of social-political transformation, particularly in breaking down paternalistic and elitist social structures; and (3) provide productive employment opportunities to potential reform beneficiaries at acceptable costs.

Land settlement programmes can affect the scale and pace of agrarian reform indirectly by competing for political favor or, directly, by competing for scarce personnel and financing. The emphasis is here on the Latin American experience.[8/]

One of the most ambitious and apparently serious proposals to justify massive land settlement projects in Latin America as a substitute for agrarian reform was that offered by the Hudson Institute.[9/] Among the

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8/ Several important studies of this question have recently been completed in addition to Nelson's study of Latin America (op. cit.). For Africa see John C. deWilde et al., Experiences with Agricultural Development in Tropical Africa, International Bank for Reconstruction and Development and John Hopkins Press, Baltimore, 1967 (2 volumes). Also, University of Oxford Economic Aspects of Agricultural Development in Africa, a selective annotated reading list, Oxford, 1969. For Asia, the Asian Agricultural Survey, Asian Development Bank, Manila, 1969, and Gunmar Myrdal, The Asian Drama, Twentieth Century Fund, Pantheon, New York, 1968 (3 volumes) are both relevant.

9/ The publications of the Hudson Institute outlining these ideas are:

"New Focus on the Amazon", Herman Kahn and Robert Panero, 1965.

"The A-B-C Distinction Applied to South America", Ronald Dago and Robert Panero, 1967.

"The Long-Range Potential of Latin America: A Year 2000 Ideology", John Karlik, 1967.

"Implications of the Choco Project", Robert Panero, 1968.

"An Approach to large-scale Agriculture Systems in South America", Ronad Dagon and Robert Panero, 1968.

development situations in Latin America, as the Institute sees it, there is little chance to have an impact either in the urbanized, modernized areas with their masses of urban poor, or in the rural, primitive and poor areas with the conflicts between landowners and peasants. The unexploited frontier is the most interesting situation. Here, the planners suggest, opportunities exist for investments which are not complicated by social problems, vested interests, power conflicts, and corruption found in the urban or traditional areas. They propose to pour capital into the "heartland", building giant lakes in the Amazon basin (inundating Manaus, once the rubber capital of the world and still the principal interior city of the Amazon), and as a complementary gesture to create a sea-level Atlantic-Pacific canal in Colombia.

Although none of the countries involved in the Hudson Institute plan have acted upon these proposals, these same countries have given their frontier settlement programmes very high priorities during the last decade or two. Kubitschek created Brasilia and drove roads deep into the Amazon. Belaunde spent his political capital on the Carretera Marginal de la Selva, which if and when completed will open the back side of the Peruvian Andes. The Movimiento Nacional Revolucionario and Paz Estensoro, with substantial capital from the U.S., built roads from the Bolivian highlands, where ninety percent of the people lived,

to Santa Cruz, where oil and fertile lands lay unexploited. Colombia's land reform agency has spent a major part of its very substantial budget on irrigation and roads in the tropics, and large government credits have gone to the livestock producers of the Llanos. The Central American countries and Mexico have given similarly high priority to opening their jungle frontiers.

Although it is never simple to determine the intentions of political leaders, in most of the cases here the practical result of the search for "El Dorado" was to divert public attention and official priorities away from acute social conflicts and growing inequities in established farming areas. While Brasilia was in creation, and the interior roads were being built, no land reform activity occurred. In a nation with six million possible reform beneficiaries only 329 families had been settled by IBRA by 1968. 10/ The Peruvian land reform, before 1969, was put into effect only where peasant unrest was manifest; meanwhile major public resources continued to be channeled into the Tingo María, Upper Amazon and other frontier projects. 11/

10/ "Aspectos de la Reforma Agraria en Brasil" (Informe de la Misión de la FAO), Santiago, Chile, July 1968.

11/ Thomas F. Carroll, "Land Reform in Peru" paper prepared for AID Spring Review, April 1970.

"When the jungle roads were opened into the interior of Peru", Mangin notes, "the same upper class families, through their own generals, senators and influential representatives, bought up the land along the routes. When the roads were built, they and some foreign companies (like Anderson-Clayton, Le Tourneau, U.S. Gypsum and American Plywood) bought the land for the new plantations and mines, and hired the labor of the intended colonizers, often at government expense."[12]

A more or less balanced blend of reform and new land settlement programmes was apparent in Mexico and Venezuela. Venezuela, with its extensive areas of accessible, unused government lands, a relatively small rural population and substantial government revenues, was able to expand its agricultural frontier at the same time that expropriated private haciendas were being transformed into reform settlements . (Nonetheless, some of the newly irrigated lands were distributed in "commercial size" units; one example was the Calabozo project, where 200 ha. farms, valued at up to $1 million each, were made available on a selective basis to entrepreneurs).

Mexico has spent a major part of its public investment budget since the 1940's in a massive campaign to expand its cultivated land base. The expenditures went fundamentally into new irrigation works, notably in the northern and western states. About half of the land in these projects went to commercial, generally export-oriented

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12/ William Mangin, "Yankees in the Amazon", Nickel Review, July 1968.

producers, and half to the ejido communities. In the Papaloápan Basin[13] and other parts of Mexico's tropical frontier, substantial colonization programmes were put into operation since 1946. More than 60.000 families have been resettled as part of this programme.

Even though the combination of new irrigation, frontier land settlement and large-scale land reform programmes in both countries has had a substantial impact on overall production,[14] greater impact on rural employment and income redistribution would have been entirely possible by a more consistent reform orientation.

The experience in Bolivia and Colombia -both of which have publicly committed themselves to implement and consolidate land reform- raise serious doubts about the adequacy of their mixed "reform-settlement" strategies.

In Bolivia, after the massive land redistribution of the mid-1950's, the government channeled all but a minor portion of its agricultural services and investments into settling and servicing the tropical frontier. Since Bolivia is faced with the nearly opposite conditions to Venezuela -population pressures, limited fiscal revenues, and traditional social structure -frontier land settlement and reform consolidation projects become direct competitors. Land reform

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13/ This project was among those analyzed as part of a five-country study of problems of agrarian reform financing in Latin America. (See Juan Ballesteros, Matthew Edel and Michael Nelson, La Colonización en la Cuenca del Papaloápan, CIDA, Washington, D.C., April 1969).

14/ The annual rate of increase in agricultural production for the 1950-65 period was 5.5 percent in Venezuela and 6.4 percent in Mexico, compared to 3.4 percent for the region as a whole. (ECLA, Agricultural Development in Latin America, Santiago, Chile, (Doc. E/CN.12/829) February 1969.

gave the campesinos land and a minimum security but little else for development. The few agricultural technicians willing to work in field projects, and the limited credits and long term investment capital, have gone to promoting the development of Santa Cruz and to the directed colonization projects that also received international financing. Some of the privately developed settlements are quite dynamic but the government-sponsored ones are in difficulties. There have been two notable problems: none of the directed colonization efforts is beyond the "pioneer" stage and all are far behind plans. In contrast, in the regions where poor settlers have come voluntarily, without encouragement or official help, the settlements are relatively prosperous.[15/]

These results might be acceptable for countries with wider margins for error than Bolivia. But the new lands priority has meant the campesino of the Altiplano was deprived of significant investments or credits. Even the paper work of issuing land titles to "legalize" the 1953 land reform was only half done in 1968. Meanwhile, the direct and indirect public assistance received by the large-scale commercial producers of the tropical areas has permitted them to expand their output of subsidized, internationally surplus rice and sugar.

15/ Michael Nelson (op.cit. pp. 208-215) analyzes the results of two spontaneous settlements initiated when access roads were constructed connecting the Altiplano to the tropics north of La Paz. These "projects" cost little in public investment but have apparently led to the creation of viable communities based on self-selection and survival. Meanwhile, the four directed projects receiving international financing have cost about $22 million, so far for 5.300 families, or $4.300 each. Average net family incomes ranged from $100 to $350 per family in 1968.

Colombia's land reform agency INCORA, has devoted 40 percent of its capital budget to irrigation and drainage projects to expand production area but only 4 percent to land acquisition for reform purposes.[16/] Instead of devoting resources to resolving the land problems of the intensively cultivated and heavily populated farming areas, the agency gave its attention to land titling in public lands, primarily in the Llanos. All but 4.1 percent of the land titled by INCORA was former public lands. Through mid-1969, INCORA had titled only 1.194 parcels of lands with 13.600 ha. of land. This programme accommodated the number of new farm-families formed in only a single week.[17/]

Examples of mixed or faulty priorities could be multiplied, but the evidence seems clear that, in Latin America at least, there has been strong tendency to use tropical land settlement as an "escape valve" for rural unrest, rather than as a complement to land reform. In the countries where land reform has not been carried out (vide, Brazil), the agrarian problems are at least as severe as they were before massive investments were made on the frontier.

16/ A review of INCORA and its Program in Colombia. IBRD and IDA, Washington, D.C. 1967.

17/ Herman Felstehausen "A Review of Agrarian Reform and Development in Colombia", Land Tenure Center, University of Wisconsin, April 1970 (Draft) p. 21.

This is not the opportunity for careful project cost comparisons, particularly if we pretend to relate various types of land use, different resource bases, and market conditions, etc. Available calculations show an enormous range of costs which might be assumed by public agencies in settlement projects. As Nelson notes, "International finance agencies and government departments scrutinize projected costs per family--La Chontalpa $18,000, $10,000 on Jengka, Alto Beni I, $6,000, Alto Beni II, $2,000, $600 in the Ethiopian Walamo project--for the income distribution implications; however the projects are often approved in spite of apparent disparities".[18] Carroll offers some relevant comparisons of project costs in terms of employment generation among settlement and reform-type projects. (Table 2). The conclusions drawn from these still tentative data are that there may be less difficulty than popularly assumed in reconciling production goals with employment generation and wide income distribution objectives. For the projects studied direct farm-investments (excluding road and other basic infrastructure) on settlement and reform-type projects give about the same output, and the income and employment benefits are similar.

The subtle point sometimes missed in these comparisons is that when the costs of opening the frontier must be paid in cash, instead of coming out of the lives of the pioneer generation, the investment can seldom be shown to be "sound". It has been the willingness of the poor peasant to exploit himself and his family that has created most of the capital which now exists in these areas.[19]

18/ Nelson, op.cit., p. 370

19/ See P. M. Raup "Land Reform and Agricultural Development" in Southworth and Johnston, ed: op.cit., p. 367-413.

TABLE 2

OUTPUT AND EMPLOYMENT EFFECTS OF

VARIOUS TYPES OF AGRICULTURAL PROJECTS

	Investment per farm (US$)	Ave. Family income per farm (US$)	Investment per employed worker (US$)	Gross Output per employed worker (US$)	Gross Output per $1000 invested	Employm. generated p. $1000 invest. man/year
Beef Cattle Development	20,000	5,590	10,000	5,540	554	0.10
Irrigation Development	19,750	3,000	8,370	3,550	514	0.27
Intensive land Development	18,490	3,422	8,404	4,620	550	0.12
Intensive land Reform	8,420	1,295	3,136	1,580	506	0.32
Medium-intensive land settlement	4,350	2,256	1,740	886	509	0.57
Supervised credit	3,390	780	1,655	900	545	0.60

Source: Thomas Carroll, "El Desarrollo Rural" (p. 327) in Una Década de Lucha por América Latina, Fondo de Cultura Económica, México, 1970.

If we were simply evaluating progress in land management and frontier settlement, it would be possible to point to many notable advances over the not too distant past. Most Latin American governments have abandoned the historically favored private concession technique of land settlement. This is in part because the remaining lands are less accessible and profitable to private operators. In addition, most governments now recognize the important public interest in the frontier and seek control of its exploitation.

However, our concern has been different, that is, how to assure that the agrarian reform is given its appropriate priority in competition with what are, to some, politically more appealing activities. Governments seriously committed to land reform will seldom have problems in establishing priorities between "reform" and "settlement". Since the clientele is the same, the approach to both programmes should be substantially the same. Under a reform-oriented strategy differences in economic and social returns would help to guide choices among projects, whether the specific project was reform consolidation or new land settlement.

If on the other hand, there is an irreversible priority commitment to opening the frontier, in spite of political, social and economic sacrifices, it makes little sense to continue discussion of alternatives. On the assumption that priorities can still be examined, we can draw some conclusions from experience to date:

1. Accessible "virgin" lands lacking only the touch of the human hand to become a source of wealth do not exist in important amounts. Even though there are ample land resources technically capable of sustaining more intensive use, most of it is inaccessible without considerable expenditure of financial and technical resources.

2. There are valid reasons for government involvement in frontier settlement programmes. For one, to offer employment alternatives to populations living in overcrowded areas (e.g. the Andean highlands). The control of misuse of the forest and soil resources also requires important government involvement.

3. Defects in agrarian structure and important deficits in employment opportunities cannot be overcome by frontier land settlement programmes alone. By pulling scarce resources away from reform activities and, by diverting public attention from agrarian problems, frontier development strategies can, in fact, worsen the situation.

There is general agreement that settlement projects are difficult to design and execute. Albert Hirschman calls colonization projects "failure prone". Nelson notes that "on a world-wide basis, it must be admitted that few spheres of economic development have a history of failure to match that of tropical land settlement".[20/] Although we have not tried to

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20/ Nelson, op. cit., p. 431

analyze the causes and cures for this seemingly endemic difficulty, a few lessons -modest compared to the grandeur of the El Dorado- can be drawn on how to strengthen the settlement activities while not weakening reform programmes.

1. Seek integration of the planning and execution of reform and frontier settlement programmes. Creation of vested bureaucratic interests in expensive settlement activities at the expense of reform consolidation should be avoided. Encouragement of basic studies of large areas over detailed area studies will give the data base.

2. Give assistance to the self-selected spontaneous settler, especially in regions without serious resource depletion problems (e.g. hillside erosion following slash and burn clearing).

3. Establish and strengthen forestry services which can assist in the control of frontier exploitation and channeling settlement. Concurrently encouragement should be given community controlled forestry and other frontier enterprises.