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TRANSMIGRATION AND REGIONAL DEVELOPMENT IN INDONESIA; POLICY OPTIONS BETWEEN MYTH AND REALITY

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Abstrak

Pelaksanaan program transmigrasi di Indonesia terkesan sangat ambisius dengan berorientasi kepada masalah demografi. Tiap Pelita ditargetkan pengiriman sejumlah transmigran ke luar Jawa dan Bali sering tidak realistik dan menimbulkan permasalahan yang besar. Untuk mengatasi masalah ini disarankan hal-hal sebagai berikut. Jumlah transmigran yang dikirim tidak didasarkan kepada target kesesuaian daya tampung di daerah tujuan. Pemindahan penduduk diprioritaskan bagi daerah kritis, bencana alam, atau wilayah yang terkena proyek pembangunan. Penduduk lokal dengan keragaman sosial budaya perlu diikutkan dalam program ini. Usahakan peningkatan pengiriman transmigran spontan.

The Indonesian government's persistent efforts to resettle large numbers of so-called transmigrants from the densely populated islands of inner Indonesia to the less crowded Outer Islands, already have raised much concern and discussion among both domestic and foreign experts. Especially so, since the government decided to step up transmigration to an ambitious 750,000 families during the last Five Year Development Plan period (1984/1989), at the same time introducing new types of transmigration projects and opening-up new settlement areas in "sensitive" provinces like Irian Jaya and East Timor. In the meantime increased doubts on the effectiveness and viability of the programme pressed the World Bank to consider its 160 million US-dollar loan to the pogramme in 1986. The official reasons offered were the disappointing returns to investments and budgetary problems of the central government, but - allegedly - ecological problems and political problems of social integration (the "Javanization" issue) played a decisive role as well. Despite the subsequent curtailing of the programme there are few signs that the government really has given up its ambitious policy for the near future. The present reduction of the total target figure to 175,000 families during Repelita V (1989/1994) rather seems to represent a temporary adjustment to financial constraints than a fundamental change in outlook. It still is relevant therefore, to pay critical attention to the basic assumptions and effects of this much disputed programme.

In this paper we hope to contribute some alternatives from a more holistic point of view and from experiences in other countries as well. Meanwhile, we are well aware of the fact that transmigration already bas become an integral part of Indonesian society since

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many decades and as such cannot and should not simply be discarded as a mirage. On the other hand however, there are many signs that transmigration has become a national myth or even a sacred cow. And as both experts and policy makers know, myths and sacred cows may become very costly in terms of human suffering and economic costs.

For this reason a continuing and open discussion on the limitations and possibilities of transmigration seems to be as before.

Consequently this paper is focusing on three main questions:

1. What are the effects of the present transmigration policy on the quality and the effectiveness of the programme in the Outer Islands?
2. To what extent is transmigration still a matter of life or death for solving the problems of the densily populated islands, i.c. Java?
3. Which conclusions may be drawn from the analysis of the previous questions, as far as alternative policies are concerned?

A. Aims and Effeets of the Present Transmigration Programme

The present transmigration programme is (still) primartily based on the government-sponsored resettlement of transmigrants from Inner Indonesia (Java, Madura, Bali, Lombok) in agricultural settlement areas in the Outer Islands. These sponsored transmigrants (*transmigran umum*) preferably are selected from young, maled-headed, and landless farmer households. On arrival they are allocated a 2 or 3 ha. farm lot (depending on the quality of the land), as well as a pre-constructed bouse with a garden. Usually most of the farm area bas to be cleared by the transmigrants themselves. In addition the transmigrants are suppliued with food, tools and fertilizer during the first year in the settlement.

Beside this flow of government-sponsored migrants there is also a steadily increasing flow of spontaneous migrants (*transmigran swakarsa*), who usually join their relatives in the established settlements, before starting a living of their own. This secondary of transmigrants amounts to about one third of the total flow. It is especially the increase of this spontaneous flow which the government seeks to trigger off, beeause it is so much cheaper and adds to the effectiveness of the programme.

The major aims of the present transmigration policy are:

- achieving a more favourable distribution of the national population and the labour force,
- developing new resources and productive areas in the Outer Islands (mainly through agricultural resettlement),
- increasing living standards in both the areas of origin and destination of the transmigrants, and
- integrating the national territory and fostering national unity by bringing together the various ethnic groups and cultures.

Although these aims have been quite persistent over time (repelita I-IV), their stress and mixture sometimes have changed considerably. This is especially true for the so-called demographic aim (which is not mentioned explicitly) i.e., alleviating population growth and pressure in Java. The logic of this aim is based on the argumentation that Java and Bali have 63 percent of the national population on just 8 percent of its territory, so that widespread landlessness, rural poverty and environmental deterioration can be

solve only by extensive population redistribution measures (cf. Widjojo Nitisastro 1963; Wander, 1965; Arndt 1977, 1983) as an impossible solution, the demographic aim repeatedly crops up again whenever authorities become nervous about Java's continuing population growth and the problems to curb it through family planning. It usually does so however, in a hidden form like the necessity of evening the distribution of population and the supply of labour for national development purposes. The persistence of this argument is clearly reflected in the very high target-figures set for the programme during the last Five Year Development Plan (Repelita IV) envisaging the resettlement of 2.5 million people, as well as another 10 to 14 million people for the next two decades, making the programme the world's biggest resettlement effort in history.

Such targets usually are based on arbitrary estimations of the carrying capacity of Java, as if it will remain a predominantly agricultural island with a more or less fixed resource system (see Table 1).

The limited value of this kind of economic-demographic arithmatic is demonstrated by the fact that the total amount of land suitable for agricultural use in the Outer Islands at present is estimated at roughly 24 million ha. On 2 ha. farms this implies an absorption capacity of 12 million farmers or some 50 million people. By transferring the whole natural inerease of Java and Bali of 2 million people per year - a tremendous effort in terms of investments and logistics - the last reserves would have been exhausted within a generation and the outcome would still be a population of 100 million in Java and a mass of small peasants on marginal lands in the Outer Islands, whereas most of the capital necessary for other development purposes would have heen absorbed by this programme. Even the argument that the underpopulated parts of the Outer Islands need a larger supply of labour in order to be developed, may be looked upon with some scepticism. Considering

TABLE 1
POPULATION PROJECTIONS FOR INDONESIA

	Population in millions			
	Census 1980	Projection 1990	Projection 2000	Projection 2010
Indonesia (r=2.32%)	147	185	233	293
Java (r=2.02%)	91	111	136	166
Percentage in Java	61.8	60.1	58.3	56.6
Maximum population in Java	70	70	70	70
Excess population in Java	21	41	66	96

Source: A.H. Mutalib, 1985, Table 14.1

that the Outer Islands all have much higher rates of natural increase (2.5-3 percent) than Java (1.9 percent, and similar underemployment figures, whereas their development requires first of all a supply of skilled and semi-skilled workers, transmigration of impoverished farmers hardly seems to offer a positive contribution (cf, Jones 1979, Hugo et al. 1987).

Finally, some doubts may be cast on the necessity of a more equal distribution of the population for national development purposes, as this presumes a vast reserve of underutilized resources which can be found for the asssumption (that in fact has become a myth in itself). Moreover, in highly developed parts of the world huge differences in population density between different areas may coexist without hampering national development or sccurity (e.g. the Megalopolis on the East Coast of the United States versus the deserts in the West, or the densely populated central parts of Western Europe versus the empty Par North). Even within smaller countries like Sweden or Prance there are extreme differences in density for quite large areas.

On the other hand, it cannot be denied that in terms of numbers of transmigrants and logistics the programme has become increasingly effective since Repelita 1 (1969/1974). Consequently, both the number of government-sponsored and spontaneous migrants (the latter in a ratio of 1:2) have been increasing over time.

As a result Java has been experiencing a net outmigration for nearly two decades and some three million of its inhabitants have heen moved out, who otherwise would have burdened the local economy and environment. Much of this achievemnt however, has been realized at high and ever increasing economic, social and environmental costs. It is our contention that many of these costs might have been averted if the government would have taken a more realistic stand towards some of the programme's basic assumptions and expectations. The main theme in our paper is that within the framework of the present transmigration policy various aims are mutually contradictory and that it is especially the hidden aim of alleviating demographic pressures on Java together

TABLE 2
TARGETS AND REALIZED NUMBERS OP TRANSMIGRANT FAMILIES IN INDONESIA'S FIVE-YEAR DEVELOPMENT PLANS (REPELITA I-IV)

Plan-period	Target	Achievement	Percentage
Repelita I (1969-1974)	41,000	45,169	110
Repelita II (1974-1979)	250,000	87,800	35
Repelita III (1979-1984)	500,000	535,474	107
Repelita IV (1984-1989)	465,000*	477,000*	103*

Source: Van der Wijst, 1985, tab. 2
Hugo et al., 1987, tab. 6.6
World Banmk, 1988, tab. 1.4

* Note: The repelita IV figures only apply to the period April 1984 - June 1987.

with the political aim of national integration, that are causing the greatest troubles. The continuous drive for realizing high targets in terms of numbers of transmigrants is negatively affecting the programme in the following ways:

1. The Occupation of Marginal Lands

As the best lands already have been occupied by the autochtonous populations, usually only marginal lands like tidal swamps, *alang-alang* uplands, and lateritic and podzolic spoils are left for the transmigrants. This tendency for ecological margionalization of the transmigrants seems to apply in particular to the new waves sent since the start of Repelita IV. The main reason for this being that the more eccessible and better endowed transmigration areas in Sumatra have already become more or less saturated, so that the focus of transmigration is shifting to less favourahle areas in Kalimantan, Sulawesi, and Irian Jaya (see Table 3). A problem which is sometimes aggravated by the settlement of remote, empty, and infertile areas for strategic reasons, like the borderland areas of Irian Jaya and West Kalimantan.

Technically, of course, marginal lands may be converted into productive land, but frequently only at high costs for drainage, irrigation, soil improvement, fertilizers, and planting with perennials (Collier, 1980). Thus, tidal swamp areas may be converted into wet-rice fields only if the peat layer is not exceeding a depth of 1 to 1.5 meters and only at the cost of applying many tons of limestone and fertilizers for neutralizing its high acidity that is detrimental to rice-growing. Similarly the podzolic soils of the tropical rainforest require croprotation and fertilizing to compensate for their low natural fertility.

Transport problems, limited marketing opportunities, small farm size and lack of skill are often inhibitive to these technical improvements. The result is a quick degradation of farm land

TABLE 3
NUMBER OF TRANSMIGRATED FERSONS BY ISLAND OF DESTINATION

Period	Sumatra	Kalimantan	Sulawesi	Other	Total
Repelita I	121,111	29,013	57,868	2,192	210,184
%	57.6	13.8	27.5	1.0	100.0
Repelita II	199,151	64,138	73,757	3,758	340,804
%	58.4	18.8	21.6	1.1	100.0
Repelita III	1,149,710	388,515	211,935	110,770	1,860,930
%	61.8	20.9	11.4	6.0	100.0
Repelita IV	812,855	343,523	126,910	78,910	1,362,200
%	59.7	25.2	9.3	5.8	100.0
Total	2,282,827	825,189	470,470	195,630	3,774,116

Sourcc: Hugo et al., 1987, tab. 6.8; figures for Repelita IV are based on data uo to May, 1986.

aggravated by improper farming techniques, as well as much ecological damage through deforestation prolification of *alang-alang* (imperata cylindrica), soil depletion, erosion, salination, dessication, etc.

A welknown consequence of the occupation of marginal land combined with the urge for self-sufficiency, is the reversion of subsistence farmers to cassava cultivation; a less demanding crop in terms of soil-fertility and inputs, but progressively depleting the land so that the farmer soon is caught in a self-defeating process. These processes are enhanced by the target-hunting policies of both the national and regional governments, causing the settlement of too many small farmers on marginal, badly surveyed and ill-prepared lands. Notorious examples are found in Sitiung (West Sumatra), where mechanical clearing of the rainforest caused massive destruction of the top-soil, forsing the farmers into cassava cultivation, as well as the failure in Air Sugihan (South Sumatra) where some 80,000 transmigrants were trapped into a badly surveyed tidal swamp area with thick opeat layers and lacking potable water (Secrett 1986). According to a conservative estimation some 300,000 transmigrant families are presently living on sites that are ecologically incapable of sustaining them in even the most marginal conditions (cf. Rich 1986).

2. increasing Costs per Transmigrant and Diminishing Returns

Arndt (1983) bas calculated an increare in cost per household from 577 US dollars in 1969/1970 to 11,663 US dollars in 1982/1983 (which implies a direct cost for the Repelita IV budget of 2 billion US dollars a year). These rising budgets can be procured only with heavy World Bank loans, that have to be repayed in due time. The increasing burden of the programme seems to be closely related to the increaring costs of occupying marginal land, using expensive foreign consultancy firms and improving the facilities of the projects (to make transmigration more attractive). These rising costs of the programme could have been justified if thcy had been balanced by increaring returns to investments. This was exactly the purpose of the so-called Nucleus Estate (NES) or PIR-system, which connected with transmigration might both absorb small farmers and increase export production of perennial crops on poor soils.

Although investments in this type of estate-settlement are very high (Rp 20 million per farmer-household) the World Bank became very interested because of the high expected returns (cf. Amin Aziz & Nugroho Semedi 1985). The recent fall in world-market proces, however, has completely jeopardized this programme and is especially hitting the "plasma" farmers of the nucleus estates. The probably structural character of the pricc-fall on the commodity markets for palm oil, rubber, and copra make prospects for PIR-transmigration projects rather gloomy. The only solution would be to increase economies of scalc for the PIR-projects by excluding small farmers. Actually this process has already started with offering a larger share to the Nucleus Estate companies by incraesing their share to 40 percent of the total arca. This policy however, is clearly contradicting the (hidden) demographic aim of the transmigration programme. Consequently, the number of transmigrants resetlled aceording to

this Nucleus Estate or PIR-system, has been falling far behind expectations (cf. Hardjono, 1986; World Bank, 1989).

3. Dual Sector Development

Grafting small farmers (originally peasants from Java) on a large scale Nucleus Estate System, may easily cause the perpetuation of a dualistic production structure similar to that existing during the colonial period in Java. The role of small farmers in the PIR-system in fact is reduced to suppliers of cheap labour, land, and produce, as they have no real say in the estate's management, whereas they are completely dependent on its services. Recent evidence for this is bound in the way the estate firms have brudened the "plasma" farmers with heavy installment costs for the conversion of their land, whereas they are themselves unwilling to carry the risk of falling commodity prices. The dependency of the plasma farmers is increased by the fact that they do not have sufficient land of reasonable quality for cultivating their own food crops during periods of crisis (like the small rubber producers in Sumatra).

Of course this does not mean that the PIR-system has no potential for utilizing marginal land, increasing export production and even absorbing some labour (cf. Mubyarto, 1985). It should however no longer be connecting to the aim of settling as many small-farmers as possible (on too small farms) in order to comply with the transmigration aims. In other words the "PIR-Trans" policy should be replaced by a "PIR-Bun" (plantation-NES) policy with better conditions for the tillers, who preferably should be trained settlers (TSI-farmers). Interesting lessons on failing small farmer settlement schemes and the role of estate firms may be learned also from the experiences in Amazona, Brazil. Here, finally the estates have taken over thye land from the small settlers or just prevented them access to the better locations (cf. Kleinpenning, 1978).

4. "Hollow-Frontier" Settlement

This concept developed by Preston James to explain failing "colonization" schemes in Latin America, seems to fit also many Indonesian transmigration schemes. The concept implies that the occupation of wastelands can only succeed if it is sufficiently backed up by a densifying population and a process of economic diversification in its hinterland, which supply capital goods, marketing opportunities and other services to the agricultural frontier areas through a continuously expanding network of roads and service centers. Prequently however, these backing-up facilities are lacking completely as many Latin American schemes have been set up too far away from the inhabited world, because the authorities were eager to occupy empty areas ("gobernar es poblar"), or because the colonists were hunting for mineral treasures and rich lands for the speculative cultivation of coffee. In these cases the often marginal land was quickly exploited and depleted, after which the colonists either went on to the next frontier, or remained on the spot as impoverished farmers (caboclos).

In neither case the diversification of the hinterland could materialize and sooner or later the "hollow" frontier might even collapse.

There are clear signs that similar processes are occurring in the transmigration areas in Indonesia, where farmers are settled far away from roads and market centers, where there are no opportunities for additional

incomes through off-farm employment, no public facilities (health and education) and where the transmigrants are falling back on primitive techniques of self-sufficient food-crop cultivation (cassava), or simply leave the site for a job in the nearest city (Palembang, Balikpapan or Merauke). The vital importance of nearby opportunities for supplementing the meager farm income is clearly reflected in Table 4, showing the various sources of income for transmigrants settled during Repelita II and III.

No less than 67.5 percent of the transmigrant households have an income derived from non-farm sources. The main cause for "hollow- frontier" development therefore, is not the lethargy or the speculative attituide of the transmigrants, but the target-hunting policy of the authorities leaving no time and no room for a gradual process of occupying wasteland by moving outward from a few more densely populated areas which are supporting the process with services and (non-agricultural)income opportunities.

5. Management Problems

Most management problems in transmigration schemes are ensuing from hastily devised plans in order to fulfil the target figures. This becomes evident already from the first stages of the land evaluation and feasibility studies. The surveys are often carried out in a rather hap-hazardous way and in a very short time (± 2 months) with insufficient field checks on hyudrology and soil quality. The costly pbase of the feasibility study, usually carried out by foreign consultants, discloses that on the average only 20-25 percent of the originally surveyed areas are fit for human settlement. However, the authorities frequently try to raise this pereentage (against the advise of the consultant) in order to place the targeted number of transmigrants. A recent study by the Land Resources Developmeht Center (U.K.) for example concluded that, although only about 75,000 ha. in Central Kalimantan were suitable and available for transmigration sites, government targets project the clearance of nearly seventeen times as much forest between 1979-1989 (secrett

TABLE 4
MONTHLY HOUSEHOLD INCOMES BY TYPE OF TRANSMIGRANT AND SOURCE OF INCOME (rp/MONTH). 1984/1985

Type of migrant	Sample size	Parm income	Non-farm income	Total income	% non-farm
Sponsored	1800	18,876	35,565	54,441	65.3
Spontaneous	152	23,533	43,208	66,741	64,7
Retired military	57	16,325	101,381	117,706	86.1
Local origin	186	20,581	53,464	74,045	72.2

Source: World Bank, 1988, tab. 2-4, based on BPS Transmigration Income Survey, 1985.

1986). These feasibility problems and those of the next phase (site-preparation) are also related to the so-called PAYP (Plan As ou Priceed) system. This planning system - devised to catch up with the over-ambitious targets - actually is inviting haphazard (ad hic) solutions as it leaves no time and room for matured plans. Morover, once started in a wrong location or direction it is very difficult to make corrections.

6. Integration Problems with the Original/Local Population

The aim of increasing national unity by integrating the local inhabitants with transmigrants from Java/Bali frequently is disturbed by forced attempts to bring them together in the samescheme (APPDT programme). The idea behind the APPDT programme is that the local population should also enjoy the advantages of the transmigration programme facilities, in order to prevent feelings of jealousy. Forthis purpose 25 percent of the participants are local transmigrants translok. In reality however, there are many barriers to this planned integration. The sheer volume of the number of transmigrants already may cause social unrest among the local population, as it fears to become a cultural minority in its own homeland. A much disputed case has been the scheduled settlement of some 690,000 transmigrants from Java in Irian Jaya during the last Five Year Development Plan (1984-1989), thus inflating the local population with 54 percent! This quantitative integration problem may be increased by large cultural and economic differences, which make it impossible to blend the two groups in one settlement project or production system. The very different types of social organization and modes of production of the communally organized Melanesian and Dayak tribes in Irian and Kalimantan, compared with that of the individually operating and commercially oriented Javanese peasant offer a clear example for this. Frequently conflicts are arising from different systems of land tenure/property relations, aggravated by the lack of suitable land for transmigration sites (cf. Loekman Soetrisno, 1985; Mubyarto, 1985). The present transmigration policy, therefore, seems to be an athema to a carefully planned integration policy. From this brief analysis of the main problems of the transmigration programme we may draw the conclusion that practically all traffic lights for the government's resettlement policy have switched to red, indicating the necessity of a thorough rethinking of its aims and underlying assumptions.

B. The Role of Transmigration for Java

Past and present (Repelita IV) transmigration programmes were still grided by the "hidden" aim of alleviating rural population pressure in Java, next to the aim of increasing the living standards of both the farmers in the areas of origin and those transmigrated to the Outer Islands. These aims are based on the assumption that Java still has a mainly agricultural society which suffers from heavy over-population, rural poverty and environmental degradation, and is going to have these problems for a long time to come (even taing into account the most optimistic population projections with quickly declining marital fertility rates). For the policy makers transmigration seems the only way out, considering the reality of an absolutely increasing cultural labour force in a situation of extensive

landlessness, underemployment and overexploitation of marginal lands. The economic-demographic solution of transmigration thus seems the logic answer to the economic-demographic problems of an overpopulated agricultural island. At least as long as the Outer Islands offer sufficient viable opportunities for new agricultural settlements (on which already some doubt has been cast).

It might be expected that under the conditions mentioned before, the rural poor would respond massively to the opportunities offered to them by the successive transmigration programmes and thus might increase their own living standards as well as of those staying behind (by easing the pressure on resources).

In the following analysis however, we shall see that this is rarely the case, and that the basic assumptions (relatig to the economic-demographic situation in Java) are no longer aplicable in their simple form.

Our analysis is based on both macro-level data and some scarce micro-level studies on the perception, response and eonsequences of transmigration at the village level (cf. Singarimbun, 1980; Nijkamp & Peeters, 1984). From these studies the following picture emerges.

1. Response tothe Transmigration Programme

Very few sources disclose an enthousiastic response of even the poorest strata to the programme. More often we hear about pressures exerted upon potential transmigrants by government officials, village heads, etc. Research of the Geographical Insritute (Utrecht) cooperating with the Transmigration Monitoring and Evaluation Institute (Bogor), on the transmigration response in two villages in Wonosobo residency in 1983 confirmed this picture.

The villages situated in the same subdistrict (Kaliwiro) were comparable in strength of programme efforts, their socioeconomic stratification and location, but not in their economic potential. One (Ngadisono), being mainly an upland village with dry land (*tegalan*) farming and mixed-forest gardening; the other (Kauman), being a *tegalan* and rain-fed rice producing (*sawah tadah hujan*) village. Ngadisono had more evenly spread employment opportunities throughout the year (mainly through perennial crops and palm-sugar processing), a stronger bargaining position and consequently better access to non-agricultural employment opportunities outside the village than Kauman, which suffered from heavy seasonal unemployment and had less access to external sources of income. Consequently, the response to transmigration was much stronger in Kauman than in Ngadisono, where there was more migration to the cities and seasonal circulation to nearby rural and urban employment opportunities, or even to PIR-projects under construction in Sumatra.

Even in Kauman, bowever, only the poorest strata which had no other choice, enlisted for transmigration. An employment preference-scale investigation disclosed that ion both villages transmigration was seen only as a last resort.

Considering the hardships of transmigration and the low overall response to programme effort, it is not surprising that most transmigrants are recruited from so-called "minus" areas

TABLE 5
GOVERNMENT SPONSORED TRANSMIGRANT FAMILIES MOVED DURING THE FIRST YEARS OF REPELITA IV BY REGION OF ORIGIN AND PRIORITY CATEGORY

Region of origin	Number of families			Priority category	Total 1984-'86
	1984/85	1985/86	Total		
DKI Jakarta	582	585	1,167	Natural disaster areas	10,680
West Java	7,469	10,228	17,697	Critical eroded areas	38,436
Central Java	11,160	13,937	25,097	Densely populated areas	13,763
DI Yogyakarta	2,216	2,309	4,525	Development Project areas	9,300
East Java	12,022	10,291	22,313	Armed Forces program	594
Bali + West Nusa Tenggara	1,420	1,451	2,871	Social welfare program	1,160
Local settlers	3,620	8,751	12,372	Oocal settler projects	12,371
Resettlement	8,477	9,518	17,095	Resettlement projects	17,732
Relocation	4,592	815	5,407	Relocation measures	5,407
Total	51,558	57,885	109,443	Total	109,443

Source: J. Hardjono, 1986, tables 4 and 5

and from the lowest status groups (cf. Hardjono, 1986).

2. Effeets onLocal Population Pressure

Whereas the illusory effect transmigration on alleviating population pressure for Java as a whole has been sufficiently proved, it has been seldomly so at the village level. The studies of Singariinbun (1980) and Nijkaınp & Peeters (1984) however, show that even at the local level, transmigration rarely ınproves the resource base of the village community. The opportunities or land left behind by the transmigrants are usually filled in very soon after their departure, both through natural population increase and inmigration. Prequcntly the land is bought by a few richer farmers and village officials (*pamong desa*), or even hy people outside the village, i.e. by persons who need it lcast. In most cases however, the landless transmigrants leave behind very little, so that their departure hardly adds to the resource base of the village. At the ınacro level of analysis however, transmigration may have some - although temporary - beneficial effects on the rural labour force. Manning (1988) has attributed the slowing down of the rural labour force growth rates in Java from 1.9 percent in 1971-1980 to 1.5 percent in 1980-1985, to the ınpact of the expanded transmigration programme during Third Pive Year Development Plan. The decreasing growth of this rural labour force came very timely because of the economic stagnation following the fall of oil prices during the early 1980s. In view of cuts in the public budget and increasing difficulties in finding suitable transmigration sites, it seems unlikely however, that a similar number can be moved during the present Pive Year Plan.

3. Effects on Living Standards

The departure of the poorest people from the villages does not only change

very little in their agricultural resource-base, but usually the various activities of the enlisted transmigrants are of such a marginal character, that their departure does not add very much to the local income opportunities either. Actually, it hasalready been shown in many migration studies that outmigration rarely offers a solution for the structural causes of communal poverty, which frequently are more a question of skewed power relations, terms of trade, land tenure, etc. On the other hand the transmigrants may experience a considerable improvement in their living standards if the project is properly selected and well organized. Especially if previously they were landless farmers. The problems experienced in most transmigsation projects however, are the main reason for the disappointing improvements in standards of living. As Arndt (1983) noticed:

> "Even in the new World Bank assisted settlements, farmers with an average of just over 1 ha. under cultivation are found after 3-4 years on the site to reach an annual family income of only about $ 600 (1962 prices), whereas the standard set by the programme itself is $ 1000. This income figure may alsobe compared with an estimated average per capita consumption expenditure of about $ 120 in rural Java. It is clear therefore, that taking account of the hardships and risks of failure in the transmigration schemes, as well as the more ample off-farm and non-farm employment opportunities in Java, few farmers are really attracted by the transmigration schemes as long as they have any alternative in Java itself (which in addition has much better facilities for education, health, and transport)."

A few years later this conclusion was confirmed by the findings of the Central

TABLE 6
COMPARISON OF TRANSMIGRANT AND NON-TRANSMIGRANT INCOMES (RP/MONTH)

Type of settlement area	Survey date	Monthly bouseh. income	% with monthly income below Rp		Annual household income (US$)
			30,000	50,000	
Transmigration sites	1985	58,300	20	50	636
Rural sending areas	1984	67,200	15	43	733
Rural receiving areas	1984	90,750	4	24	990

Note: Rp 30,000 is the monthly subsistence level for a family of five.
Rp 50,000 is the family poverty line, estimated at Rp 10,000 per capita/month.
Source: World Bank, 1988, table 4.

Bureau of Statistics Transmigration Income Survey.

4. Employment and Transmigration

Several studies have revealed that in Indonesia, and especially in Java, off- and non-farm opportunities have expanded considerably during the last intercensal decade (cf. Jones 1984; Manning 1987, 1988). The changes were closely related to both the oil-boom and agricultural sector development, bringing increasing activities in urban enters as well as in rural areas through a process of economic growth and diversification.

Intercensal rates of lahour-ahsorption show that especially the services (5) and manufacturing (A) sector has been lagging behind.

Consequently, the share of the A-sector in total employment has fallen from 67.0 percent in 1971 to 55.5 percent in 1980, whereas the share of the M-sector rose from 8.9 percent to 12.7 percent and that of the S-sector from 24 percent to 31.8 percent. The declining share of the A-sector, clearly reflects the initial stage of de-agrarianization of Java's economy. Looking more into detail we can see that even in the rural areas most new employment opportunities have been created in the S-sector (especially in private and public services, trade and transport) as well as in the construction branch of the M-sector (cf. Diah Widarti, 1984; Jones, 1984). This means that the rural population has been able to diversify its means of living, as well as to obtain a larger share of the urban based activities through labour-mobility and remittances from permanent migrants in the cities (cf. Hugo, 1978; Mantra, 1979; Manning, 1987).

On the other hand, more recent evidence suggests that since the early 1980s agricultural employment crcation seems to have been on the increase

TABLE 7
GROWTH OF GROSS DOMESTIC FRODUCT (GY), EMPLOYMENT (GN) AND CORRESPONDING COEFFICIENTS OF LABOUR ABSORPTION (G) FER ECONOMIC SECTOR IN INDONESIA (1971-1980) AND CENTRAL JAVA (1975- 1980)

Indicator by region		Economic sector			Average rate per year*
		Primary (A)	Secondary (M)	Tertiary (S)	
Indonesia:	Gy	3.64	10.92	9.22	7.52
	Gn	1.43	7.10	6.92	2.89
	Y	0.39	0.65	0.75	0.38
C. Java:	Gy	5.13	11.05	8.61	7.25
	Gn	1.38	2.90	3.59	2.22
	Y	0.27	0.26	0.42	0.31

Souree: A. Komalig, et al., 1984, p. 83, 169

* N.B. The growth rates of Gn and Gy do not represent exponential rates, but ten-year averages of the total increase.

TABLE 8
GROWTH OF LABOUR FORCE AND EMPLOYMENT PER SECTOR, 1971-1985

Population by region	Annual growth rates			
	Agricultural employment	Non-agricultural employment	Total employment	Labour force
Both sexes (1971-1980)				
Indonesia	1.23	5.87	3.04	2.98
Java	0.61	4.87	2.76	2.69
Rural Java	0.63	4.98	1.92	1.89
Males 1980-1985)				
Indonesia	2.25	3.65	2.87	3.03
Java	1.45	3.64	2.52	2.71
Rural Java	0.27	1.70	1.44	1.48

Source: Manning, 1988; based on Population Census 1971 (Series C) and 1980 (Series S2), and the Intercensal Population Survey (SUPAS) in 1985.

again, whereas non-farm employment growth had slackened (see Table 8). The major cause for this being probably the recent economic depression following the fall of export-commodity prices and public budget cuttings. According to Manning (1988) however, the successful inteusifieation of agriculture (especially rice cultivation) must also have contributed to the increase of much of the absorption capacity of the farm sector through practices like multiple cropping and the maintenance of low levels of mechanization.

Undoubtedly this absorptive capacity should be attributed also to increased pressures of family labour on sharing the available opportunities within the farm-sector during slack periods. In the long run however, this must be a self-defeating process, since the progress of agricultural commercialization and innovation will ccrtainly oppose the absorptive role of the agricultural sector, as has happened already in the recent past (cf. Collier, 1982; Jones, 1984). Considering the economic recovery during the second half of the 1980s, the resumption of the labour absorption pattern during the 1970s seems more probable.

Moreover, other studies (White, 1979; Rietveld, 1986) have disclosed that an increasing share of rural income is derived from non-agricultural sources (locally more than 50 percent of the rural household income), and that competition from urban- industrial employment opportunities (construction, manufacturing, transport) has already caused local shortages in the supply of agricultural labour (Collier, 1982; Preston, 1989). Although the majority of these non-farm and urban employment opportunities are of a small-scale informal type, their contribution to both the household and the national economy should not be

underestimated. Even when wages/ incomes per hour are low, the possibility to work many hours per day all the year round, makes these activities a more important source of income than the contrihution of these activities - often qualified as marginal and superfluous - should also not be underrated. They have important functions, not only as sources of income and employment for the mass of unskilled workers (who thus may share in the seepage of incomes and produce generated by formal sector activities), but also because of their supportive functions in the process of economic development. Namely, as cheap suppliers of labour, services, and goods to the formal sector, enabling this sector to pay low wages, and have low overhead costs, which are necessary conditions for accumulating and re-investing capital (under conditions of heavy competition from producers abroad and low world-market prices). Thus, it becomes clear that informal sector activities are going to play an important part in both labour absorption and economic development in Indonesia as loong as the A and M sectors are able to increase productivity in order to support a large S-sector (formal and informal). This is not to say that the A and M sectors should only develop into large-scale corporate activities, as even in these sectors there is still scope for increasing the productivity in small-scale enterprises (cf. Japan, Taiwan, South Korea). Consequently, extensive expulsion of lahour can be prevented under conditions of continuing growth. Another interesting option for Java might be the transformation of industrial cash-crop and staple-crop agriculture into more intensive food-crop farming and horticulture, serving the demands of the increasing urban population. This process has alreday started spontaneously in some favourably located arcas trying to switch from the cultivation of sugarcane to the multiple cropping of HYV-rice, and from staples like cassava, maize, or even rice to fruits (oranges), vegetables, and dairy or poultry farming. From the preceding analysis we may draw the conclusion that Java has already embarked upon a process of de-agrarianization and increasing urbanization without a large-scale dislocation of its population (cf. Jones, 1984; Hugo et al., 1987). At the same time this might take away one of the most pressing factors for stepping up transmigration, thus offering the government more time to reconsider this programme and plan it more carefully.

5. The Evidence from Some Population Projections

The economic-demographic impact of transmigration at the macro level can be assessed with the help of population and employment projections applying to different parts of Indonesia affected by the programme. A recent attempt by the World Bank (1988) shows the effects on both the total population and the labour force in Inncr and Outer Indonesia of various transmigration streams. (Appendix I).

It may he inferred from these projections that the most optimistic scenarios will reduce the incremental population of Inner Indonesia with some 9-13 percent of that without the programme, which means that the environmental pressure in Java will be affected only marginally. Pressure on the labour market is considerably furthcr reduced i.e. by some 19-24 percent, which is particularly interesting because

of its cumulative effect in the rural areas of origin. A major problem with these optimistic scenarios however, is their small chance of becoming a reality. The main conditions being a high proportion of spontaneous migrants and the successful extension of the transmigration programme into marginal lands through the Nucleus Estate System. The spontaneous migrants are increasingly hampered by a lack of suitable land without property claims, whereas the NES- settlements are hampered by high investment requirements and diminishing returns to capital. Under these conditions the modest scenarios seem to be more realistic, although the transfer of 200,000 families still requires considerable efforts in terms of finding suitable land and sufficient funds because of increasing costs of settlement. At the same time moreover, their demographic impact dwindles to an insignificant 3-6 percent as far as the reduction of the total population is concerned.

On the other hand it should be recognized that transmigration has made considerable contributions to the creation of new employment opportunities in Outer Indonesia. According to estimations by the World Bank (1988) some 500-660,000 permanent jobs have been created during Repelita III, i.e. about as many as the total number of households moved from Inner Indonesia during the Pive Year Development Plan period. When computing the cost per joh created, the World Bank (1980, p.80) even assumes a ratio of two johs per household moved, which seems too optimistic in the light of the achievements during Repelita III. According to the Bank thc cost per household moved had reached an average of US$ 7000-9000 during Repelita III, depending on the type of settlement. This means that according to their estimates the cost per job are just half of that. The German Development Agency (GTZ) however, already assumed an average of US$ 13,000 per household in 1986 (GEO, 1986), so that the average cost of creating a permanent job may actually amount to US$ 7000-10000. This is not only much more than the Bank's estimates, but also more than the cost of creating job in the services (S)sector, and even approaches the cost of employment creation in manufacturing industry (US$ 10000-20000 per job). Most expensive of course are the jobs created in Nucleus Estate settlements that now suffer from declining returns to capital. Considering that these diminishing returns are increaringly characteristic for the other settlement types as well, it becomes questionable whether large scale employment creation through transmigration projects is still a viable option. Especially if compered with the opportunities for labour absorption and economic return in other sectors than the agricultural one.

Our next step is to assess the economic-demographic necessity of transmigration for inner Indonesia, i.e. mainly Java. Por this purpose we are using projections of the labour force and the expected employment opportunities in Central Java, in order to estimate its surplus labour under varions conditions of economic growth. The surplus lahour is taken as an indicator for the necessity and the potential volume of transmigration. The case of Central Java was selected because it represents one of the most densely populated and poorcst

TABLE 9
PROJECTIONS OF LABOUR FORCE, EMPLOYMENT AND LABOUR SURPLUS PER ECONOMIC SECTOR IN CENTRAL JAVA, 1980-1990

Scenario per sector		Labour force*		Employment**		Assumed growth rates		Labour surplus 1980
		1980	1990	1980	1990	Gn	Gy	
I	A		6,673.3	5,766.6	6,562.4	1.30	5.11	110.9
	M		2,230.0	1,607.9	2,205.9	3.07	11.77	24.1
	S		4,416.7	3,114.7	4,342.7	3.95	9.40	74.0
Total		10,667.0	13,320.0	10,569.2	13,111.0	2.40	7.74	209.0
II	A		6,987.2	5,766.6	6,406.7	1.11	4.11	580.0
	M		2,139.3	1,607.9	1,961.6	1.62	6.23	177.7
	S		4,193.5	3.114.7	3,845.1	2.63	5.62	348.4
Total		10,667.0	13,320.0	10,569.2	12,213.4	1.56	5.03	1,106.6
III	A		6,492.4	5,766.6	6,406.7	1.11	4.11	85.7
	M		2,326.2	1,667.9	295.5	3.60	13.84	30.7
	S		4,501.4	3,114.7	4,441.9	4.26	10,14	59.6
Total		10,667.0	13,320.0	10,569.2	13,144.1	2.44	7,87	176.0

Source: A.Komalig et al. (1984), tables IV 2; IV 3; IV 4 (adapted)

* Assumptions for labour force projections:
- Projections of total labour force are based on declining mortality rates, constant net-migration losses and in- creasing labour force participation ratio's among females and the youngest age groups.
- The sectoral districution of the 1990-labour force follows the distribution of the projected employment-structure in 1990.

** Assumptions for employment projections:
- All sectoral projections are based on constant labour absorption coefficients (g = Gn/Gy = constant).
- Scenario I projections assume that Gn 1980-1990 = Gn 1975-1980.
- Scenario II projections assume a decline of Gn 1980-1990 following a decline of Gy in sector A = 20%, sector M = 40% and sector S = 40%.
- Scenario III assumes a constant rate of employment of 0.013 for the total labour forcc and a declining absorption of labour in agriculture.

provinces of Inner Indonesia with a very weak resource base.

The labour force projections are based on moderately declining mortality rates, slightly increasing labour force participation rates (especially among females) and a constant negative migration balance (1975-1980). Despite a net-migration loss of 1.3 percent per year the labour force is growing with 2.32 percent per year. All three scenarios are based on the rather unfavourable assumption of constant low levels of labour absorption (g) and relatively low levels of employment growth (Gn). In each economic sector the coefficient of the labour force absorption (g) in Central Java (A=0.27; M=0.26; S=0.42) remains considerably below the Indonesian average deemed necessary for absorbing new entrants to the labour market (g 0.5)(cf. Hugo et al., 1987, p.293).

Still, neither of these scenarios - even not the most pessimistic one (II) warrants a Malthusian solution based on the removal of as many households as possible through transmigration The reason for this being that transmigration explains only some 40 percent of the net-migration loss from Central Java, which mostly is absorbed by urban jobs in Java and the Outer Islands, thus refrecting the migrants preference for urban destinations. In terms of transmigration targets and assuming an average of 2.0 productive persons per family, this implies the removal of the following numbers of households:
Scenario I; 0.4 (209,000/2.0)= 41,800 households or 4,180 pe year
Scenario II; 0.4 (1,106,600/2.0)= 221,320 households or 22,132 per year
Scenario III; 0.4 (176,000/2.0) = 32,000 households or 3,200 per year

In comparison with the average of 30,000 families transmigrated from Central Java during the period 1981-1985, the targets represent only a modest effort and certaiuly do not warrant an inflation on the target figures to some 50,000 families per year as originally envisaged for Repelita IV.

One should keep in mind moreover, that these projections are based on rather conservative economic growth consumptions, whereas in reakty there is still scope for increasing investments and improving the low level of labour absorption in the non-agricultural sectors. As economic conditions have been improving already during the second half of the 1980s, there seems no reason at least to accept the most pessimistic scenario II.

C. Conelusious

Although there is much reason for concern about the way in which transmigration is still seen as a solution for a variety of problems, as well as about its proper implementation, there is no reason for discarding the idea of transmigration as just another national myth. The following suggestions for reorienting and improving the programme will make this clear:

1. The government might make a more relaxed stand towards population and employment problems in Java as far as the necessity of moving large numbers of people to other regions is concerned (cf. section 2). This enables a more realistiuc and mature planning of the transmigration programme, that should be geared first of all towards the development potentials and needs of thc underutilized regions outside Java, thus inviting a spontaneous stream of migrants from Java far cheaper and far

more effective than the present government-sponsored stream of transmigrant-farmers (cf. Arndt, 1983; Tjondronegoro, 1985).

2. Transmigration remains a viable solution for people living in socalled critieal areas in Java, who have to be evacuated because of excessive erosion, frought, natural eatastrophies, etc. or for areas that have to be evacuated for artificial lakes, riads, canals, reforestation projects, etc. Because of the limited reserves of land suitable for agricultural settlement in the Outer Islands, the government should confine her active transmigration programme only to these critical areas (which already contain several millions of people). This implies a careful selection of these critical areas and the potential transmigrants, and not some general target imposed on all districts or *kabupaten* alike.
   Moreover cooperation of the population affected should be ensured by fair compensation procedures for the material by the evacuation of the Kedung Ombo project area in Central Java serves as a warning example against a careless handling of such local interests.
3. In the Outer Islands, transmigration should only be presented as one of the possibilities for regional development, although it might be a very important one as it may reinforce the agrarian production structure and increase population density in areas previously empty (thus offering possihiluties for increasiung food production, marketing and transport facilities, labour supply, etc.). In that case however, again the potentials of the region should be the standard and not some ahstract target figure determined from behind the planners's desk with some other (hidden) motivations. Regional development, however, might also start on a more capital and technology intensive base (provided that both its economic and environmantal limitations are taken into account) by improving the infrastructure (roads, ports), exploiting local resources (timber, oil, coal, ores, agricultural export products), developing local processing industries and improving local services (administrative, health, education, and finance). Indirectly this might attract a much larger and more qualified stream of migrants from Java than the present transmigration schemes (cf. Arndt, 1983).
4. Instead of the increasingly expensive, government sponsored transmigration of unskilled, impoverished farmers, more attention should be paid to the attraction of spontaneous migrants with some qualifieations or skills (so called TSI migrants). This is possible, exactly because spontaneous migration to other islands (incl. transmigration) has already become an integrally accepted pattern in Indonesian society (cf. Heeren, 1967; Mochtar Naim, 1979; Mubyarto, 1985). Spontaneous migrants are on the average not only more successful, but also more positively selected than the sponsored migrants (thus contributing to a more balanced exchange of labour between Java and the Outer Islands). These better trained migrants are a first requirement for the development of

the Outer Islands regions, according to the model proposed under point 3.

5. The government should pay more careful attention to the position and role of the local (autochthonous) population in the receiving areas. Until recently these interests usually have been sub-ordinated to those of the transmigration seheme, even in the APPDT programme. If direct participation of the local population in the scheme is not possible because of great cultural and economic differences (like in Irian Jaya and Kalimantan) a parallel development effort probably needs pretection of the local population and taking over of the local economy by stronger and better equipped groups. A special role in this parallel development effort might be conferred upon NGO's, which usually have a better knowledge of the local social and cultural conditions and economic potentials. Once parallel development has gained momentum, the local population might try to participate in more complicate activities and institutions outside their protected habitat or region. Moreover, a process of regional development as envisaged under point 3, might entail the participation of various ethnic groups (*suku bangsa*) on a more equal base, as all of them have to accomodate and integral on higher social, political and economic levels, which at the same time erode their socio-cultural differences and prevent issues of cultural domination. An interesting example of such a process of accomodation already has been set by the Dayak in East Malaysia, where several tribal communities have been able to adapt successfully to the new opportunities offered by the oil and timber boom and by subsequent urbanization.

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1 During the 5-year period preceding the 1980-census the estimated net-migration loss amounted to 136,000 persons per year, whereas transmigration averaged some 50-60,000 per year.

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