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POPULATION AND LABOUR POLICIES PROGRAMME
Working Paper No. 146

TRANSMIGRATION IN INDONESIA

by H.W. Arndt*

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Foreword

This study is the second in a series of studies on the evaluation of land settlement schemes being carried out by the ILO in such countries as Indonesia, Malaysia, the Philippines, Somalia, Ethiopia, Tanzania, Brazil and Peru. A volume containing a synthesis of country case studies and settlement experiences is planned for publication during 1985.

Land settlements or colonisation schemes have been adopted in many countries, often at enormous cost. Although they have the common aim of raising the incomes and standard of living of the rural landless, land settlement schemes in individual countries appear to differ in their approach and aims. Issues of population redistribution and efficient utilisation of waste land are predominant in Indonesia, Malaysia and Sri Lanka: in Tanzania and Brazil, settlements of various kinds have been considered as a prerequisite to the overall development strategy of the country. There have also been instances where extensive land settlement programmes have been used in place of more radical agrarian reform However, such programmes have been largely unsuccessful in solving problems of population redistribution, unemployment and poverty. Besides, they are extremely expensive in relation to the number of persons settled. In some cases they also appear to have created social tensions in the areas concerned. The purpose of ILO studies is, therefore, to undertake a wide-ranging analysis of land settlement schemes as a means of population redistribution and to assess the costs and benefits of such schemes.

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Vorking Des not Labour The present study assesses the achievements of the transmigration programme in Indonesia, identifies the causes of success or failure of the programme, and analyses the extent to which the transmigration programme is an appropriate policy response to population distribution problems in Indonesia.

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I. Introduction

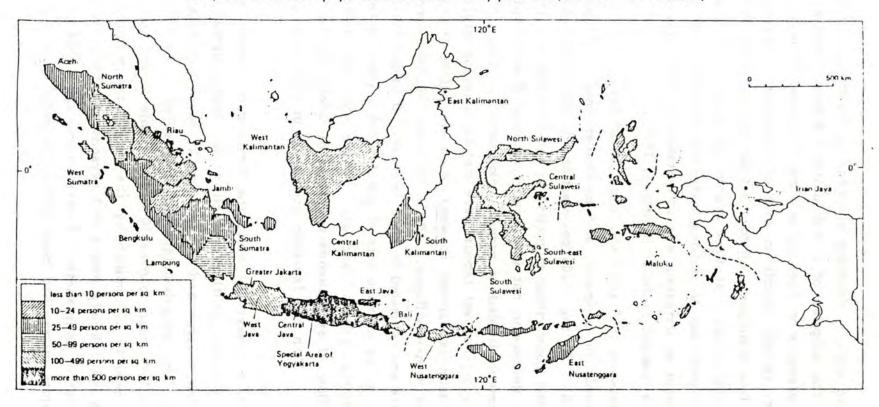
The idea of trying to alleviate population pressure and poverty in Java by organising and encouraging the movement of people from Java to the outer islands of Indonesia is almost a hundred years old. During the 1970s, fuelled by the oil boom, Indonesia's transmigration programme became one of the largest voluntary land settlement programmes in the world. While many of the formidable technical, logistic and administrative problems of moving and settling 100,000 or more families a year are being energetically tackled, the future of the programme is subject to two serious constraints, increasing shortage of land and financial resources.

This study, after a short historical account, describes in section III the main features of the programme, policies with respect to selection of migrants, identification of sites, preparation of land, assistance to transmigrants in the form of transport, food and other inputs, housing and other social welfare services, ethnic relations and administrative Section IV deals with interprovincial movement of sponorganisation. Section V assesses the effects of the programme, taneous migrants. on population distribution, on the living standards of the transmigrants on food production, and on regional economic development. discusses the two main problems now facing the programme, land availability and finance. Section VII considers the options available to cope with the fundamental problems which the programme has been designed Section VIII consists of a short conclusion. to remedy.

II. History

The history of transmigration in Indonesia goes back to the early years of the twentieth century. A census conducted by the Dutch colonial administration in 1905 had shown that, of the total population of the Netherlands East Indies of 37.5 million, 30 million or 80 per cent lived in Java-Madura which accounted for little more than 7 per cent of

Map 1: Indonesia: population distribution by province (based on 1971 Census)



Source: Joan Hardjono, op.cit.

the land area. Mounting evidence of declining welfare in rural Java led to the adoption of a "colonisation" policy, aimed at relieving population pressure in Java by settling "colonies" of Javanese on the outer islands, initially mainly in southern Sumatra. Migrant families were given free transport, up to 1 hectare of reasonably fertile and watered land, and money - at first grants and later, to save expense, loans - for the purchase of housing materials, tools and seeds. Substantial investment in irrigation was undertaken in Lampung, the province of Sumatra nearest to Java (Hardjono, 1977).

Between 1905 and 1922, some 22,000 people were moved to two main settlements in Lampung, and to smaller ones in Bengkulu and south In the 1920s colonisation virtually stopped, although there was some spontaneous migration to the Lampung settlements. as the depression cut into export incomes of smallholders, the Dutch Government decided to resume colonisation. The needs of established settlers for harvest labour were met by bringing migrants to work for one season as harvest (bawon) labourers before themselves becoming settlers in new villages. By 1940, some 200,000 government-sponsored migrants are estimated to have been settled under the Dutch colonisation policy, at an average rate of about 4,000 a year, more than two-thirds in Lampung (tables 1 and 2). There was also, during the 1930s, a large flow of spontaneous migration of labour to the Sumatran plan-With the Japanese occupation in 1942, colonisation came to an end.

For the next 15 years, the Indonesian economy was wracked by war, civil war, political instability and finally turmoil, while population continued to grow and the problems of population pressure and poverty in Java (and neighbouring Bali) intensified. By 1966, the population of Java had risen to over 70 million (table 3) and was virtually certain to increase to 150 million by the end of the century. Population density was already nearly 600 persons per km², 50 per cent larger than that of Bangladesh and nearly three times that of the Netherlands. Per capita income had been falling for much of the preceding decade,

Table 1: Number of migrants in Lumpung settlement,
Dutch colonisation period, 1905-41

Period	Government-sponsored migrants	Total number a end of year*		
1905-11	2 - 11	6,073		
1912-22	16,838	22,274		
1923-33	8,693	37,257		
1934	1,375	37,477		
1935	12,524	51,605		
1936	12,181	62,764		
1937	14,938	73,499		
1938	20,014	91.595		
1939	27,826	120,464		
1940	31,173	144,619		
1941	35,251	173,959		

^{*} Total number of transmigrants resident in the settlements, i.e. cumulative inflow (+ natural increase) less outflow (and deaths).

Source: Hardjono, 1977, op. cit.

Table 2: Number of migrants in colonisation settlements, all Indonesia, end of 1940

Total population in settlements
144,619 19,876 7,443
1,920 3,107
23,600 200,565

Source: Ibid.

Table 3: Population growth in Java and Indonesia, 1900-76

Year	Java		Indonesia		
	Population (thousands)	Growth rate over previous period (% per annum)	Population (thousands)	Growth rate over previous period (% per annum)	
1900	28,746	-	n.a.b	n.a.	
1905	30,098	0.9	n.a.	n.a.	
1917	34,157	1.1	n.a.	n.a.	
1920	34,984	0.8	n.a.	n.a.	
1930a	41,718	1.8	60.727	n.a.	
1940	48,400	1.5	70,400	1.5	
1950	50,456	0.4	77,200	1.0	
1961 ^a	62,993	2.0	97,019 ^c	2.1	
1971 ^a	76,102	1.9	119,232	2.1	
1976	82,103	1.5	126,093 ^d	2.0	

a Census year, other years are official estimates.

Source. Hull and Mantra (1981), p. 273.

b Population estimates not available for the Outer Islands.

c Including an estimate of 700,000 for Irian Jaya.

d Excluding rural areas of Irian Jaya, East Nusatenggara and Maluku. Growth rate adjusted for boundary changes.

and two-thirds of the population was estimated to live below the poverty line. From 1966 onwards, under the Soeharto regime, economic development began to be given priority over political objectives, and during the 1970s the oil boom provided Indonesia with the external resources for exceptionally rapid economic growth.

Even before the Republic of Indonesia was formally born in 1950, ambitious plans for transmigration had begun to be made by the new A 1947 plan to move 31 million people over 15 years gave way in 1951 to one to move 49 million over 35 years. economic circumstances were not propitious even for much less grandiose plans than these, and they became still less so under Sukarno's Guided Democracy from 1959 onwards. Between 1947 and 1966, ministerial and department responsibility for transmigration was changed 10 times, from Labour and Social Welfare, to Development and Youth, Home Affairs, Agrarian Affairs, Co-operatives, back to Manpower and so forth. practice, the Dutch policy of transmigrating families of Javanese subsistence farmers, or of landless hoping to become subsistence farmers, predominantly to southern Sumatra, continued. The numbers moved in any one year rarely exceeded 25,000 and fell to a trickle in the chaotic years of the mid-1960s (table 4).

As rational economic policy-making again became possible after the 1965-66 change of government, interest in transmigration revived, but with a different perspective. It came to be recognised that transmigration could not solve, or even substantially alleviate, the problem of "population imbalance" between Java-Bali and the other islands, if indeed that was the problem. Transmigration was now seen primarily as having a welfare objective, to raise the living standards of the migrants and that of their home villages in Java. It was also hoped that transmigration could serve as a strategy for regional economic development on the outer islands.

The first few years were devoted chiefly to rehabilitation of existing settlements that had been allowed to run down. Transmigration to new settlements was resumed under the First Five-Year Plan (Repelita-I, 1969-70 to 1974-75) which, in this as in other respects, put the emphasis on expanded food production. For some years there were high hopes

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Table 4: Transmigrants by area of settlement, 1950-68

Year	Sumatra	Kalimantan	Sulawesi	Elsewhere	Total
1950	77			-	77
1951	2,453		96	402	2,951
1952	16,585		338	682	17,605
1953	33,212	2,619	310	3,868	40,009
1954	26,430	1,736	1,078	494	21,389
1955	17,609	2,033	1,314	433	21,389
1956	22,135	2,119	96		24,350
1957	17,456	4,184	1,590		23,230
1958	25,700	463		256	26,419
1959	44,124	1,412	298	262	46,096
1960	19,128	2,947			22,075
1961	14,876	4,330	263	140	19,609
1962	13,966	7,543	420	200	22,129
1963	28,903	1,808	1,448		32,159
1964	11,787	2,448	987		15,222
1965	46,287	5,019	1,919		53,225
1966	771	375	2,774	728	4,648
1967	7,149	652	1,015	750	9,566
1968	9,664	2,010	1,922	287	13,883

Notes: 1951-53 to Banten, West Java; 1954-55 chiefly to Maluku; 1958-62 chiefly to western Lombok; 1966-68 to Irian Jaya.

Source: Hardjono, 1977, op. cit.

for this through swamp reclamation in coastal regions of southern Kalimantan and eastern Sumatra. When the practical obstacles proved too formidable for quick settlement of significant numbers, attention shifted to settlement on unirrigated (rain-fed) land in other provinces of Sumatra. Kalimantan and Sulawesi.

The OPEC oil price increases of 1973-74 and 1979-80, which brought hitherto undreamed-of foreign exchange earnings to the country and revenue to the government, raised Indonesian development targets all round, and transmigration became one of the main beneficiaries of the windfall. Both the scale of the transmigration programme and its regional development objectives became more ambitious. The income of migrant settlers was to be raised by giving them enough land to grow

cash crops as well as food for their own needs, with special emphasis on tree crops, such as rubber and oil palm. The pace of transmigration was to be accelerated to the point where settlements would economically justify the provision of new infrastructure and community facilities, such as schools, clinics and local government. The land settlements themselves were increasingly to serve as growth centres by attracting spontaneous migrants from Java and by promoting regional development beyond agriculture, in processing and other industries, as well as in trade and services.

The Second Five-Year Plan (Repelita-II, 1974-75 to 1978-79), with its strong emphasis on social welfare and regional development, at first adopted a transmigration target of 250,000 families (50,000 families or over 200,000 persons a year), a figure four times as high as the highest achieved in any previous year. This target was subsequently recognised as unrealistic and was in 1976 scaled down to 108,000 families for the plan period. The Third Five-Year Plan set its sights even higher, with a transmigration target of 500,000 families or over two million persons for the years 1978-79 to 1983-84, and within a year of its adoption the second oil price increase seemed to make so vast a programme financially feasible. Development budget allocations for transmigration rose from an annual average of Rp. (rupiah) 2 billion in Repelita-I (about US\$ 5 million) to Rp. 40 billion in Repelita-II and Rp. 218 billion (about US\$ 340 million) in Repelita-III. The latter change represented a more than fourfold increase in real terms and raised the share of transmigration in the development (capital) budget to almost 6 per cent. Since the early 1970s, the transmigration programme has also received an increasing flow of external assistance, from the World Bank and IDA, the Asian and Islamic Development Banks, UN specialised agencies and from bilateral donors.

III. Policies

1. Selection of transmigrants

From the beginning, the Indonesian transmigration programme has aimed at land settlement. With this objective in view, selection of transmigrants has rested on three principles. Transmigration should

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move family units. Participation should be voluntary. And priority should be given to people from "critical" areas. The three principles have not always been easy to reconcile with one another and with the requirements of effective land settlement.

The official criteria for selection of transmigrants in terms of personal characteristics have changed little since the days of the Dutch colonisation policy. The family head should be aged between 20 and 40 years, married with a family of not more than five members. No member of his household should be over 60 years, none under six months and no pregnant women may join the group. Farming skills are desirable but not a condition for selection (Suratman and Guinness, 1973). The available evidence suggests that the great majority of transmigrants have certainly consisted of nuclear families, but that in other respects the official criteria have been applied with considerable latitude.

Official statistics for families and persons moved in the past decade show a fairly stable average family size of around 4.2 persons, with a slight tendency for the average to decline (from nearly 4.3 in 1974-75 to just over 4.0 in 1982-83). But there have been wide variations around the average. A 1976 survey indicated that over 30 per cent of respondents had more than four dependants with them. Another survey showed one-third of transmigrant family heads to have been over 40 on departure, and many complained that they lacked the strength to clear the land. More important is the fact, brought out in numerous surveys, that many transmigrants had little, if any, experience in farming. Since selection aimed at helping especially the landless, it is not surprising that nearly one-third in one survey had never owned or managed farm land before and 16 per cent had not been engaged in farming at all (ibid.).

With the expansion of the programme in the 1970s, official policy statements began to stress the need to include among transmigrants an admixture of people with other skills, for building and construction and for services of many kinds. But there is little evidence that this has influenced transmigrant selection, as contrasted with secondment to settlement areas of teachers, nurses, agricultural extension workers and other government employees with requisite skills, or at least nominal

qualifications. If anything, the reduced emphasis on farming experience has tended to serve as an excuse for the inclusion in transmigrant groups of unskilled and unwanted people from Jakarta and other cities.

All voluntary migration contains an element of self-selection since willingness to tear up one's roots and face the risks and burdens of building up a new life in unknown surroundings implies a minimum of courage and determination. But in the circumstances of Java, the push of poverty has often made desperation the dominant motive. Willingness to move has not always gone hand in hand with suitability for the arduous life of transmigrant settlers. "Too often those who agreed to move were the less enterprising and less resourceful people in the village" (Hardjono, 1977, op. cit., p. 36), and the official priority for "critical" areas of heavy population pressure, poor soils and natural disasters has reinforced this tendency. Social Welfare Department and village officials have been tempted to solve their own problems by sending out of Java the landless, homeless and jobless who did not necessarily have the skills and pioneering spirit needed. Nor has participation always been entirely voluntary.

Recruitment and selection of transmigrants have been the task of transmigration branch offices set up in the capitals of the provinces of Java and Bali and some of the larger district (kabupaten) capitals. One function of these officials has been to spread information among village communities, so that farmers and landless labourers would become interested in moving away from overcrowded areas. Another function has been to make a selection from lists of willing transmigrants prepared by village heads. As programme targets were raised during Repelita-II and III, quotas were allocated for each province and kabupaten. need to fill quotas not infrequently led to the use of persuasion, to put it no more strongly. There have also been periods when political factors influenced the selection of transmigrants. Thus, the very large number of people moved in 1965 has been attributed to pressure by the Indonesian Communist Party which was seeking to strengthen its influence in certain outer island provinces (ibid., p. 37). does not seem to have happened more recently.

Another qualification of the principle of voluntary participation has been the practice of moving whole communities affected by natural xperinigrant cities.

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disasters, such as the eruption of the volcano Gunung Agung on Bali in 1963, or displaced by flooding for hydro projects, as in the case of the Wonogiri dam in 1976, when individual families were given little choice. In the latter case, however, government determination to make the settlement of the Wonogiri community at Sitiung (south Sumatra) a showplace helped to overcome whatever reluctance might have been felt.

By and large, one gains the impression that the principle of voluntary participation has been adhered to. Few transmigrants have returned to their home villages, and most areas of Java normally report an excess of registered applicants over available places.

As table 5 shows, during the period of Repelita-I (1969-73), the vast majority (87 per cent) of transmigrants came from Java, and most of the rest from Bali. No corresponding figures for the more recent period are available, but the proportions have not changed much, except for somewhat larger numbers from the island of Lombok (on the eastern side of Bali) which has suffered periods of famine.

Table 5: Number of migrants by area of origin, 1969-74

Area of origin	1969-70	1970-71	1971-72	1972-73	1973-74	Total
West Java	2,105	3,004	2,647	7.936	8,170	23,862
Central Java	4,093	5,979	4,119	15,455	27,778	57,424
Special area of						
Yogyakarta	5,397	2,636	2,739	5,916	6,212	22,900
East Java	4,726	3,475	4,139	16,850	24,966	54,156
Bali	1,527	4,901	5,226	5,761	4,380	21,795
Lombok					1,451	1,451
Local ²					108	108
	17,848	19,995	18,870	51,918	73,065	181,696

The 1973-74 figure for West Java includes 1,433 people from the Capital Territory of Jakarta.

Source: Hardjono, 1977, op. cit.

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[&]quot;Local" refers to indigenous people moving into project areas.

2. Identification of sites

Under the Dutch colonisation policy, selection of sites for transmigration settlements was governed chiefly by two criteria, suitability for irrigation (for wet rice production), and proximity to Java (to keep down transport costs). As the areas in Lampung and south Sumatra available and suitable for wet rice farming became increasingly crowded, attention perforce shifted elsewhere. Most of what good agricultural land there was on the outer islands, chiefly in north Sumatra and south Sulawesi, was by 1965 already under cultivation. The choice was between the relatively poor soils of rain-fed upland, whether under primary forest or under grass with secondary timber growth, and reclaimable swamp.

For a few years after 1966, the latter alternative excited most interest among transmigration planners, partly because food production was a high priority objective and reclaimed swamp land, with its opportunities for tidal irrigation, seemed suitable for wet rice cultivation. (Tidal irrigation operates on the principle of using the tides for controlled inundation by backed-up fresh water of fields on either side of great rivers sometimes up to 100 km inland.) Nearly 40 million ha, or one-quarter of the total land area of Indonesia consists of swamps, and of this some 2 million ha are believed to be potentially cultivable.

Swamp reclamation was pioneered in Indonesia by spontaneous migrants, Buginese (from south Sulawesi) in Jambi and Riau (eastern Sumatra) and local Bandarese in southern Kalimantan. Some efforts at swamp reclamation for land settlement were made in south Kalimantan under government auspices before and after the Second World War, but while canals were dug, mainly for improved communications, few people were settled.

Enthusiasm for swamp reclamation reached a peak in the years 1967-69, when a special unit in the Department of Public Works was created to accelerate the programme, but by the end of Repelita-I barely 7,000 transmigrant families had been settled on newly reclaimed tidal swamp land. With the oil boom, the high capital cost of swamp reclamation no longer seemed a major obstacle, and Repelita-II initially

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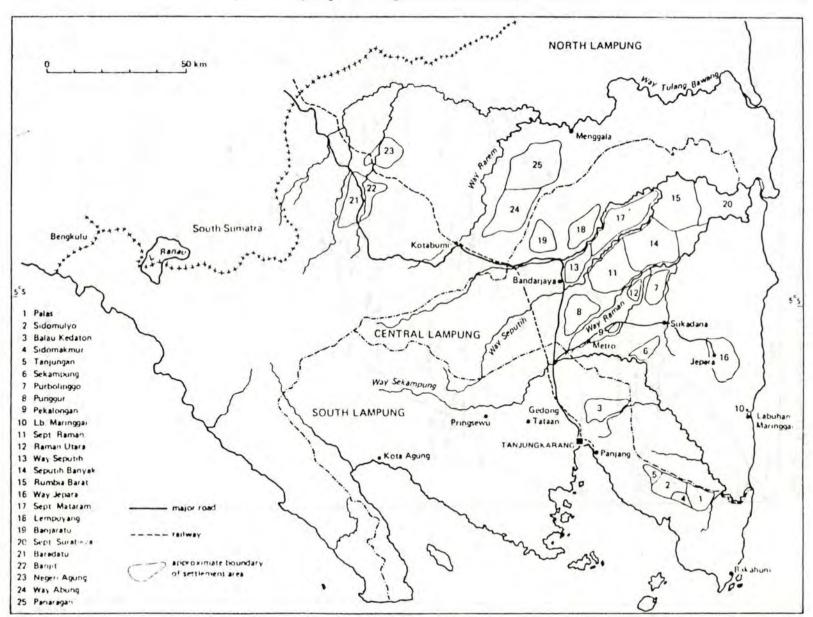
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set an ambitious target of 1 million ha of tidal swamp development. But after the Pertamina crisis of 1975, this was scaled down to 250,000 ha. By the end of Repelita-II (March 1979), even this target had not been reached. Of 208,000 ha of newly "opened" land, 117,000 had received no settlers at all and of the remaining 91,000 ha only 60 per cent were occupied by transmigrant families. The number of families settled on swamp land during Repelita-II was just over 9,000. For Repelita-III (1979-84), the swamp reclamation target was set at 400,000 ha, but once again performance lagged well behind in the first three years.

The disappointment of early hopes for swamp reclamation as a major source of land for transmigration settlements is partly accounted for by technical constraints. Not all coastal land is suitable for tidal "The site chosen must be close enough to the coast for tidal effects to be felt daily but not so close that crops are affected by the salt water that penetrates some miles inland in the dry season. the same time, the location must be such that annual floods in the wet season are not too extensive ... Obviously, a thorough knowledge of the local river regime is necessary before a site can be chosen for tidal rice fields." (ibid., p. 73). By the end of Repelita-I, it had become apparent that few suitable project sites were left in Riau, Jambi or West Kalimantan and that future swamp reclamation would be confined in the main to the Palembang (south Sumatra) and Banjarmasin (South Kalimantan) areas, apart from even more remote Irian Jaya. Canal design and construction also presented greater technical problems than had been expected, the capital costs were considerably, and for organisational and other reasons long time lags occurred between the ostensible "opening" of land by the construction of canals and the completion of clearing, housing and other preparations necessary for settlement.

With little scope for more settlement on irrigated lowland, and swamp reclamation lagging, the transmigration programme has had to look for settlement sites primarily in rain-fed upland areas of the outer islands. None of these can compare in fertility with Java or the relatively fertile areas of north Sumatra or south Sulawesi. Very large parts of Sumatra, Kalimantan, Sulawesi and Irian Jaya - 50 million

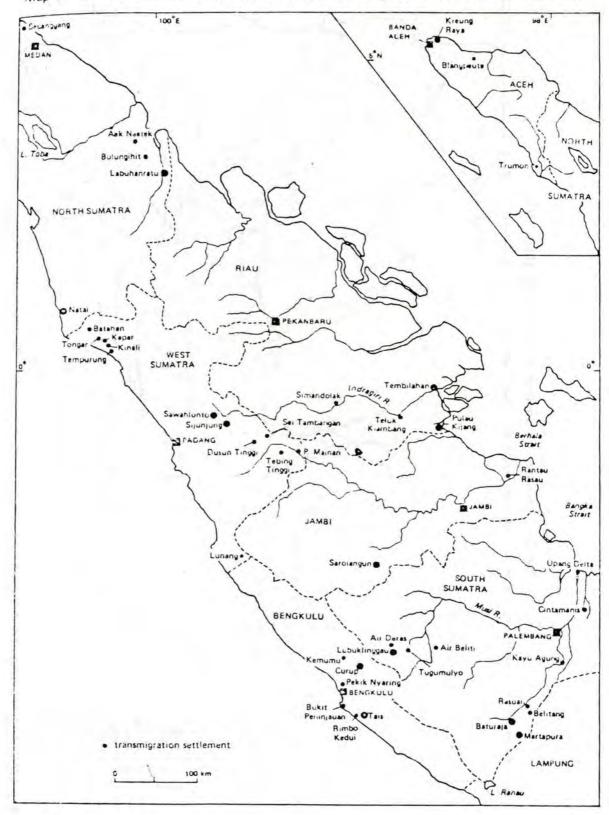
Map 2: Lampung: transmigration settlements, 1950-1974



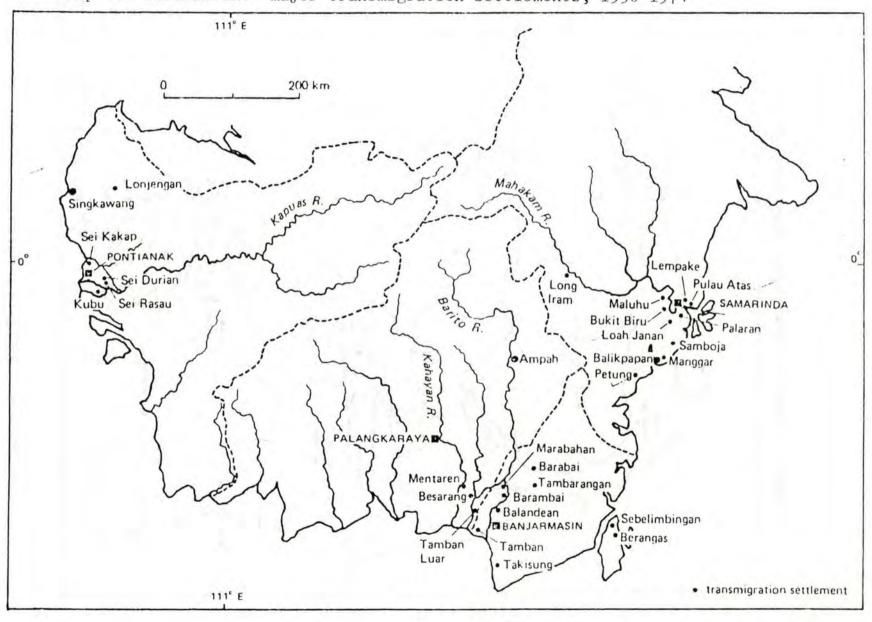
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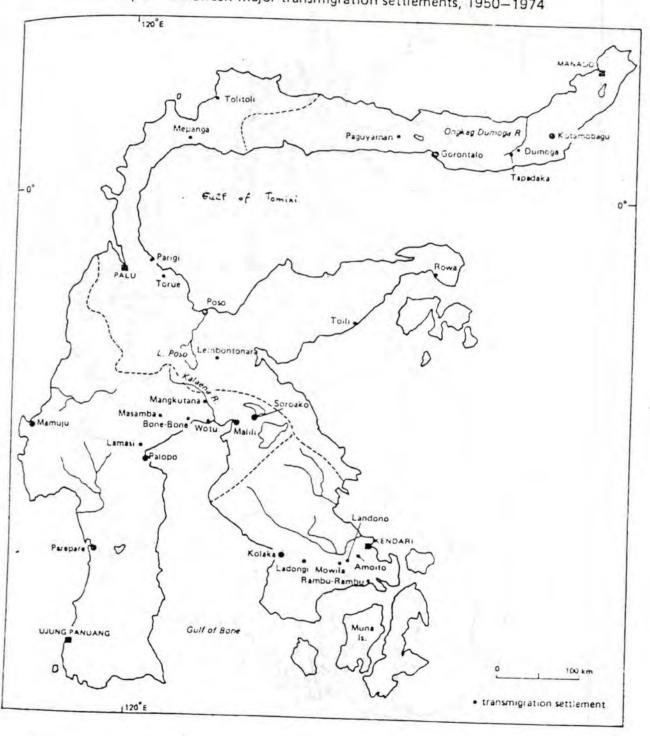
Map 3: Central and northern Sumatra: major transmigration settlements, 1950-1974



Map 4: Kalimantan: major transmigration settlements, 1950-1974



Map 5: Sulawesi: major transmigration settlements, 1950-1974



Source: Joan Hardjone, op.cit.

hectares or more - are said to have some agricultural potential, but they consist mostly of red-yellow podzolic soils which are highly susceptible to erosion and leaching. Their natural fertility is low, more suited to tree than to food crops.

Poor site selection was a major source of failure of settlements in the 1950s and 1960s. The job was left to provincial governments most of which had little enthusiasm for settlement of poor Javanese in their provinces. There was virtually no systematic survey work, to ascertain the nature of the soils or availability of water and to determine appropriate cropping patterns. "Transmigration officials simply accepted whatever land was made available." (ibid., p. 39).

Procedures for site identification were improved under Repelita-I Responsibility for selection remained with provincial governments, subject to approval in Jakarta. But the central government laid down specifications, usually a minimum area of 15,000 ha where five adjacent villages of 500 families each could be established. Soil surveys and enquiries into land rights were mandatory before a final selection This helped but did not altogether overcome the problem. Some surveys, particularly those conducted by overseas financing bodies or by local university teams in conjunction with the transmigration authorities, have been reasonably thorough, but most pre-settlement surveys have been confined to cursory inspection over a month or two. The result only too often was that, after years of settlement, crops failed, soil fertility declined and land disputes with local villagers disrupted farming activities (Suratman and Guinness, 1977, op. cit., p. 90).

In 1978, as part of a major reorganisation of the transmigration programme, responsibility for selection and evaluation of large sites was assigned to the Directorate of Regional and City Planning (DITADA) within the Department of Public Works. Although without any previous experience in agricultural planning, DITADA, with increasing assistance by the World Bank, soon developed staff and procedures. The standard planning programme prior to land clearing covered provisional selection of sites based on regional development criteria, such as proximity to existing or proposed roads and regional growth centres, screening of sites using existing data and aerial photography,

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topographic mapping, soil surveys and analysis, examination of land claims, tentative indication of roads and villages, and designation of clearing blocks. To cope with the acceleration of settlement required by Repelita-III targets, an emergency PAYP (plan-as-you-proceed) procedure was formulated under which site investigation and land development proceeded simultaneously.

While PAYP has inevitably tended to repeat the mistakes due to perfunctory identification procedures, the standard programme has been demanding in money and skilled manpower and has come up against ever more serious constraints on availability of suitable land on the scale demanded by Plan targets. The requirements for technical specialists of various kinds are, under plans currently being worked out with the help of the World Bank, to be met by domestic and foreign consulting firms, as well as by training of government officials. World Bank and other financial assistance is to look after a major part of the considerable costs involved. The land availability problem was much less manageable. By 1981, for example, of over 2 million ha identified for transmigration along the new Trans-Sumatra Highway, almost 95 per cent had been rejected as unsuitable for one reason or another. Large areas were excluded because the soil was toxic, swampy or too steep (an 8 per cent limit on slope was thought necessary to avoid erosion) or because of possible land claims or forestry regulations of inadequate access to services and markets or simply because of poor co-ordination with local officials. More will be said about this in section VI.

Land preparation

Under the Dutch colonisation programme, transmigrants received 0.7-1.0 ha irrigated plots, though irrigation often did not become available until some years after settlement, and the migrants were required to give 75 days labour to the construction of irrigation facilities (Hardjono, 1977, op. cit., pp. 18f). Experience in Lampung demonstrated that so small a plot allowed neither for an income above subsistence nor for expansion for children or newcomers. During the 1950s and 1960s, it became the standard to give each migrant family 2 ha, of which one was cleared by the government before the migrants' arrival, while the second was to be cleared later by the migrants themselves. Clearing of the second hectare often proved beyond the

migrants' capacity, and 2 ha of rainfed land at best yielded only a subsistence income. In the 1970s, therefore, initially on World Bank assisted projects, plots of 3.5-5.0 ha were allocated to each transmigrant family, of which the major part, including 1 ha already cleared and planted, was reserved for tree crops. The government also assumed responsibility for provision of increasingly complex infrastructure for settlements.

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Experience suggests that adequate preparation of sites, from soil surveys and land acquisition to the clearing of land, construction of roads and bridges and building of houses for settlers and community buildings for villages, can take up to six years. Until 1973, the transmigration programme provided for a category of semi-assisted (spontan) transmigrants who received only cash for transport, a plot of land (in some cases uncleared) and housing materials and were expected to build their own houses. Since this category was abolished, all transmigrants, at least in principle, have housing ready when they arrive.

Until 1978, the Directorate General of Transmigration was itself responsible for village planning, land clearing, construction of houses and other village infrastructure. In that year, village planning and land clearing were transferred to a new Directorate for Land Planning (PTPT) in the Department of Public Works. Clearing is performed by private contractors under contracts awarded and supervised by PTPT. Clearing of the fields does not inloude removal of the stumps, a task which takes migrants up to five years. There has been a good deal of debate about methods of clearing, the government agencies preferring mechanical clearing to keep up with timetables, while World Bank and other consultants advise manual clearing with chain saws, for employment and soil conservation reasons and because mechanical clearing requires large blocks to amortise equipment costs.

4. Assistance to migrants

The amount and kinds of other assistance given to transmigrants, apart from land and housing, have varied greatly at different times and among different parts of the programme. In the 1950s, it was assumed

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that it would be sufficient to settle migrants on the land, to provide seed and a food allowance for the first few months until the first crop was harvested. This proved unrealistic, whether because the land was not cleared when the settlers arrived or because the first crops were disappointing on account of poor soil, inadequate water or pests (ibid., After 1970s, regular transmigrants received support during the first 12 months (18 months in tidal swamp areas) and therefore had time to invest in clearing and cultivating their fields. support package consisted of a monthly ration of rice, salted fish, salt, kerosene and cooking oil, in addition to an initial supply of farming tools, fertiliser, pesticides, seeds and seedlings and in most projects one draft animal. Failure to ensure that these essential variable inputs reach the settlers when they need them has been one of the chronic logistic problems of the programme. In 1972, the World Food Programme began to provide settler families on five projects with a food ration (wheat, dried milk, fish, pulses) to replace rice and supplement the government ration and additional amounts as an incentive to perform specified works in subsequent years.

There has been even more variation in the range of services In principle, though by no means always provided to transmigrants. in practice, prospective settlers are assembled in transit centres in Java where they are briefed on what to expect in their new environments, while designated group leaders receive a three months training in organisation and administration of settlement units. For regular transmigrants, transport is normally provided by the authorities, first to the transit centres and then, often over long distances, by ship, train or bus to the project site. In recent years, to reduce delays, a large number of transmigrants have been flown to the settlement province, an expensive operation. At the project site, transmigrants are supposed to receive help and advice from project staff, including courses in agriculture, animal husbandry, health care, etc. But much of this, even in the more accessible and better organised large settlements, has remained on paper for lack of sufficient skilled staff, particularly of agricultural extension officers, health workers, teachers and social workers.

One of the most effective forms of assistance to transmigrants has been the promotion of tree crop cultivation. For the past 10 years, the World Bank has provided large-scale financial and technical assistance in support of tree crop, chiefly rubber, projects based on the nucleus estate principle. The primary object has been to raise the income of migrants by enabling them to grow a cash crop besides food. essential feature of the nucleus estate shceme is that the layout, technical know-how and organisational capacity of established estates, mostly government owned but commercially operated, is drawn on to assist smallholders, initially mainly local but now increasingly transmigrant settlers, by planting the first hectare with immature trees and subsequently providing extension-type help. The estates are permitted to retain 20 per cent of the land for their own profitable operation and therefore co-operate keenly through special Production Management Units (PMU). Much of the finance for land development, infrastructure and planting is raised by borrowing - in some cases rather too freely. The programme in the longer run undoubtedly promises a more secure livelihood for transmigrants than the traditional agricultural package for food production, as well as support for Indonesia's policy of expanding non-oil exports. Its chief disadvantage, apart from its long time horizon and consequent problems in the early years, is its high cost, currently estimated at some US\$ 15,000 of direct cost per family.

5. Ethnic relations

Indonesia's outer islands are sparsely inhabited, but they are inhabited - by millions of Indonesian people differing more or less widely from Javanese and Balinese in language, culture and ways of life - from the relatively backward Dyak people of Kalimantan to the Minangkebau, Bataks, Buginese and Acehnese with their highly developed and distinctive traditions. In some cases, as in the eastern provinces of Maluku and Irian Jaya, there are conspicuous differences in ethnic composition, skin colour and physiognomy. It is fair to say that the indigenous people of the outer islands have not generally welcomed settlement of Javanese transmigrants among them, especially where the Javanese have threatened to become a majority. Indigenous villagers not unnaturally tend to resent the special facilities, such as roads, schools and clinics, and other assistance, given to settlers.

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The Dutch policy was, for this very reason, to concentrate Javanese transmigrants in compact settlements, "colonies", with the result that they tended to become enclaves. Relations have generally proved easier where land claims presented no major problem and where local people have benefited from employment or business opportunities opened up by transmigrant settlements. But there has been little genuine assimilation, based on intermarriage, partly because transmigrants recruited from among the poorest in Java have not enjoyed sufficient social standing in Mingkebau, Buginese or Batak communities.

The transmigration authorities have tried to deal with this problem in four main ways. One has been planned movement of indigenous people into project settlement areas, with the object of helping them to benefit from project facilities and thus raise their own economic position. In some project areas, 10 per cent of each settlement site is reserved for locals who receive the same benefits, and must share the same duties, as the transmigrants. They are selected by the kabupaten administration on the basis of similar criteria as transmigrants. Secondly, some attempt has been made to put arrangements for land acquisition and compensation - one of the sorest points in relations with the indigenous people - on a sounder institutional and financial basis. Thirdly, indigenous people have been encouraged to establish stores and other businesses that cater to the needs of the new settlers. Compensation for village land sometimes provides the necessary capital. Finally, efforts are being made to improve co-operation between the central government's transmigration and line agency departments involved in the programme and the provincial authorities, in the hope that closer involvement of provincial officials and decentralisation of decision-making will help smooth relations.

In all these respects, practice still lags a good deal behind formulated policies. In any case, there is no escaping the fact that a sustained large-scale movement of people from Java, whether by government-sponsored transmigration or spontaneous migration, implies increasing Javanisation of the outer islands. This fact, which is implicit in all notions of correcting or moderating the population imbalance, and the suspicion in the minds of some that this is one of

the motives for the programme, may yet give rise to soico-political problems, especially where, as in Irian Jaya, it is liable to have international repercussions.

6. Administration and management

As was mentioned earlier, overall control of Indonesia's transmigration programme suffered many changes and vicissitudes in the 1950s and 1960s. The expansion of the programme to mammoth dimensions during the 1970s has continuously strained the country's limited administrative capacity. Efforts to improve administration and co-ordination among the numerous agencies involved in the programme have been made year by year, with indifferent success.

During Repelita-I, transmigration became the responsibility of a Directorate-General within the Department of Manpower, Transmigration and Co-operatives, assisted by co-ordinating bodies (BPPDT) set up at central, provincial and district levels to give it regular contact with other departments concerned - the National Planning Agency (Bappenas) and the Departments of Public Works, Agriculture, Home Affairs, Finance Social Welfare, Health, and Education. In March 1978, a major reorganisation created a post of Junior Minister for Transmigration, but transferred responsibility for project implementation from the Directorate-General to the seven departments (and by now over 50 Directorates-General) involved in the Repelita-III programme, co-ordinated by a board consisting of the relevant ministers. This does not seem to have worked very well, and the March 1983 Cabinet reconstruction brought yet another change. The Directorate-General became a department of its own, now including also the important transmigration sections of the Department of Public Works, with the former Junior Minister as Minister.

The 1978 reorgnisation allocated responsibility for programme implementation as follows: site selection, land development and road construction were given to Public Works; land alienation and transfer to the Directorate-General of Agraria; selection, resettlement, housing and community development to the Directorate-General of Transmigration and agricultural inputs and extension to the appropriate Directorates-General in the Department of Agriculture. In addition, the Department

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of Health, Education, Religion, Social Welfare, Telecommunications and several others were involved both in central administration and in the project areas. The Board of Ministers (BAKOPTRANS), which reported directly to the President, had the task of setting general policy guidelines. Under it was a body consisting of all the Directorates-General (SATDAL) responsible for co-ordinating day-to-day implementation. Within each implementing agency, a technical team was made responsible for design and implementation of appropriate components of the programme. In each province, the Governor, with a Provincial Committee for Transmigration, had the task of integrating the work of line agencies in the province. How far these arrangements have been retained or modified by the March 1983 reorganisation is not yet clear.

The Directorate-General of Transmigration had by 1982 grown into a very large apparatus, with nearly 10,000 employees. As numbers of staff have increased to meet the demands of a considerably expanded programme, quality has inevitably suffered, especially among on-site staff in project areas. Many of the Project Management Units and Project Co-ordinators appointed by the Directorate-General to look after individual projects are reported to be dedicated and effective in often very difficult and frustrating conditions. But it is not easy to persuade persons with the requisite professional skills and experience to leave Jakarta and other cities to live in remote areas under pioneering conditions on meagre Indonesian Government salaries. Shortage of settlement staff for extension and all other services, and inadequacy of training facilities, have been one recurrent theme in reports on transmigration settlements in the last few years.

Another has been the problem of co-ordination. A 1977 study of the programme pointed to lack of co-ordination between central, provincial and district offices of the Transmigration Department as "a major source of failure to reach targets and spend budgets" (Suratman and Guinness, 1977, p. 88). Since then the number of departments with responsibilities for various aspects of the programme, and the number of directorates-general and sub-directorates in each have steadily increased. To improve co-ordination was one of the objectives of combining the functions of the former Directorate-General for Transmigration and the transmigration sections of the Department of Public

Works in a single separate department in March 1983. But this covers only part, though a major part, of the unwieldy bureaucracy in charge of the programme.

Not the least difficult aspect has been the division of responsibility between central and local authorities. In principle, the central government's transmigration authorities retain responsibility for settlements until they become "self-supporting", when they are transferred to the local authorities, ultimately to be integrated into provincial and kabupate administration. As table 6 shows, transfer in the difficult years before and during Repelita-I was often long delayed. If, as frequently happened, older projects were transferred irrespective of their level of economic development, the local authorities were saddled with problems for which they were usually not well equipped. There has been some improvement in this respect, but hardly enough to match the rate of expansion of the programme.

IV. Spontaneous Migration

Before returning to the results achieved by Indonesia's official transmigration programme, something needs to be said about the flow of spontaneous migrants that has occurred alongside it. There has always been movement of people among the islands and provinces of Indonesia and at times such movement has assumed considerable proportions.

The first large flow from Java to the outer islands in the twentieth century consisted of labour needed by, and attracted to, the plantations established by Dutch and other Western enterprises, espeically in north and south Sumatra. In the 1920s some of this labour was recruited and transported by private contractors (mandor). But there was also voluntary movement to the plantations, and this increased greatly when the "penal sanction" under the Coolie Ordinance was removed in 1930 (Hardjono, 1977, p. 17). The needs of the plantations for labour were also a factor in the Dutch colonisation policy since settlement of farm families near the plantations in south Sumatra was expected to help improve labour supply, partly through off-season employment of the settlers themselves, but chiefly through the attraction to the settlement of a flow of friends and relations of settler families, as bawon workers or as permanent members of settler households (ibid.).

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Transmigration projects in Lampung, 1952-March 1973 Table 6:

onsibility	Project		Period of	Project	Population	Year of
al govern-	Proj		settlement	area (ha)	(1973)	transfer
tlements	-	South Lampung	1-			
ed to the	I.	Palas	1958-73	14,300	15,127	1970*
l kabupaten years	2.	Sidomulyo Balau Kedaton Sidomakmur	1958-73 1961-73 1967	14,500 12,000 500	27,053 7,041 977	1970* 1970
frequently	4.	Tanjungan	1968-73	1,000	1,867	
r level of				42,300	52,065	
problems	II.	Central Lampung				
been some	6.	Sekampung	1952-55	3,000	18,069	1955*
e rate of	7.	Purboling go	1952-56	10,000	46,704	1963*
	8.	Punggur	1953-57	10,000	33,013	1968*
	9.	Pekalongan	1953-57	1,000	8,711	1963
	10.	Lb. Maringgai	1953-56	142	3,023	1956
	11.	Sept. Raman	1954-59	12,630	46,915	1968*
official	12.	Raman Utara	1955-58	9,958	28,655	1968*
	13.	Way Seputih	1954-61	10,537	57,172	1968*
the flow of	14.	Seputih Banyak	1958-61	19,180	44,752	1969*
ana hac	15.	Rumbia Barat/	XOVE V OVE			
nere has		Sept. Buminabung	1960-72	9,738	20,537	1969*
rinces of	16.	Way Jepara	1957-63	11,658	46,255	1968*
J-weble	17.	Sept. Mataram	1962-65	38,000	43,229	1969*
derable	18.	Lempuyang	1959	12,000	732	
	19.	Banjaratu	1959-63	6,000	4,209	
	20.	Sept. Surabaya	1965-70	10,000	11,045	
e twentieth				163,843	413,021	
plantations						
ly in north	III.	North Lampung				
recruited	21.	Baradatu Banjit	1959-63 1952-63	17,500	19,906 19,303	1970* 1970*
re was also	23.	Negeri Agung	1965	8,500	8,542	
eatly when	24.	Way Abung	1965-73	20,000	29,138	
ed in 1930				46,000	76,889	
labour were	Tota	al Lampung:		252,143	541,975	

Note: Projects marked * are now administrative districts (kecamatan).

Sources: Tanjungkarang, Direktorat Transmigrasi (1973), pp. 43-44; Hardjono, 1977.

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The concept of "chain migration", of transmigration settlements established by government acting as "seed communities" which would attract unsponsored immigration through family ties, has been an important element in thinking about transmigration in Indonesia ever since. Indeed, it has sometimes been suggested that "the ultimate goal in transmigration is to set up a flow of "spontaneous" migrants who move from overcrowded areas of their own accord and without government assistance" (Hardjono, 1977, p. 30).

Such chain migration has undoubtedly occurred on quite a large scale, particularly to the provinces closest to Java where two-way communications were easy. Sometimes unsponsored migrants would take up land abandoned by disappointed settlers. More often, they would share the work and income of settler families, or would move on to seek employment on estates or logging concessions. In favourable circumstances, spontaneous chain migration could reinforce the official transmigration programme, achieving its purposes at relatively little cost to the government through a kind of multiplier process, by accelerating the growth of settler communities and providing additional labour for clearing, planting and other agricultural tasks. But chain migration continuing over many years could also add to overcrowding in settlement areas. This has been a major problem in Lampung and adjoining parts of southern Sumatra.

A third kind of spontaneous outward migration has been that of independent settlers, some from Java but chiefly from Bali. The Parigi settlement in Central Sulawesi is the best known example (Davis, 1976). The settlement began in 1950 with 17 Hindu Balinese families who had been exiled to Sulawesi for breaches of <u>adat</u> (customary) law. They were joined in 1957 by a group of Christian Balinese. Over the next 25 years, nearly 10,000 people from Bali followed, all in some way connected with the original settlers. Many were personally recruited in Bali by Parigi settlers in need of labour or anxious to help friends and relatives, particularly in the aftermath of the communal and political conflict in Bali which accompanied the change of regime in 1965-66. For a time, provincial and national government assistance was secured, but during the 1970s the flow continued entirely independently, and

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even in the face of government discouragement. The introduction of the new rapidly maturing varieties of rice which permitted two-three crops a year produced higher incomes but also shortages of labour. Both attracted more spontaneous migrants, in increasing numbers not merely as farmers or farm labourers but also as school teachers, shop-keepers, craftsmen and others who found their services in demand in the thriving communities which, from the initial settlement, spread out along the coast of the Gulf of Tomini.

There has been much discussion of the reasons for the exceptional success of these Balinese settlements. One undoubtedly was the fact that the area into which the Balinese moved, Tana Boa (empty quarter), had been depopulated at the end of the nineteenth century and was virtually empty. Another was the close cohesion of the Balinese who brought to the settlement their distinctive culture and tradition of A third has been the self-selective process village co-operation. referred to earlier which tends to raise spontaneous migrants above the average in initiative and self-reliance. The second of these characteristics has frequently been observed among migrants from Bali, government-sponsored as well as spontaneous. "The Balinese settlers, who have generally been allotted land in a contiguous area, have worked together in clearing the land, and improving irrigation, and have created many of the organisations that characterised their home culture. Each month they meet together to discuss social or agricultural matters, and group work activities are regarded as compulsory for all Balinese, as are contributions to celebrations of any of their group." (Suratman and Guinness, 1977, pp. 95f). The third factor has characterised other spontaneous settlers, such as the Buginese who pioneered settlement in eastern Sumatra.

Partially offsetting spontaneous outward migration from Java in these various forms, there has always been a reverse flow, from the outer islands to Java. As economic growth accelerated in the 1970s, heavily biased towards Java, this reverse flow became very substantial, motivated by perceived employment opportunities and the attractions of city life. It has not directly affected the transmigration programme, but it has certainly made the objective of mitigating Indonesia's population imbalance still more difficult.

V. Results

1. Number of transmigrants

Judged merely by the number of people moved from Java to the outer islands, the transmigration programme has achieved remarkable results in the past 10 years. As table 7 shows, the number of families (and persons) moved annually doubled during Repelita-I as compared with the preceding two decades, doubled again during Repelita-II and at least quadrupled in Repelita-III. (Statistics are so far availble only for the first four years. If the Repelita-III target is reached in the current fiscal year, the increase, compared with Repelita-II, will be nearly sixfold.) Table 8 indicates that the majority of transmigrants have been settled in Sumatra, around 60 per cent in each of the three Five-Year Plan periods. The proportion settled in Kalimantan has also remained fairly stable around 15-18 per cent. But the proportion moved to Sulawesi has declined, from 26 per cent in Repelita-I to 12 per cent in Repelita-III, in favour of the eastern provinces of Maluku and Irian Jaya whose share has risen to 7 per cent.

Table 7: Transmigrants, 1950-82

	1950-72	Repelita-I 1969-70/		Repelita-III 1979-80/1983-84		
		1973-74		Target 1979	-80/end-1982	
Persons per year	417,500 18,900	181,700 36,300	376,900 75,380	2,100,000 420,000	1,169,000 292,000	
Families ^a per year	100,000 4,500	46,100 9,200	87,800 17,560	500,000	286,000 57,200	

Assuming 4.2 persons per family.

Sources: 1950-72: Hardjono, 1977, op. cit.

1969-70/1973-74: ibid.

1974-75/1982: Directorate-General of Transmigration,

Jakarta.

Table 8: Number of families and persons settled under transmigration programme, 1969-70/1982-83 (thousands)

Java to the		Sumatra	Kalimantan	Sulawesi	Maluku	Irian Jaya	Total
remarkable	A. Families					-	
er of families	1969-70						3.9
s compared	1970-71						4.4
elita-II and	1971-72						4.1 11.3
availble only	1972-73 1973-74						22.4
ched in the							
II, will be	Repelita I	0.0	1.4	2 2	0.2	0.2	12.2
ansmigrants	1974-75 1975-76	8.0 6.1	1.6	3.3	0.2	0.2	13.3 11.0
of the three	1976-77	5.5	3.2	3.2	-	-	11.8
	1977-78	12.7	5.7	4.5	7 - ny	0.2	23.1
itan has also	1978-79	20.0	4.5	3.9		0.5	28.8
proportion		51.9	17.1	17.6	0.2	1.0	88.0
lita-I to 12		100					
s of Maluku	Repelita-II						
5 or marara	1975-80	31.5	10.5	4.6	2.1	2.1	50.7
	1980-81	46.9	16.6	12.4	2.0	2.0 5.3	79.9 88.0
	1 31 - 82	52.5 43.6	18.6 11.4	7.6	1.1	2.7	
	1982-83 1983-84	43.0	11.4	7.0	1.7	4.1	67.4 [125.0] ^b
		174.5 ^a	57.1 ^a	35.3ª	7.1 ^a	12.0 ^a	
	Repelita-III		1.57			-	[500.0] ^b

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69,000 92,000

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57,200

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Table 8 (continued)

	Sumatr	a	Kalimar	ntan	Sulawe	si	Maluk	u	Irian	Jaya	7
B. Persons		90		9		o o		90		9	
1969-70 1970-71 1971-72	11.1 8.4 9.0	62.4 42.0 47.6	2.6 4.0 4.7	14.6 20.0 24.9	4.1 7.4 5.1	23.0 37.0 27.0	0.2	1.0	-	-	
1972-73 1973-74	31.8 45.0	61.2	7.2 8.0	13.9	11.9 19.0	22.9 26.0	0.5	1.0	0.5	1.0	
	105.2	57.9	26.6	14.6	47.7	26.3	1.7	0.9	0.5	0.3	
Repelita-I											
1974-75 1975-76 1976-77	35.2 27.3 26.3	62.0 56.9 49.0	7.1 9.1 13.8	12.5 19.0 25.7	13.3 10.9 13.7	23.4 22.7 25.5	0.6	1.0	0.7 0.7	1.2	
1977-78 1978-79	54.4 84.6	57.2 68.7	20.2	21.2	20.0	21.0 15.7	-/-	-	0.7	0.7	
	227.8	60.4	69.4	18.4	74.8	19.8	0.6	0.2	4.3	1.1	
Repelita-II											
1979-80 1980-81 1981-82	130.7 191.5 210.8	62.2 58.5 58.9	43.3 67.5 77.8	20.6 20.6 21.7	18.6 51.6 42.9	8.9 15.8 12.0	8.6 8.5 4.3	4.1 2.6 1.2	8.9 8.4 22.1	4.2 2.6 6.2	
1982-83 ^c 1983-84	174.9 707.9	64.2	47.8 236.4	17.5 20.2	30.8 144.0	11.3 12.3	7.9 29.2 ^a	2.9	11.3 50.7 ^a	4.1 4.3	

¹⁹⁷⁹⁻⁸⁰ to 31 December 1982

Totals may not add owing to rounding.

Sources: Repelita-I: Hardiono, 1977, op. cit.
Repelita-II and -III: Directorate-General of Transmigration.

Target

¹ April 1982 to 31 December 1982.

The importance of total numbers should not be underestimated. When the Repelita-III target of 500,000 families was announced, it was widely regarded as unrealistic and unattainable. To have managed the movement and settlement of some 60-100,000 families of migrants a year in the often extremely difficult conditions of the Indonesian archipelago represents an organisational achievement of no mean order.

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Even this tremendous effort, however, has merely underlined what has become obvious and almost universally admitted, that transmigration cannot hope to correct the population imbalance between Java and the outer islands. The population of Java (including Bali) is now close to 100 million and growing at about 2 per cent a year. This means that, even if it were possible to sustain transmigration at the Repelita-III target rate, this would remove from Java only one-fifth of the annual increase in Java's population. The population imbalance in Indonesia is an irremediable fact of life. The question is only whether whatever economic or other disadvantages it may entail can be remedied within Java.

This is not to say that, in terms of numbers, the effort has been pointless. The removal of 300-400,000 people a year must have done something to relieve population pressure and consequent social problems in some of the poorest areas of Java; and in so far as low population density and labour shortage constitute obstacles to the economic development of the outer islands, the influx of this number of transmigrants represents a significant addition to their natural increase (of about 1.4 million a year⁵). But it would clearly be difficult to justify the transmigration programme in terms only of its direct effects on relative rates of population growth in Java and the outer islands.

Side by side with transmigration, that is, the movement of government-sponsored migrants, there has, as we have noted, been for many decades a flow of spontaneous migrants in the same direction, and in the past decade also a substantial reverse flow. Table 9 presents a rough estimate of the magnitude of these flows, based on a comparison of official transmigration statistics with population census data on interprovincial migration, in two periods, 1950-72 and 1975-80 (approximately coincident with Repelita-II). In the earlier period, when the flow of

transmigrants was small, it was quite swamped by spontaneous out-migration from Java which was four times as large. Even allowing for one million in-migrants, the net outflow from Java of spontaneous migrants was considerably larger than the outflow under the official transmigration programme. In the Repelita-II period, this was no longer the case. As economic development accelerated in Java, a large number of people from the outer islands were attracted to Java, and especially to Jakarta, by business and employment opportunities that seemed to be opening up. While the gross outflow of spontaenous migrants still exceeded that of government-sponsored transmigrants, the net outflow, after allowing for the reverse movement to Java, was smaller.

Table 9: Transmigrants and spontaneous migrants from Java 1950-72, 1975-80 (thousands)

1950-72		1975-80	
Total	Annual average	Total	Annual average
2,068	94	1,107	221
-1,065	-48	-509	-102
1,023	46	598	119
418	19	377 ^b	75 ^b
604	27	221	44
	Total 2,068 -1,065 1,023	Total Annual average 2,068 94 -1,065 -48 1,023 46 418 19	Total Annual average 2,068 94 1,107 -1,065 -48 -509 1,023 46 598 418 19 377 ^b

a Java only.

Sources: 1950-72: Arndt and Sundrum (1977).

1975-80: Transmigrants: table 4, Repelita-II.

Other: Population Census 1980.

b 1974-75 to 1978-79.

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In this crude form, these figures do not tell us much. relevance to an assessment of the transmigration programme depends on whether there was a causal connection between spontaneous and government-sponsored migration. If the outflow of spontaneous migrants was directly or indirectly induced by the transmigration programme, the programme can be credited with a larger total effect on the population balance than the official transmigration statistics would suggest. on the other hand, spontaneous migration was wholly or largely independent, it might suggest, on the contrary, that the effort and resources that have been expended on transmigration would have been better devoted to facilitating and encouraging spontaneous migration. shall return to this important question in section VII. the most favourable (and certainly unrealistic) assumption that the spontaneous outflow from Java was entirely induced by transmigration, and the spontaneous inflow entirely independent of it, the gross outflow of all migrants from Java still fell well short of Java's natural population increase during Repelita-II. No comparable figures for the most recent period of Repelita-III are as yet available, but it is unlikely that the conclusion would be any different.

If transmigration cannot be justified by its effects on the population balance, what of its achievements in terms of the two other objectives which have in the past decade been most commonly held out, a better life for the transmigrants and the promotion of regional development in the outer islands? In the absence of any reliable measure or data by which the results can be quantified, there is room for wide differences of opinion. A personal judgement, based entirely on secondary sources, is that in both respects there has been a marked improvement in recent years but that the benefits are still extremely variable and on average relatively small.

2. Transmigrant Welfare

There is now a fairly general consensus that the Dutch colonisation policy, and transmigration in the first 25 years after Independence which continued that policy in essentials, did little more than reproduce, in Lampung and other settlement areas, the problems of rural Java. As one well informed commentator put it, "settlements were more or less expected to remain at subsistence level" (Hardjono, 1977, p. 44).

The realisation that cash crop cultivation is necessary if settlers are ever to achieve higher standards of living lies behind the shift of emphasis during Repelita-II and III in favour of combined food and cash crop production on larger holdings, a shift strongly supported by the World Bank. This, and many other improvements in the programme to which reference has already been made, have, it seems, done a good deal to ameliorate conditions and prospects in the average settlement. Life is still hard, especially in the early years, and what little evidence there is suggests that average income per head is only a little above the average in rural Java. Even in the new World Bank assisted settlements, farmers with an average of just over I ha under cultivation are found after three to four years on the site to reach an annual family income of only about US\$ 600 (at 1982 prices). This may be compared with an estimated average per capita consumption expenditure of about US\$ 120 in rural Java.6 Even optimistic projections put target family income on the most favoured World Bank assisted projects at no more than Rp. 2 million (1982 prices) at full development in 1990, or about US\$ 450 per capita, little above estimated per capita income for Indonesia as a whole.

Surveys of farmers in older upland settlements suggest that crop yields and incomes are both low and extremely variable. In one survey, nearly two-thirds of farmers were found to obtain 500 kg of paddy (gabah or unhulled rice) or less from their holdings in a year. These farmers relied on crops other than rice for subsistence and obtained cash largely from off-farm work. In the dry grassland areas, particularly, where soil fertility diminishes quickly, yields decline after a few good harvests and farmers revert to cassava as the subsistence crop (Suratman and Guinness, 1977, p. 94). In tidal swamp areas, higher rice yields, of around 1 ton/ha, are usually achieved, but even this is much below the average in Java and Bali.

In assessing the significance of these data, however, it must be remembered that most of the transmigrants are not average Javanese. The majority are recruited from among the landless and poorest. To them, even an average migrant standard of living, including a piece of land of their own, represents a big improvement. The flow of spontaenous migrants to the settlements supports this conclusion. They must at least believe that they will be better off.

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All reports agree that there is a wide dispersion around the average income of settlers (Hardjono, 1977; Suratman and Guinness, 1977; Suratman, Singarimbun and Guinness, 1977; Jones, 1979; Fachurrozie and McAndrews, 1978). On the one hand, there are quite prosperous Balinese settlers, such as those at Parigi, but also transmigrants, among them those at Belitang and Baturaja in south Sumatra. other hand, there are the overcrowded areas of Lampung, comparable to some of the poorest in Java, and isolated transmigrant settlements in central Kalimantan or Irian Jaya where life is a struggle for survival. Many disappointed settlers have over the years abandoned their holdings to look for a livelihood in logging or other work. One survey of a project in a rather remote grassland area of Lampung which was settled in the early 1970s, with "social welfare" families, mostly of urban unemployed with no experience of the hard work of clearing and the constant effort of farm life, and little stomach for it, found that by 1977 only just over half of the original families were still on site. sequently, as conditions on the settlement improved and more opportunities for off-farm employment became available, quite a few returned to their plots. Certainly, on publicly available evidence, very few transmigrants appear to have returned to their home villages in Java.

Opportunities for off-farm employment are clearly a major determinant of settlers' living standards and of income differentials between more and less successful projects. Off-season wage employment may be essential for subsistence and the only source of cash income until marketable crops can be grown. In upland areas, the most important opportunities have been in logging and in construction, although misguided regulations have in some areas forbidden household heads to work in construction. In tidal swamp settlements, settlers have generally had to depend, apart from fishing, on limited opportunities of wage employment as labourers on site development.

Another major factor is marketing outlets for cash crops which, in turn, depend largely on access to town or major roads. (In tidal swamp areas, canals provide easy transport, but towns or other larger communities are liable to be far away.) While roads or canals may give adequate access, marketing networks to link settlers to local and regional markets take time to evolve. Even in relatively prosperous settlements, such as that in the Luwu district of Sulawesi, economic improvement has

been held back by isolation. Migrants have lacked incentive to product more than they could consume, or to cultivate commercial crops, because of difficulty in selling the products. In some settlement areas, indigent ous traders with capital to acquire and market produce in larger quantity render a valuable service to transmigrants.

3. Regional Development

One's judgement about the contribution that transmigration has made to regional development in the outer islands depends very much on what one means by regional development. Without doubt, large areas on Sumatra, Kalimantan and Sulawesi have been developed in the sense that primary forest has given way to cultivation of rice, cassava and other food crops, that some 2-3 million people have been settled in new village communities and that, associated with the programme, there has been considerable investment in infrastructure, especially roads, irrigation and swamp reclamation.

There is also statistical support for the presumption that transmigration has contributed to one of the major policy objectives of the three Five-Year Plans, increased food production. Table 10 presents growth rates of (sawah) rice production in the various provinces of Sumatra since the 1950s. Over the period as a whole, the northern Sumatran provinces which have received relatively fewer transmigrants have shown somewhat higher rates of yield increase than those of southern Sumatra. But in the southern provinces harvested area increased at an average annual rate of over 4 per cent and production at over 5 per cent; and in the last quinquennium, even yield per hectare rose fastest in the two chief transmigrant settlement provinces, Lampung and south Sumatra, resulting in an annual rate of growth of output twice as rapid as that of Java. There is no reason to doubt that the inflow of transmigrants and opening of land to irrigated rice production has been a major factor in this. Of course, there remain the questions how much longer such rates of increase in area or yield can be sustained in these provinces and whether such rates can be matched in the rainfed upland areas.

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Table 10: Growth rates of area, production and yield of wet rice (sawah) production, Sumatra, 1951-60 to 1976-80 (per cent per annum)

	1951-60 to	1976-80		1971-75 to 1976-80			
	Harvested area	Pro- duction	Yield	Harvested area	Pro- duction	Yield	
l. Aceh	1.9	3.3	1.4	1.7	1.9	0.2	
2. North Sumatra	3.5	4.8	1.3	0.4	0.2	-0.2	
3. West Sumatra	2.6	3.4	0.8	1.4	5.4	3.9	
4. Riau	3.6	4.6	0.9	-0.2	3.0	3.2	
5. Jambi	4.1	4.8	0.7	4.1	7.3	3.2	
6. South Sumatra				3.5	7.6	4.1	
7. Bengkulu				1.2	1.7	0.5	
8. Lampung				5.1	9.2	4.1	
6 & 7 & 8	4.6	5.2	0.6	3.7	7.3	3.5	
Sumatra	3.4	4.3	0.8	1.9	3.7	1.7	
Java	0.4	3.4	3.1	0.6	3.7	3.2	

Notes:

In the earlier period, Bengkulu and Lampung were part of the province of South Sumatra.

Totals may not add owing to rounding.

Source: Central Statistical Bureau: Production of food crops in Indonesia.

If by regional development is meant the promotion of industry and trade, the exploitation and processing of the outer islands' mineral, forestry and other natural resources and the improvement of transport and communications necessary to integrate them more effectively into the national and world economy, the contribution of transmigration has so far been quite marginal. Members of settler families, and spontaenous migrants initially attracted to transmigration settlements, have at times eased labour supply problems for timber concessionaires and for small-holder and estate producers of cash crops. The roads built in association with transmigration have incidentally improved market access for timber, cash crops and processing industries. But the major industrial

developments in the outer islands of the past decade, chiefly based on oil and natural gas, mineral processing and plywood production, have occurred entirely independently; and manufacturing development has continued to be largely confined to Java because the outer islands cannot effectively compete with Java's domestic market, labour supply, physical, business and administrative infrastructure and lines of communication.

To expect transmigration by now to have registered a marked impact on regional development in this sense may be unreasonable. Large-scale transmigration has been going on for only a few years. In opening up large tracts of jungle and swamp, it may be said to have laid the foundations for a process that must be thought of in terms of decades, into the period in the next century when the oil sector can not longer be relied upon to propel development of the outer islands. How much weight can be given to this argument depends in large part on two sets of questions. One relates to the prospects for overcoming the many difficulties which the transmigration programme has had to face and still faces. The other concerns the availability of alternatives to transmigration for the broad purposes this programme has been designed to promote.

Programme Problems

Little needs to be added to what has already been said about some of the major problem areas of the programme - migrant selection, assist ance to migrants with inputs and services, cropping systems, ethnic relations and administration.

The central dilemma in migrant selection has been between the criteria of need and suitability. So long as relief of population pressure in the most poverty-ridden areas of Java and the welfare of the transmigrants remain major objectives of the programme, the dilemma is inescapable. But it has come to be increasingly recognised that the prospects for successful land settlement, let alone for regional development outside agriculture, depend on a sufficient admixture of people with leadership qualities and a wide range of skills. The answer lies partly in deliberate emphasis on such qualities in selection and partly further training facilities in or near the settlements.

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Most of the deficiencies in assistance to transmigrants can be traced to logistic problems connected with inefficient administration and co-ordination. These, in turn, are endemic in Indonesia as in other developing countries and have merely been aggravated by the pace at which the whole programme was expanded in the atmosphere of euphoria engendered by the oil windfall of the 1970s. There are no easy solutions, and most of what needs to be done is obvious enough.

As regards farming systems on transmigration settlements, the main answer now in favour among transmigration policy-makers and consultants to the problems encountered by the earlier policy of transferring to the outer islands the Javanese system of wet rice cultivation is agricultural diversification. Since Repelita-II, as we noted before, it has been official policy to aim at providing in rainfed upland settlements larger plots, so as to enable settlers to supplement their income by cash crop production. Other measures now proposed to improve settlers' incomes and prospects are better preliminary soil surveys to determine the most appropriate cropping pattern in each area, whether for food crops of different kinds or tree or other cash crops; facilities for timber disposal for the benefit of settlements, whether by contractors or settlers themselves; encouragement of animal husbandry; and with respect to all of these, more adequate extension and advisory services.

In contrast to all these problems of the transmigration programme which are in principle manageable, there are two the full seriousness of which has emerged only in the last year or two. They are shortage of land and shortage of money. Each deserves fuller discussion.

VI. Key Constraints

Land shortage

The idea that there should be a shortage of land for transmigration settlements in the vast areas of Indonesia's outer islands usually meets with incredulity. The statement one hears quite frequently that Sumatra, Kalimantan and Sulawesi "are full" is certainly an exaggeration. But even with improved procedures for site identification for which the World Bank is providing considerable finance and technical assistance, lack of suitable sites is regarded by many informed observers as the crucial constraint on continuance of the programme on anything like its present scale.

We noted before the great contrast in soil fertility between Java and most of the outer islands. Much of the land area of the latter that is not already cultivated is unusable - mountains or swamp. Much of the rest consists of poor soils and/or steep terrain subject to leaching and erosion. It is difficult to believe that in coming decades new technology will not make much of this land cultivable, by new kinds of fertiliser, new techniques of farming, cheaper methods of swamp reclamation. But such technological advances cannot be counted to transform the situation within the next Five-Year Plan period or the one after. Apart from these basic limitations, three other factors limit the amount of land left for transmigration sites.

The first is concern for conservation and rational exploitation of Indonesia's forest resources. It has been forcefully argued that sustained yield forestry represents a more economic use of primary forest land than agricultural development, unless all timber is fully recovered during clearing and makes a major contribution to agricultural development in the first year (Burbridget et al., 1981). This case is now substantially conceded by the transmigration authorities. Mapping and surveying, moreover, are more difficult in primary forest, and the cost of clearing is ten times as high in forest as in grassland areas. In practice, increasingly effective control of forest land by the government forestry agencies has now led to a situation where primary forest is virtually unavailable for transmigration settlement sites.

The alternative is grassland or land cleared of forest by logging. The problem here is alang-alang grass (Imperata cylindrica) which has long been recognised as the chief obstacle to use for agriculture of upland areas not under virgin forest in much of Sumatra and Kalimantan. Intensive research has been undertaken for many years on the possibilities of mechanical, chemical or vegetative eradication of alang-alang. A few years ago, experiments with vegetative control by means of a leguminous cover crop (stylosanthus) seemed very promising (Daroesman, 1981). More recent reports cast doubt on the effectiveness of this approach when it is extended from controlled pilot plots to smallholder agriculture.

A third frequent source of difficulty in procuring settlement sites has been the assertion of prior land claims by the indigenous people of

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nent sites people of the region. One feature of the system of shifting cultivation long customary in much of Sumatra and Kalimantan was the formation of marga groups claiming hereditary rights to large, unmapped tracts of land. In the absence of legal records or precise boundaries, disputes have been common, often well after transmigrants have settled on the land in the belief that they hold secure title. The problem has recently also become an issue in Irian Jaya. It is now acknowledged that the development of a legal framework for transfer of title from local people to transmigrants is an urgent task. But while this should reduce the incidence of disputes, it is likely to increase rather than diminish the shortage of land for transmigrant sites.

That this problem is serious, and acknowledged as such by the Indonesian authorities, is evidenced by the proposal said to be under consideration in Jakarta to shift the emphasis in Repelita-IV (1984-85 to 1988-89) heavily towards Irian Jaya. One can hardly think of a less satisfactory solution. Apart from the obvious logistic problems presented by that distant and in large part very inaccessible province, Irian Jaya exemplifies the problem of ethnic relations in its starkest form. Any attempt to settle in Irian Jaya a million Javanese who would submerge the indigenous population of 750,000 Papuans would risk serious internal and possibly external conflict.

2. Costs

The financial constraint is hardly less worrying. The transmigration programme, with its formidable administrative superstructure, the costly efforts to improve conditions for transmigrants - by providing transport (largely now by air), adequate preparation of sites, clearing and planting of larger holdings, provision of housing, food rations and other inputs, irrigation and roads, education, health and other facilities - and the heavy reliance on expensive consultant services, all these have considerably increased the cost per transmigrant family. At the same time, target numbers have been rising and, in the minds of some of the planners, should rise further. Until recently, even so lavish a transmigration programme appeared to be supportable, side by side with many other imaginative projects of economic and social development, by Indonesia's oil earnings. This is no longer the case. The prospect

is for much leaner years ahead, as the government has fully recognised and acknowledged. The question is how the transmigration $programm_e$ now stands in competition with other essential or worthwhile uses of much more limited funds.

Table 11 relates the central government's annual development budget allocation for transmigration to the number of families settled in each year since the beginning of Repelita-I. For various reasons, this is a very crude measure of the cost of the programme. hand, disbursements may have fallen short of budget allocations (though this does not seem to have been the case to any significant extent in the first eight years for which figures are available). On the other hand, the figures cover only part of the cost. They include neither the allocation for transmigration in the routine budget (not a large figure, about Rp. 10 billion in 1983-84), nor the amounts attributable to the programme in the development and routine budget for other central government departments, such as public works, health, education, home affairs, etc. (some of which would, of course, have been incurred for the same people had they remained in Java), nor the expenditures on transmigration by provincial authorities (which absorbed an unknown proportion of very large central government grants to them - Rp. 1,423 billion in the 1983-84 development budget). The figures do, however, give some indication of the growth of expenditure that has occurred with the expansion of the transmigration programme in the course of the first three Five-Year Plans.

The proportion of the development budget absorbed by the allocation to the programme has risen from 0.7 per cent in 1969-70 to 6.1 per cent in 1982-83 and slightly less (5.8 per cent) in 1983-84. Expenditure per family settled reached nearly \$12,000 in 1982-83. (If the revised target of 150,000 families should be reached this fiscal year, and expenditures remain within the budget allocation, the cost per family would drop dramatically to \$3,590, but this seems improbable. Most of the recommendations for improvement of the programme would, if adopted, raise the cost still further, though there is undoubtedly also scope for economies which would increase the cost-effectiveness of expenditure. But taking the figure of \$12,000 per family as a benchmark and relating it to the target size of 800,000 families most commonly

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Table 11: Transmigration: Development budget allocation and number of families settled, 1969-70 to 1983-84

		ent budget		Families	Cost per	family
	Rp. (billion)	Rp. (billion)	As % of total	settled (000's)	Rp. (000s)	US\$ ^b
1969-70	123	0.85	0.7	3.9	218	577
1970-71	161	1.04	0.6	4.4	236	624
1971-72	242	1.36	0.6	4.1	332	878
1972-73	314	2.32	0.7	11.3	205	522
1973-74	344	3.66	1.1	22.4	163	393
1974-75	616	6.65	1.1	13.3	500	1,204
1975-76	1,268	15.08	1.2	11.0	1,370	3,301
1976-77	1,920	27.30	1.4	11.8	2,314	5,576
1977-78	2,168	50.93	2.3	23.1	2,205	5,313
1978-79	2,455	104.50	4.3	28.8	3,628	7,344
1979-80	3,488	146.2	4.2	50.7	2,884	4,689
1980-81	5,028	272.4	5.4	79.9	3,409	5,543
1981-82	6,399	394.0	6.2	88.0	4,477	7,280
1982-83	8,605	526.7	6.1	67.4	7,815	11,663
1983-84	9,290	539.0	5.8	$(125.0)^{a}$	(4,312)	(6,436

a Target: recently revised to 150,000.

b Exchange rates used:

1969-70 to 1971-72:	Rp 328
1972-73:	Rp 393 (weighted average)
1973-74 to 1977-78:	Rp 415
1978-79:	Rp 494 (weighted average)
1980-81 to 1981-82:	Rp 615
1982-83 to 1983-84:	Rp 670 (weighted average)

Sources: Development Budget: Ministry of Finance.

Families settled: Directorate General of Transmigration.

mentioned for Repelita-IV, the direct cost to the development budget would add up to nearly \$10 billion, or \$2 billion a year.

Some of the cost of the programme has been met by external financial assistance, and such assistance can be expected to continue. By far the largest contributor, and indeed one of the most committed and influential supporters of transmigration in the past decade, has Motivated in part by the increased emphasis on been the World Bank. social objectives under the McNamara presidency, the Bank took up the cause of transmigration in the mid-1970s. Its Transmigration I project initiated in 1976 provided a loan of \$30 million for two test schemes, one for rehabilitation of an existing project in Lampung, the other for an experimental project combining tree and food crop cultivation at Baturaja in South Sumatra. The Transmigration II agreement, signed in 1979, provided a \$90 million loan and \$67 million IDA support for the Repelita-III transmigration programme. A third project, still being negotiated, is to meet \$100 million of the foreign exchange cost (chiefly consultants) of site identification, extension of the Baturaja project and general programme support, especially training of transmigration officials. Other multilateral assistance for transmigration has come from UN specialised agencies (UNDP, FAP, WFP), from the Asian Development Bank (\$34 million) and from the bilateral donors grouped in IGGI (the Inter-Governmental Group for Indonesia). All this assistance has been valuable, especially in supplementing and strengthening the managerial and technical capability of Indonesian Government departments in charge But it is clear that it has contributed only a few of the programme. per cent to the overall financial cost of the programme.

The questions which are naturally being asked, and which must be asked, among Indonesian policy-makers as much as by foreign donor agencies, are whether the benefits of transmigration justify the very large funds the programme now absorbs and whether Indonesia can afford to continue to spend at this rate on transmigration in the conditions of much more severe resource constraints likely through the 1980s (Arndt, 1983).

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VII. Options

We have seen that transmigration has in the past decade achieved a momentum which few would have thought possible and that, even when all allowances are made for failures and setbacks, it has almost certainly yielded significant benefits in terms of relief from population pressure in some of the worse poverty areas of Java, in terms of improvement in income and economic security for the majority of transmigrants and in terms of development of land in the outer islands. We have seen that the programme has run into a host of problems but that most of them are being energetically tackled and, with reasonably efficient administration and external help, should be remediable. But we have also seen that the programme is now running into two constraints which may require serious reconsideration of the more ambitious plans for the future, shortage of land and money.

Many question the whole concept of transmigration. They argue that the underlying notion of a population "imbalance" in Indonesia is an illusion, based on looking at a map, which makes no more economic sense than similar notions about population imbalance between Egypt and the Sahara or between south-east and central Australia. accident, they say, that fertile Java is so much more densely populated than the inhospitable jungle and swamp lands of Kalimantan or the craggy mountains of Irian Jaya; and to attempt to correct this "imbalance" is, beyond a point which has probably already been reached, counterproductive. Granted, and this is now granted by the most fervant enthusiasts for transmigration, that the key to a better life for the people of Java lies in Java, transmigration, so the criticis would argue, merely diverts resources and effort from the task of raising farm incomes and increasing non-agricultural opportunities for productive employment in Java and attention from the need for population control through family planning.

There are others who, without questioning either the desirability of some movement of people from Java to the less densely populated parts of Indonesia or the potential for economic development of large parts of the outer islands, do not believe that the traditional policy of transmigration for land settlement, whether for subsistence or cash crop

farming, represents a realistic approach. A recent study had even suggested an altogether different approach. Arguing that mere land settlement can never achieve industrial and commercial development of the outer islands, that regional development in this sense is inhibited by backward transport and other infrastructure, and would soon be held back by manpower shortage if it gained a significant momentum, and that, if only for reasons of cost, any really large-scale movement of people from Java must depend primarily on spontaneous rather than on government-sponsored migration, the authors of the study proposed a scheme for massive public works expenditure in the outer islands provinces which would attract labour from Java by opening up wage employment opportunities (Arndt and Sundrum, 1977).

Others have objected that it is the promise of land, above all else, which motivates landless and other poor people to volunteer for transmigration, that land settlement has proved the most effective catalyst for spontaneous migration, in the form of chain migration - the encouragement to relatives and friends by settlers in need of labour to help with clearing, planting and harvesting - and that land settlement constitutes and promotes regional development by opening up upland and swamp land for cultivation. In their view, it does so by improving transport and establishing communities as well as improving labour supply through the attraction of spontaneous migrants (e.g. Hardjono, 1978).

This debate turns largely on the empirical question touched on earlier, of the extent to which the outflow of spontaneous migrants is itself dependent on transmigration, through chain migration and in other ways, or whether it could be induced equally or more effectively by the offer of visible and large wage employment opportunities. The question cannot be conclusively settled either by case studies or by available aggregate statistics. Several studies have pointed to the large spontaneous outflow of labour to the plantations of Sumatra under the Dutch and in the first two decades of Independence, and to East Kalimantan during the timber boom of the late 1960s (Manning, 1971), as well as to the inflow to Java and especially Jakarta in the 1970s, all attracted by opportunities, or at least hopes, of wage employment. The critics of these studies, in turn, point to the substantial evidence in favour of chain migration in Lampung and other settlement provinces.

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Table 12 presents a further breakdown of the figures given in table 8. It suggests that during the period 1950-72, independent outflow from Java predominated over chain migration to the areas of land settlement. Nearly 20 times as many spontaneous migrants as transmigrants moved to the northern provinces of Sumatra, as compared with less than three times as many to the main provinces of transmigration settlement, Lampung and South Sumatra. In the more recent period, 1975-80, the situation was reversed. Almost the whole of the flow of spontaneous migrants to Sumatra went to the two southern provinces. The figures for Lampung are particularly striking, with 400,000 spontaneous migrants but only 30,000 transmigrants in the latter period, as compared with over 200,000 in the earlier period.

These figures, too, however, are open to alternative interpretations. They do suggest a very effective, though considerably lagged, chain migration process. But if it is true, as Joan Hardjono and others have reported, that already in the mid-1970s Lampung was severely overcrowded, with fragmentation of holdings and increasing landlessness, it is arguable that transmigration did indeed act as a catalyst for spontaneous migration "but only by reinforcing the tendency of the official programme to recreate in much of neighbouring Lampung the Malthusian situation of rural Java" (Arndt and Sundrum, 1977, p. 80). Clearly, this need not be the consequence of chain migration, as the example of Parigi shows. But it greatly weakens the case for treating chain migration as an automatic plus, a necessarily favourable externality, of the official transmigration programme.

VIII. Conclusion

The Indonesian Government is strongly committed to the transmigration programme. It would be pointless, even if it were sound, to recommend that it be abandoned.

The last five years have demonstrated that the policy-makers and administrators in charge of the programme are capable of moving very large numbers of transmigrant families from Java to the outer islands and coping with most of the immense logistic and organisational problems. There is scope for much further improvement, as our quick survey of

Table 12: Outflow of transmigrants and spontaneous migrants from Java to Sumatra by province of settlement, 1950-72, 1975-80 (in thousands)

	1950-72				1975-80					
	Total outflow	Trans- migrants	Spontaneous	Spontaneous transmigrants ratio	Total outflow	Trans- migrants	Spontaneous	Spontaneous transmigrant ratio		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		
Lampung	880	213	667	3.1	429	30	399	13.1		
South Sumatra	268	82	185	2.2	160	59	101	1.7		
Bengkulu	14	9	5	0.6	43	29	13	0.4		
Southern Sumatra	1,162	305	857	2.8	632	118	513	4.3		
Aceh	21	21	20	16.7	18	10	8	0.8		
North Sumatra	417	7	410	56.9	37	2	35	18.4		
West Sumatra	56	18	38	2.1	32	23	9	0.4		
Riau	85	2	83	46.1	28	13	15	1.1		
Jambi	58	5	53	10.3	64	61	3	0.1		
Northern Sumatra	637	33	604	18.2	179	109	70	0.6		
Sumatra	1,799	338	1,461	4.3	810	228	583	2.6		
Other Outer Islands	269	80	189	2.4	297	149	1 48	1.0		
All Indonesia	2,068	418	1,650	4.0	1,107	377	730	1.9		

Sources: 1950-72: Arndt and Sundrum (1977).

1975-80: Transmigrants, table 4, Repelita-II.

Other: Population Census 1980.

Sources

policies and summary of programme problems has shown, and further technical assistance from the World Bank and others is available. Some of the most pressing of these problems are due to deficiencies of administration where no rapid improvement can be expected. Others call for the application of technical knowhow - new technology to improve and adapt cropping patterns and animal husbandry to varying soil and other conditions, to develop higher-yielding planting materials and more efficient methods of cultivation of tree crops, such as rubber, oil palm and coconut; and, perhaps most important of all in view of the constraint of land availability, for eradication of alang-alang grass and less expensive techniques of swamp reclamation.

But it is unduly optimistic to believe that technology can answer the financial, economic and socio-political questions posed by the transmigration programme. Longstanding doubts about the relative advantages of transmigration and alternative ways of achieving its objectives are now being strongly reinforced by the two key constraints to which the present study has referred. There is a danger that an inflexible attachment to ambitious transmigration targets will in the search for new settlement sites cause socio-political problems in the outer islands and that in the effort to make financial ends meet it will cause social and economic development programmes in Java to be cut In the longer run, serious thought needs to be given to the trade-off between economic and social development in Java, official transmigration and a spontaneous migration approach aimed at wage employment opportunities on public works in the outer islands. short run, it is obviously desirable to restrain the escalating financial demands of the transmigration programme by more economical and costeffective ways of running it. But it may also be necessary to contemplate a marked reduction in the planned size of the programme, at least for Repelita-IV.

Footnotes

- For an account of economic developments in Indonesia in the Sukarno period, see Glassburner (1971).
- Cf. Booth and McCawley (1971); also also the regular "Survey of recent developments" series in <u>Bulletin of Indonesian Economic Studie</u> (BIES) published by the Australian National University, Canberra.

Transmigrants (and spontaneous migrants) have come from Bali, and recently also from Lombok, as well as from Java. Unless specifically indicated, "Java" as the source of migrants in this paper includes the two former small islands.

- Non-sponsored migrants are sometimes referred to as "voluntary but this usage offends against the principle that all recruitment to the transmigration programme is, or should be, voluntary. The word "spontaneous" was inconvenient so long as official terminology in Indonesia distinguished a spontan or semi-sponsored and a fully-sponsored category of transmigrants. Since this distinction was abolished in 1973, we have opted for spontaneous as the least confusing term.
 - 54 millions in 1980, growing at 2.6 per cent a year.

US\$ 104 at 1980 prices; from V.V. Bhanojii Rao: "Poverty in Indonesia, 1970-80" (mimeo) based on SUSENAS (national household expenditure survey) data. This figure is of course very much smaller than GDP per capita, even for rural Java. The World Development Report for 1983 puts GDP per capita for Indonesia as a whole in 1981 at US\$ 530.

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THE AUSTRALIAN NATIONAL UNIVERSITY RESEARCH SCHOOL OF PACIFIC STUDIES

DEPARTMENT OF FCONOMICS

TRANSMIGRATION: LAND SETTLEMENT OR REGIONAL DEVELOPMENT?

H.W. Arndt R.M. Sundrum

To be presented and discussed at a work-in-progress seminar at 2p.m. on Tuesday, 11 October 1977 in Seminar Room 'B' (Room 7139), Coombs Building.

TRANSMIGRATION: LAND SETTLEMENT OR REGIONAL DEVELOPMENT

While much has been written about transmigration in recent years, there has never yet been a comprehensive study of this remarkable and in some respects unique Indonesian experiment in social engineering, its history, successes and failures, the lessons of the past and plans for the future. This gap has now been admirably filled by Mrs Joan Hardjono, Senior Lecturer in Geography at Padjajaran University, Bandung. (1)

The policy of transmigration had its origin in the notion that Indonesia's population problem, unlike that of India, is primarily one of maldistribution, rather than of size or growth. Mrs Hardjono therefore starts her book with a summary statement of this problem of maldistribution and follows this with a chapter on the geographic contrasts between Java-Bali and the Other Islands which are largely responsible for the population imbalance. (2) After this introduction she gives a most useful historical account of changing transmigration policies, from the Dutch experiments with "colonisation" in the early years of this century to the beginning of the Second Five Year Plan in April 1974, and ends the first half of the book with a chapter on "Past Problems". Most of the second half is devoted to case studies of transmigration projects in Sumatra, Kalimantan, Sulawesi and the eastern provinces. The book concludes with a chapter on future prospects.

The central theme of the book is that until the drafting of the First Five Year Plan in 1969, transmigration "tended to be based upon purely demographic considerations..... The nation's leaders and planners were inclined to think of transmigration as the way to reduce population pressure in Java." "It has sometimes been said that transmigration has been a failure. Seen in this light, it has indeed, for in no one year

J.M. Hardjono, <u>Transmigration in Indonesia</u>, Oxford University Press, Kuala Lumpur, 1977. Pp. xv + 116. Recommended price in Australia \$A8.95. See also Suratman and P. Guinness, "The Changing Focus of Transmigration, <u>BIES</u>, July 1977, pp.78ff.

Throughout this article, we shall for brevity use "Java" to stand for the six provinces of Java and Bali and "Other Islands" for all other provinces of Indonesia.

in the 1950-70 period did more than 55,000 people leave Java, Madura and Bali under transmigration schemes." (p.7) (The peak figure of 53,000, it might be added, was exceptional, due to emergency measures to relocate the people affected by the eruption of Mt Agung on Bali in March 1963. The annual average over the period 1950-68 was only 22,000, a small fraction of the increase - by well over one million in Java's population in each year.) In the past decade, there has been a shift of objective. "Since the beginning of the First Five Year Plan in 1969 transmigration has been placed by the government in the much wider context of regional development." (p.7) "Transmigration today is seen as a rural development program in which the aim is to utilize the agricultural potential of less populous areas by providing the manpower needed for agricultural expansion." (p.xv) There has also been an increase in the numbers moved, from an average of 19,000 annually in the period 1969 to 1972 to over 50,000 in 1972/3 and over 70,000 in 1973/4. (3)

Past Problems

Mrs Hardjono gives many reasons why the traditional transmigration policy has yielded such meagre results. Selection of transmigrants, even when it has not been motivated by political considerations or by emergencies such as the eruption of Mt Agung or the recent Sitiung project for families displaced by dam construction at Wonogiri (4) has generally been unhelpful. "Usually transmigration officials simply took those people willing to move, giving little thought to their suitability" and "too often those who agreed to be moved were the less enterprising and less resourceful people in the village." (p.36) At the receiving end, the greatest hindrances to the successful establishment of projects were almost invariably land issues. "In the selection of

A decline in both target and realised figures is reported in official statistics (Nota Keuangan) but even the lower figures are above the average for the period before 1972.

Cf. Suratman and Guiress, op.cit., p.89

project sites, insufficient attention was given to survey work....

Transmigration officials simply accepted whatever land was made
available." (p.39) Often the land selected proved subsequently to be
subject to local claims by individual owners or by marga groups with
hereditary rights. Until the Second Five Year Plan, each migrant
family was entitled to two hectares of land, sufficient for subsistence
cultivation where irrigation was available - "until overcrowding
appeared as a result of natural increase and the flow into the area of
completely independent migrants" (p.41) - but quite inadequate for
anything beyond subsistence or in dry-farming areas. Great difficulties
have been encountered in integrating Javanese settlers into the ethnically
very different local communities of the Other Islands, with their different
languages and customs as well as farming patterns; if, to minimise friction,
transmigrants were settled in separate villages, the result tended to be
Javanese enclaves. (pp.42f.)

Behind all these problems, however, lay what Mrs Hardjono identifies as the basic fault of the approach to transmigration which the policy makers of independent Indonesia took over from their Dutch predecessors.

"In retaining the same pattern of subsistence agriculture found in Java, the Dutch colonization authority, perhaps unwittingly, made possible the development of many of the problems of rural Java." Until at least 1969, the official transmigration program adhered to "the basic aggumption.... that the traditional wet-rice pattern of Java would be continued." (p.20) "Settlements were more or less expected to remain at a subsistence level." (p.44)

There have been successes, in Lampung, in the Belitang area of South Sumatra and in the Luwu area of South Sulawesi. (5) But overall

⁵ Ibid., pp. 93 ff

the traditional transmigration policy has failed in its major objectives. It has made virtually no impact on the maldistribution of Indonesia's population and even "from the point of view of living standards of the new settlers, very little was really achieved." (p.20). And the cost has been high. (p.36).

Mrs Hardjono gives no cost figures. In 1973/4 the cost of settling a transmigrant family was estimated at Rp.350,000 (about \$850), but in the recent Sitiung project the cost was much higher, Rp.1.8 million (\$4,400) including infrastructure. (6) It is very doubtful whether it can be done for much less than the \$5,000 cost per family recently estimated by the World Bank if the transmigration authority is to "do everything required, including the recruiting of migrants, transportation to project areas, actual settlement work like land clearing, house construction and road building, and even the construction of small dams and weirs." (p.44). No policy that relies wholly on official transmigration at such a cost can serve as a means of improving Indonesia's population imbalance.

New Policies

In recent years, this fact has come to be increasingly acknowledged by Indonesian policy makers. "Since the beginning of the First Five-Year Plan in 1969 transmigration has been placed by the government in the much wider context of regional development,... transmigration being viewed as a means of providing support for development by increasing the mobility of labour." (p.7). "If regional development outside Java reaches a point where job opportunities prove attractive, more people will automatically be encouraged to move." (p.93).

Writing in 1974, Mrs Hardjono was able to speak only of changes in the Second Five Year Plan document, rather than point to any marked

⁶ Tbid. p.89

changes in actual policy. And indeed, although there has been a notable increase in the scale of the official transmigration program in recent years, and some improvement in its administration, the pattern of transmigration has remained fundamentally unchanged. Integration of transmigration into regional development has largely remained an abstract aspiration. Nor has Mrs Hardjono herself any real guidance to offer towards this objective. While she refers to the contribution that transmigration can make because "the lack of manpower forms a major obstacle to economic growth in the other islands of the archipelago" (p.xiv), she continues to envisage transmigration as "a land settlement programme." (pp.xv, 43, 94). The only major change she advocates is from the old emphasis on wet-rice subsistence farming to cash-crop cultivation.

"Transmigration settlements in the past have often not been very successful, and in many instances have been complete failures, because planners have, in their preoccupation with the wet-rice patterns of farming typical of Java, remained unaware of the agricultural potential offered by those parts of the archipelago for the cultivation of crops other than rice." (p.14). Not only is most of the land on the Other Islands ill suited for wet-rice farming, but cash crop cultivation is necessary if migrants are ever to achieve higher standards of living. "In the past, in projects where cash crops were not cultivated, migrants found it impossible to rise above the subsistence level." (p.95). While emphasising the need for "better integration of transmigration programs" into regional development plans", she gives little indication how this is to be achieved, beyond arguing for "further expansion of the concept of transmigration as a land settlement programme designed for the benefit of both newcomers and local people" and claiming that, "if transmigration projects become centres of economic growth, migrants seeking work in all fields, not just in agriculture, will be drawn to them. (p. 93).

Mrs Hardjono is not suggesting that irrigated rice projects should entirely disappear from the transmigration programme. She believes there is still much scope particularly for tidal projects in the swamp lands of Sumatra and Kalimantan. (p.96). She also stresses the wide-ranging potential for non-agricultural development on the Other Islands in forestry, mining and animal husbandry, and argues that "a better balance in population distribution is.... necessary, if labour is to be made available for new undertakings that will stimulate economic growth in the provinces outside Java." (p.15). But this does not, in her view, seem to be the task of the official transmigration programme. The only major change in the latter which she envisages is the concept of "transforming subsistence farmers into cultivators of cash crops." (p.96).

There is very little doubt that this change of emphasis is desirable. The question is whether it does nearly far enough. Can land settlement in any form - the settlement of Javanese as smallholder farmers, whether producing rice for subsistence or cash crops for the market - make any real difference to the pace of regional development in the less developed provinces of Indonesia? If, as Mrs Hardjono says, "the problem is how to set about organising migration on a sufficiently large scale" to meet the labour requirements of sustained and rapid regional development, can this problem be expected to solve itself through voluntary migration initially attracted by land settlement projects?

One can imagine a strategy of development for Indonesia in which deliberate redistribution of population between Java and the Other Islands plays no part at all. Regional development in the Other Islands would continue, as at present, exploiting the islands' vast mineral, forestry and other natural resources in modern-sector enclaves for the financial benefit of the whole country, with only modest spillover effects in a few provinces. To relieve the growing population pressures

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in rural Java, such a strategy would rely on industrialisation and urbanisation in Java. Transmigration would continue as a land settlement programme designed to give a better livelihood for a few thousand impoverished Javanese farm families each year.

If this strategy, with its implication of ever greater population imbalance between Java and the Other Islands is rejected as a counsel of despair, a more realistic alternative approach is needed than a fond belief that transmigration conceived purely as a land settlement program can trigger either broad-based regional development in the Other Islands or the large-scale migration needed to supply the labour for such development. Such an alternative approach would not preclude cultivation of the land settlement type on a modest scale, but it would drastically change the main thrust of transmigration policy.

In the latter part of this article, we shall outline such an alternative approach. We shall argue that, for transmigration to make a significant contribution to a better population and development balance between Java and the Other Islands, it must move away from the traditional pattern in three other respects, more fundamental than those Mrs Hardjono has in mind. It must

- (a) aim at ensuring an adequate supply of labour for regional development outside as well as in agriculture;
- (b) serve as a catalyst for regional development by using labour from Java to remove the obstacles to both regional development and mobility of labour arising from inadequate infrastructure;
- (c) offer migrants, both transmigrants and voluntary migrants, opportunities for employment as wage earners rather than as smallholders.

Before spelling out such as approach in more detail, something needs to be said about the phenomenon of voluntary migration on which Mrs Hardjono only touches in her book, about the kind of regional development that has taken place in the past decade and about the notion of labour shortage for regional development.

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Voluntary Migration

The Second Five Year Plan declared it to be "the fundamental aim in transmigration... to encourage an ever-increasing flow of completely independent migrants to places where employment opportunities are better." (Quoted p.93). How realistic is it to expect official transmigration of the land settlement type to act as a catalyst for large-scale voluntary migration from Java to the Other Islands? (7)

The view has been widely held, among Indonesian and foreign observers, that the flow of voluntary migrants from Java to the Other Islands has been small and has been outweighed by reverse migration from the Other Islands. McNicoll challenged this view in 1969 (8) and the 1971 Census has provided further statistical evidence which, at first sight, refutes it conclusively.

According to that Census, 1.96 million persons born in Java-Bali were resident in the Other Islands, compared with 0.65 million persons born in the Other Islands resident in Java. This already shows a balance of net lifetime migration from Java to the Other Islands.

These figures, moreover, omit return migration, i.e. those who moved from Java to the Other Islands and then returned to Java, or vice versa.

Census data on province of previous residence show that, in addition to the 1.96 million Javanese who had moved to the Other Islands and stayed

The notion of transmigration as a catalyst for voluntary migration has long been central to Indonesian thinking on the subject. Twenty passers ago, Djoko Santoso and Ali Wardhana argued that "the success of spontaneous migration to an area depends very much on the success of the preceding settlements in that area... whether set up by a group of pioneers of their own accord or purposely set up by a Government agency" (Some Aspects of Spontaneous Transmigration in Indonesia", Ekonomi dan Keuangan, June 1957, pp.429f.)

^{,8}G. McNicoll, "Net Migration between Java and the Outer Islands", BIES, March 1969, pp.79f.

there, 0.41 million had moved to the Other Islands and subsequently returned to Java. (The Census recorded 1.06 million persons residing in Java in 1971 who had previously resided in the Other Islands; since 0.65 of these were born in the Other Islands, the balance, 0.41 million must have been return migrants.) The total out-migration from Java, therefore, was 2.37 million. If, of these, only 0.41 million returned to Java, the rate of return migration to Java was 17 per cent, only slightly higher than the rate of return migration to the Other Islands (15 per cent).

Clearly, there has been a considerable net voluntary migration from Java to the Other Islands, far exceeding the movement of official transmigrants. Moreover, a considerable proportion of these migrants appear to have gone to the transmigration settlement areas. book deals with official transmigration and therefore mentions voluntary migration only in passing. But in her chapter on the transmigration settlements in Lampung, she points out that "quite apart from colonization and transmigration programmes, there has always been a steady movement of people from Java to southern Sumatra... The 1930 census indicated that 36.2 per cent of the total Lampung population of 361,000 consisted of people from different parts of Java. In 1971, however, two-thirds of the population, placed by the census of that year at 2,777,085, consisted of non-indigenous people. The difference is explained by the movement into the province not just of governmentsponsored migrants but also of independent settlers who have migrated of their own accord." (p. 46). Especially under the bawon system of the 1930s (9) but also during the 1950s and 1960s, many of these independent migrants to Lampung moved, transitorily or permanently, into the transmigrant settlements, whether to join transmigrant families or to buy up land sold by disappointed transmigrants.

So far, the evidence tells against the view that voluntary migration

Suratman and Guinness, op.cit., pp.80f.

has tended to frustrate, rather than support, efforts through transmigration to redistribute population from Java to the Other Islands. On closer examination of the data, however, the position is more complex. Table 1 shows net migration from Java to the provinces of Sumatra and to the remaining of the Other Islands up to 1966 and during the five years 1966-71. It is clear that the sceptical view was quite wrong as applied to Sumatra up to 1966. There was a net outflow to Sumatra - and indeed to each of the provinces of Sumatra except West Sumatra and Aceh up to that year. But even before 1966 the sceptical view was correct in relation to the net flow between Java and the provinces of Kalimantan, Sulawesi and eastern Indonesia collectively. Moreover after 1966 the net flow was reversed even for most of Sumatra, both because of decline in the outflow from Java and because of an increase in migration to Java (Table 2). The significant exception was Lampung. Between 1966 and 1971, more than half the outward flow of migrants to Sumatra went to Lampung, and only a small fraction of the reverse flow came from Lampung. Table 1 also shows that both in the case of the islands other than Sumatra and in the case of the Sumatran provinces other than Lampung, much the larger part of the reverse flow of voluntary migration was to urban destinations in Java, presumably largely to Jakarta.

Secondly, as Mrs Hardjono also emphasises, the heavy voluntary migration to Lampung, far from contributing to dynamic regional development, aggravated the problems created in Lampung by the official policy. "The settlements have become overcrowded and fragmentation of holdings has occurred in most areas, for no land was left for natural expansion. (p.49). In other words, transmigration to Lampung did in a sense act as a catalyst for voluntary migration, but only by reinforcing the tendency of the official program to recreate in, much of neighbouring Lampung the Malthusian situation of rural Java.

Table 1. Higration From and To Java (in 000s)

-	1	re-1966	5		1966-71		Mhole Period		
	From 3	To J	Hot n	rroa J	TO J	Not Mig ⁿ	From	To	Nat Mig
Aceh	16	22	-7	5	12	-6	21	34	-13
N.S	368	83	285	49	59	-10	417	142	275
V.S.	32	72	-40	24	39	-16	56	111	-55
R	57	25	32	28	18	10	85	43	42
J	39	25	13	18	15	3	58	41	1:
8.8.	197	106	92	70	77	-7	268	183	85
Bongkulu	12	8	3	3	4	-2	14	12	:
Sub-total	722	342	380	198	224	-27	919	566	35:
Lampung	663	41	622	. 217	30	187	830	71	203
Sumatra	1385	383	1002	415	254	160	1799	637	115
(Urban)	188	204	-16	105	144	-39	293	349	-55
Kal, Sul, Ei.	186	285	-33	101	142	-41	287	427	-140
(Urban)	. 69	214	-146	61	104	-44	129	319	-199
Total	1571	668 ,	903	516	396	119	2096	1065	102
(Urban)	257	419	-162	166	249	-63	423	667	-24

Source: 1971 Population Census

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This, in turn, may help to explain the decline in the flow of migrants to Sumatra that occurred in the late 1960s. Table 2, using the 1971 Census data on period of residence, shows that most of this decline was accounted for by a fall in the rate of migration to Lampung.

Two conclusions suggest themselves. One is that both the outward movement of people from Java to the Other Islands and the reverse movement to Java demonstrate that large numbers of Indonesian people have readily responded to economic incentives. (10) The varying net balance of voluntary migration has largely reflected a varying balance of relative economic opportunities. This gives some ground for confidence that a shift of emphasis in overall economic strategy from Java to the Other Islands could be expected to make some contribution to relief of the mounting population pressure in Java.

The second conclusion is that, in so far as voluntary migration has been induced by the traditional bransmigration policy it has compounded the problems created by that policy. Mrs Hardjono argues plausibly that voluntary migration attracted by land settlement schemes would have more beneficial effects if land settlement aimed at cash-crop rather than wet-rice cultivation. But it is difficult to believe that land settlements of any kind could develop into economic growth centres offering job opportunities for the "ever increasing flow of completely independent migrants" envisaged by Repelita II.

The Unevenness of Regional Development

Despite the great volume of policy discussion of regional development in the recent past, very little comparative quantitative information is available about development in the various parts of Other Islands. The most recent comprehensive estimates are those made by a study group under the chairmanship of Hendra Esmara for the

This may also be illustrated by the considerable volume of shortrange migration within these regions to provinces experiencing high rates of economic development; cf. R.M. Sundrum, "Interprovincial Migration", BIES, March 1973, p.90.

Table 2. Migration between Java and Sumatra, 1960's (Annual Averages; '000)

_		1962-66	1966-71		
	F			•	
1.	From Java:	60	20		
	to Lampung	62	39		
	<pre>to other provinces of Sumatra</pre>	44	36		
	to Sumatra	106	75		
2.	To Java				
	from Lampung	4	5		
	from other provinces of Sumatra	27	41		
	from Sumatra	31	46		
3.	Net Migration from Java			,	
	to Lampung	58	34		
	to other provinces of Sumatra	17	-5		
	to Sumatra	75	29		

Source: 1971 Population Census

years 1968-72. (11) These estimates at first sight suggest, surprisingly, that the Other Islands enjoyed a slightly higher rate of economic growth than Java. The aggregate GDP of the Other Islands, even excluding income produced in the oil industry, most of which accrues to the central government or foreign companies, increased over the four years by 31 per cent at constant prices (7.0 per cent p.a.), while that of Java increased by only 26 per cent (6.0 per cent p.a.). On closer examination, however, this impression proves to be misleading for several reasons.

Much of the increase in regional GDP in the Other Islands was produced in extraction industries, especially forestry and oil, whose spillover effects were largely confined to the provinces concerned. (12) In consequence, growth in the Other Islands was very unevenly distributed. (Table 4). Most of it, according to these estimates, was concentrated in six provinces - Riau, East Kalimantan, Southeast Sulawesi, Aceh, Maluku and Irian Jaya - which between them had only 16 per cent of the 1971 population of the Other Islands. While the aggregate GDP of these six was estimated to have grown at an annual rate of nearly 15 per cent, that of the remaining 14 provinces grew at only 4.5 per cent a year during the same period, less than Java. There is some doubt, moreover, about some of these estimates, especially for Maluku and Irian Jaya. The degree of concentration of growth may, therefore, have been even greater than these estimates imply. Finally, account must be taken of the fact that interregional redistribution in favour of Java of income produced in the Other Islands, through the central government budget and in other ways, occurred not only in the case of oil but also in some

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Regional di Indonesia, 1968-72, Fakultas Ekonomi, Universitas Indonesia, Jakarta 1974. Cf. also II. Esmara, "Regional Income Disparities", BIFS, March 1975.

The fact that per capita income in Riau, the province that contains the Caltex Minas fields, is considerably higher than that of all other provinces of Sumatra (H. Esmara, op.cit., p.45) even when oil industry income is excluded is presumably evidence of such spillover effects, though it may in part reflect statistical difficulties in excluding oil industry activities in other sectors; cf. on this H. Esmara, "Economic Survey of Riau", BIES, November 1975.

Table 3. Growth Pates of GDP by Province: 1968-72 (per cent per year)

Aceh	8.1	N. Sumatra	7.8	Jakarta	9.2
Riau	9.7	W. Sumatra	6.5	W. Java	5.3
E. Kalimantan	25.0	Jambi	3.6	C. Java	5.3
S.E. Sulawesi	8.4	S. Sumatra	4.3	Yogyakarta	3.7
Maluku	15.2	Bengkulu	2.3	E. Java	5.9
Irian Jaya	16.2	Lampung	4.3	Bali	9.1
		W. Nusatenggar	a 2.6		
*		E. Nusatenggar	a 3.1		
		W.Kalimantan	2.4		
		C.Kalimantan	6.2		
		S.Kalimantan	1.8		
		N. Sulawesi	-1.4		
		C.Sulawesi	5.9	~	
		S. Sulawesi	3.5		
Aggregate	14.4	Aggregate	4.5	Aggregate	6.0

Source: Hendra Esmara, "Regional Income Disparities", Table 9 BIES, March 1975, p.54. degree with other extractive industries.

If the concept of more balanced economic development of Indonesia as a whole, with greater emphasis on regional development in the Other Islands, is taken seriously, it presumably implies rejection of this past pattern. It must mean that, instead of confining development in the Other Islands largely to modern extractive industries of an enclave character and using most of the income thus produced to support current living standards and economic development in ever more crowded Java, a major effort will be made in the next two decades to build on the land and other natural resources of the Other Islands a much more broadly based development process which will bring not only higher living standards to the local people of the Other Islands but also job opportunities on the Other Islands for a very substantial flow of migrants from Java.

Labour Requirements of Regional Development

There is little evidence of labour shortage in the Other Islands now, at their current rates of development. It is true that the average level of wages is somewhat higher than in Java. (13) A higher proportion of unpaid family workers in agriculture may also reflect a limited supply of wage labour. During the timber boom in East Kalimantan in the late 1960s local wages rose manifold (14) and difficulties in finding labour have been reported as one of the problems encountered by the Mitsugoro maize project in South Sumatra. (15) But in the main

¹³ Inpres daily wage data, deflated by a regional price index suggest that the average level of real wages in the Other Islands was in 1972 about one-third above that of Java (cf. the authors' "Regional Price Disparities", BIES, July 1975, pp.41, 56).

¹⁴C. Manning, "The Timber Boom with Special Reference to East Kalimantan", BIES, November 1971, p.56.

¹⁵ Cf. Y. Tsurumi, "A Socio-economic Evaluation of the Mitsugoro Project", mimeographed, New York 1977.

labour shortage in the Other Islands is as yet only a potential problem.

It will not become real until regional development attains a higher momentum. A crude arithmetic example may help to illustrate the point and indicate orders of magnitude.

Let us assume a Repelita III target rate of growth of regional GDP in the Other Islands (excluding the oil sector) equal to that achieved in Java in recent years, i.e. 6 per cent a year. Since farm production, which accounts for two-thirds of the total, can hardly be expected to grow by more than (say) 4 per cent annually, such a target implies a growth rate in all other sectors averaging at least 10 per cent. Let us also assume that the output elasticity of employment in agriculture will not rise significantly, so that labour requirements will grow proportionately. This may be a conservative assumption but is unlikely to be far wrong unless development in the Other Islands becomes much more capital intensive. On this assumption the agricultural labour force would need to grow at an annual rate of 3 per cent, the non-agricultural labour force at 4.5 per cent, giving an overall required growth rate of the labour force in the Other Islands of about 3.5 per cent. Natural increase is unlikely to exceed 2.5 per cent. There would thus be a deficiency which, assuming a mid-Repelita III population of the Other Islands of 60 millions and a labour force of 25 millions, can be put at about 250,000 workers a year. The figures in Table 4 are only illustrative and could easily be changed with different assumptions. What matters here is that it is only in some such sense as this that in Mrs Hardjono's words, "the lack of manpower forms a major obstacle to economic growth in the other islands of the archipelago. (p.xiv).

It would be quite unrealistic to suggest that transmigration as an official program of government sponsored and assisted migrants, could or should aim at a target of 250,000 families (a million or more persons) a year during the Third Five Year Plan. Most of the deficiency will have to be met, if at all, by voluntary migration. The question is whether

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Table 4

Sector	Growth Rate of output (%)	Output Elasticity of Employment	Growth Rate of Labour (%)
	(a) Past		
Agriculture	3.0	.75	2.25
Non-agriculture	7.5	.40	3.00
Total	4.5		2.50
			¥-
	(b) Target		
Agriculture	4.0	.75	3.00
Non-agriculture	10.0	.45	4.50
	6.0		3.50

there is any strategy of regional development which could conceivably induce a voluntary flow of this magnitude - equal to about one-half the annual increase in the population of Java - without the aid of an official transmigration program specifically geared to this purpose.

Clearly, manpower shortage is not the only, or even a major, reason why economic development in most of the Other Islands has in the past decade lagged behind that of Java. In terms of most of the other prerequisites (external economies) for broadly based development - transport, communications, electric power and other physical infrastructure, as well as banking, insurance, marketing and other business infrastructure, and access to markets, to administrative and policy decision-making centres - Java had a long start over the Other Islands. (16) Conceivably, if a determined effort were made to overcome all these obstacles in the next few years and economic development could be got going in a broad range of industries - in mining, forestry, fisheries, in smallholder and plantation agriculture, in manufacturing, construction, public utilities, trade and other services - such development could attract the labour it needs through the forces of the market.

Such a scenario, however, needs merely to be sketched for the chances of success to appear remote. The not insignificantly higher wage levels ruling in the Other Islands in recent years (17) have been quite ineffective in inducing a net flow of voluntary migrants from Java, while a very much higher cost of labour in the Other Islands would soon throttle off any but the most capital-intensive development projects. The conclusion is inescapable that an official transmigration program is an essential part of any ambitious strategy for regional development in Indonesia.

An illustration of the importance of inadequate transport and other infrastructure as an obstacle to economic development in the more remote regions of Indonesia is provided by Ibrahim Hasan, "Rice Marketing in Acch", BIES, November 1976.

¹⁷ See footnote 13.

But it must be a program specifically directed at promoting broadly based regional development. This will not be achieved by settling small farmers to produce food for themselves or even cash crops for export. It must aim primarily at removing the obstacles, both to investment in development projects in the Other Islands and to mobility of labour to the Other Islands, due to poor transport, communications and other infrastructure. These objectives of a transmigration program for regional development imply an emphasis on opportunities for wage employment, in the first instance in public works and public utilities.

Transmigration: A New Model

How might this be done? It is clearly not possible to put forward a detailed plan which would need to be based on and dovetailed with the planning for regional development during Repelita III that is now going on. But some essential features of a new model for transmigration can tentatively be suggested even at this stage.

The employment opportunities offered to transmigrants would be wage employment on public works projects in the provinces of the Other Islands included in the development budgets of both the national and provincial governments. These would cover, as at present, construction of roads, canals, harbours; land development such as clearing of jungle, drainage of swamps, construction of irrigation works; provision of power and water supply in rural as well as urban areas; and perhaps public sector housing and other buildings. What would be new would be, not the nature of the projects but the scale of the development budget. Allocating to regional development a substantial part of the additional financial resources that have become available to Indonesia through the oil price increase, the rate of development expenditure in the Other Islands would be sharply increased to the point where labour shortage would become the bottleneck unless labour from Java was brought by official transmigration and attracted by job opportunities for voluntary migrants. To recruit labour in Java for such employment would become the chief function of the transmigration authorities.

Transmigrants would be paid the normal wages of employees of Public Works departments or of contractors working on government projects. The cost of employing transmigrant labour after arrival in the Other Islands province, and the cost of housing and other services that might need to be provided for them, (18) would therefore be part of development expenditure in that province, whether the project forms part of the development plan and budget of the central or of the provincial government. The transmigration authorities would be responsible for recruiting and transporting transmigrants and their families, in close coordination with those in charge of the development projects.

The labour needed would be very different from the padi farmers and families who have been the transmigrants of the past. They would be mainly unskilled labourers from the rural areas and cities of Java, but they would also need to include an important component of skilled labour, experienced building tradesmen, engineers, surveyors, etc. Recruitment of such skilled labour might have a training aspect, whether organised by the central government before departure or by the provincial government after arrival. If broadly based regional development got under way, supported by larger development budgets and a substantial flow of transmigrant wage labour for employment in public works, such as is here envisaged, many of these transmigrant workers might be expected sooner or later, e.g. on expiration of fixed-term contracts, to move into wage or self employment in other sectors, as happened, according to Mrs Hardjono, when transmigrants "left projects in East Kalimantan /and/... easily found employment in the logging industry and in 'harbour areas from which timber is exported. (p.71).

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The experience of East Kalimantan, where the timber boom of the years around 1970 raised wages rates to three times the level ruling in Java (excluding Jakarta) but also raised the cost of living in the province to almost twice the Java level Esmara, BIES, March 1975, pp.45, points to the importance of adequate supplies of consumer goods if high money wages for workers in outlying development areas are not to be eroded by higher prices.

So much for a transmigration scheme designed to supply transmigrant labour for employment on public works projects within the development plans for the provinces of the Other Islands. Is there a case for envisaging an extension of such a transmigration scheme to organised supply of transmigration wage labour to the productive sectors of the regional economies of the Other Islands?

Mrs Hardjono refers to plans of recent years for rice estates using transmigrants as workers but is highly sceptical of all such schemes "largely because to expect Javanese subsistence farmers to adapt themselves to 'estate' conditions would present insurmountable problems" and because "the Indonesian government is very much committed to the private ownership of smallholdings." (p.97). Neither objection necessarily carries conviction. Much of the labour force recruited for the rubber and other estates in Sumatra in the colonial period came from Java (19) and, while the last thing one wants to see is a return to "colonisation", the evidence does not suggest that Javanese were unable to adapt to estate conditions and would not do so again if employment on reasonable terms were offered. And the Indonesian government's commitment to the ideal of smallholder agriculture presumably does not exclude food crop or other estate development where this can be shown to be practicable and economic.

Similarly, while Mrs Hardjono, in discussing regional development, mentions large-scale animal husbandry, forestry and mining as potential sources of demand for labour and suggests that "it is in this context that transmigration projects can be very significant", (p.14) she dismisses industrialisation as an answer to Indonesia's problem of unemployment, arguing that "industrialization tends to involve undertakings that are, for the most part, capital-intensive rather than labour-intensive", (p.6) and does not even mention manufacturing industry

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¹⁹ Cf. Suratman and Guiness, op.cit., pp.79f.

as a potential component of regional development on the Other Islands. This is the more surprising in view of the persistent theme in official policy in the past decade that there is need to correct the "excessive" concentration of industrial development on Java by offering preferential concessions to foreign and domestic investors willing to set up industrial plants on the Other Islands. As a general policy, this is probably misconceived. It is Java that has the markets and manpower, as well as the necessary infrastructure, for footloose or market-oriented consumer goods industries. But there is surely much scope for resourcebased manufacturing industry on the Other Islands, whether processing of agricultural, forestry and fisheries products, or ore smelting, petrochemical and other plants based on these islands' oil, natural gas and mineral resources. It is just as true of most of these as Mrs Hardjono says of mining that "although the actual work of mining is heavily mechanized, there are many associated activities... that require labour." (p.15).

If regional development takes off on such a broad front, it will need wage labour from Java. Whether an official transmigration scheme is an appropriate vehicle for the supply of such wage labour to plantations, mining, forestry or manufacturing enterprises on the Other Islands is more doubtful. The colonial history of many countries demonstrates that such a system lends itself to abuse. Although safeguards may be easier to apply if the prospective employer is a public authority rather than a foreign or domestic private firm, there may be sufficient grounds for hesitation on this score to rely for this part of the necessary labour supply on voluntary migration recruited by (private or public enterprise) employees. (20). The transmigration

Some such recruitment is going on. The press recently reported that the Department of Manpower had given approval for five companies to recruit and send workers to and from Indonesian regions, including 300 persons from East and Central Java to a timber company in Central Kalimantan, 250 lumbermen for a timber company near the Padang River in South Sumatra and 50 workers for a sugar company in South Sulawesi (Warta CAFI, 18 June 1977). Why government approval is needed for such recruitment enterprise is not quite clear.

administration however, might take responsibility for providing information about job vacancies in the Other Islands, in other words perform in relation to voluntary migration something like a labour exchange function.

Assimilation

Reference has been made to Mrs Hardjono's comments on the difficulties encountered by the traditional type of transmigration because of ethnic differences between the Javanese settlers and the local population of the Other Islands. It might be argued that these difficulties would be greatly exacertated by a much larger flow of people from Java to the Other Islands. The most obvious answer is that this is a problem inherent in any policy of significantly correcting the maldistribution of Indonesia's population. But it is not too far-fetched to suggest that the new model transmigration here proposed would in some respects ease the problems of assimilation of Javanese immigrants into the Other Islands.

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In the first place, the immigrants would be more evenly distributed among twenty-two provinces of the Other Islands. The traditional policy, as we have seen, involved a marked concentration of Japanese settlers, both transmigrant and voluntary, in a few provinces, especially in southern Sumatra. In 1971, 4.9 per cent of the population of the Other Islands was born in Java but there was a much higher concentration of 8.4 per cent in Sumatra and 32 per cent in Lampung. Regional development is bound to be uneven in some degree, but it can certainly do better than this.

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Secondly, land settlement, in its nature, contains seeds of conflict which might be expected to be absent, or at least much less, when transmigrants are employed on public works or in public enterprises, and voluntary migrants in areas where there are job opportunities that cannot be filled locally. Assimilation of large inflows of labour have been successfully achieved by many western and other countries where

differences of language, custom and ethnic background were much greater than between Javanese and the people of the Other Islands. Experience in many parts of the world suggests that the chances of peaceful absorption of ethnically different peoples in any community depend very largely on the economic opportunities open in that community.

Conclusion

While the approach to transmigration suggested here would seem to us to be decidedly more promising than a mere shift of emphasis from wet-rice to cash-crop smallholder settlement, it is not immune to one set of problems extensively discussed by Mrs Hardjono, problems of administration.

Transmigration, like much else in Indonesia, has been bedevilled by inadequacies of administration, especially frequent changes in departmental responsibility for the program, insufficient clarity of purpose and procedures, and lack of coordination between numerous central and local authorities involved. (p.38). In some respects, the demands the new model transmigration would make on planners at both the national and provincial government level, and on efficient coordination between these two (and lower) levels of government, would be even greater than those experienced in the past. For while smallholder settlers can be, and have indeed in the past only too frequently been, left to sink or swim, the transmigrants would, at least for some years, remain as employees the responsibility of provincial government authorities, and transmigration to meet the wage labour requirements of provincial public works and other development projects would depend crucially on effective matching of supply and demand. But this is a challenge which confronts any major new policy initiative in developing countries.

Having wandered some way from Mrs Hardjono's discussion of transmigration and in the process made a few comments that might be read as
critical of her treatment, we would not wish to conclude this article without
a final tribute to her excellent work. Her book is informative, stimulating
and readable, one of the best on any aspect of the Indonesian economy written
in recent years.

H.W. Arndt R.M. Sundrum