

ED Précis



Operations Evaluation Department

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Transmigration in Indonesia

Indonesia's Transmigration Program, one of the largest resettlement programs in the world, has been much criticized. Supporters point to the safe and orderly resettlement of millions of people, alleviating pressure on land in inner islands and contributing significantly to the development of the outer islands. But detractors argue that considerable resources have been wasted in settling people who have not been able to move beyond subsistence level, with extensive damage to the environment and deracination of tribal people.

*The Bank has supported the Transmigration Program through seven projects totaling \$560 million. An impact evaluation by OED of five completed projects assesses their effects on people and the environment.**

Indonesia's population density varies greatly from island to island. Out of 185 million people, more than 100 million live on Java, which has excellent soils but only about 7 percent of the nation's land. Densely crowded Java has small agricultural holdings, and growing numbers of landless people are swelling its towns and cities. The outer islands have a large portion of Indonesia's natural resources, less dense population, and higher rural incomes, on average, than in Java.

Between 1903 and 1990, the Transmigration Program resettled more than 3.6 million people at government expense in the outer islands, where they received houses, land for farming, and a subsistence

and production package during their early settlement years. Most applicants for transmigration have been young landless agricultural workers and their families, from Java and Bali. The program continues today.

The OED study analyzes five projects (see boxes). At the time the Bank completed its loan disbursements, these projects had supported the resettlement of about 35,000 sponsored families and 1,200 spontaneous settler families. Performance audits done soon afterwards concluded that Transmigration 1 (T1) had achieved its settlement goals and supplied health and education facilities and other infrastructure as planned. The four follow-on projects all achieved their resettlement goals, despite the difficult natural conditions of the project areas. In all villages, schools and health centers were built and adequately staffed. The settler population was stable, and settlers considered their new life to be better than the one they had left behind.

Project planners had expected farming (treecrops or annual crops) to provide almost all household income. But farming in the settlements did not develop as planned. Cropping intensities and yields of annual crops were much lower than expected. Settlers could not develop their land fully. Important reasons were shortages of family labor and low

use of animal traction; settlers' lack of experience, combined with the inefficiency of supporting services; settlers' preference for off-farm employment; soil degradation; erosion; and difficulties in marketing crops. Of the five projects studied, only the two based on rubber production (T1 and T3) proved economically viable. In T4, in a remote site on East Kalimantan, 6,000 families survive only at a subsistence level, for lack of processing facilities for the coconuts they produce with project assistance.

Living standards

The impact evaluations, undertaken in 1993, found that settlers' incomes in T1, T2, and T3 were above the poverty level, in some cases significantly so, and higher than expected at project appraisal. Many of the resettlement sites, particularly in T1, were thriving villages with a broad range of commercial, social, and cultural activities. Fully 83-95 percent of the transmigrants in the three projects described themselves as very satisfied with their current situation.

* "Indonesia Transmigration Program: A Review of Five Bank-supported Projects", Report No. 12988, April 1994. OED reports are available to World Bank executive directors and staff from the internal documents unit and from regional information services centers.

Projects reviewed

Of the seven Bank-supported transmigration projects, five supported schemes in the uplands of Sumatra and East Kalimantan, and two supported swamp reclamation in coastal Sumatra. The OED study reviews the following five:

Transmigration 1 (approved 1976): a pilot operation to test strategies for agriculture, social, and economic development of transmigration sites in southern Sumatra

Transmigration 2 (approved 1979): to resettle about 30,000 families in four sites along the Trans-Sumatra highway.

Transmigration 3 (approved 1982): to resettle 2,000 families in the same location as Transmigration 1.

Transmigration 4 (approved 1983): to resettle 6,000 families in a remote area of East Kalimantan

Swamps 1 (approved 1981) to resettle 3,200 families on land to be developed in two stages for paddy and other crop production.

Sources of income

The program has been criticized for not generating enough income from farming, forcing families to seek off-farm employment. The criticism is justified in T2 and T3 at present, though as treecrops mature, on-farm income will rise in T3.

Where rubber was the main crop, economic growth had occurred after substantial cash income began to flow from rubber. Settlers in T1 considered themselves to be economically independent and self-reliant. In T2, the more modest growth was largely related to the lack of a strong commercial crop to generate savings. In T3, probably because income from rubber was only beginning to come onstream,

only half the settlers felt secure enough to rely on their own future resources.

Off-farm employment varies—from sustainable activities such as small business to unsustainable ones such as gold prospecting. The most important in value terms are wage labor in estate crops, trading, and crafts.

Social infrastructure

Settlers ranked access to education for their children as the most important benefit of transmigration. Not only were schools more plentiful but fees were lower than in Java or Bali, so parents could afford to keep their children in school longer. All children in the project areas attended primary school. Of the few children in higher education, a higher proportion than before were girls.

Home ownership was seen as the next most important benefit; provision of health services was also widely appreciated.

Status of women

Women were contributing substantially to family income, through family farming, home industries, handicrafts, trading, and work on agricultural estates. On average, their off-farm incomes were 83 percent of men's.

Equally important was women's community management role. The new communities are viable and strongly rooted, in part because of women's efforts; all villages had active women's groups which provided services, opportunities for savings, and acted as a social safety net. Women's support for each other was strong, partly making up for the loss of the extended families they had left behind.

Environment

Deforestation

Probably no single transmigration site, treecrop area, logging conces-

sion, or industrial timber plantation has caused a loss of forest or biodiversity that is significant at the national level. But when they are viewed in combination, their serious impact can be appreciated. The legislation in place when these projects were prepared and implemented made no provisions to consider the cumulative impact of development projects on forests. Such a requirement was introduced in the Spatial Use Management Act of 1992. Indonesia has national guidelines for the protection of forests; nevertheless, available maps are not detailed and accurate enough to implement the guidelines effectively. New spatial planning maps are being drawn up by provinces individually to be in line with the 1992 act.

Land clearing

Land clearing failed to achieve full and effective compliance with the guidelines established at project appraisal. Slopes of more than 8 percent have been cleared and trees bulldozed into waterways. Measures to prevent erosion along contours were not undertaken, the opportunity to introduce settlers to a range of forest products was lost, and no attempt was made to harvest the commercial timber left partly burned in the fields. These practices were continuing in 1993.

Government regulations are generally appropriate and adequate but there seems to be little capacity to enforce them. Alternative ways to provide incentives to the private sector to clear land properly are not being explored.

Indigenous people

Transmigration had a major negative and probably irreversible impact on indigenous people, particularly the Kubu Rimba. With the extensive forest clearing now underway in T2 as part of the development of the uncleared areas to oil palm, the Kubu Rimba have been (and are being) displaced.

The Bank made a positive contribution to integrating environmental concerns into the site selection planning process. It helped to develop a reliable information base to strengthen site selection for the transmigration program overall, giving Indonesia its first countrywide resource/land use/development potential maps.

The environmental damage associated with these projects was caused less by ignorance than by inattention, poor follow-up, and lack of accountability during project implementation. Many environmental issues were identified at project appraisal: the potential for soil erosion, possibility of declining soil fertility, need for protection against pests and disease, possible adverse effects on wildlife and deforestation, impact on indigenous people, and the need to strengthen the borrower's capacity for managing natural resources. But often, the audits found, the proposed mitigatory measures were unrealistic or were insufficiently monitored by the Bank and the government.

Agricultural technology

Transmigration 1 and 3 succeeded largely because their development approach was based on treecrops. The treecrop package made an important contribution to poverty alleviation; if developed well, it can also contribute to environmental protection.

Bank agriculturalists and soil specialists recommended a similar approach for T2 and Swamps 1 because the environmental conditions at most of the sites were less suited to annual crops. Bank managers overruled these specialists on the grounds that the transmigration program was a low-cost operation, incompatible with treecrop development. In the end, the technical specialists proved correct. And while the foodcrop model was changed, lesson learning could

have been faster with a more effective project monitoring system.

The treecrop model in T4 has not yielded the expected benefits for lack of processing and marketing facilities. Processing facilities were included in the project as designed, but have not been built.

Program management

During 1979–84, four ministries and 53 different government or provincial agencies were involved in implementing the program. Institutional arrangements were changed from one Bank-supported project to another. In all projects except T1 and T3, the decision making process was weak and time consuming and interagency coordination was poor during implementation.

The effectiveness of FELDA in Malaysia and the Mahaweli Authority in Sri Lanka suggests that settlement projects succeed better if they are implemented by a stable and strong autonomous agency with a clearly identified plan and strategy.

Local (district level) authorities were seldom involved in planning or implementing what was, in many places, a 50 percent increase in population and infrastructure. As a consequence, they were ill prepared to manage integration of the new implanted society at project completion.

Findings and lessons

- A principal goal for almost all farmers is to secure a guaranteed income. Levels of income are less important than security.
- The high value treecrop model, with processing facilities, provides settlers with a guaranteed income above the poverty level, and generates capacity to repay development costs.
- In settlement projects, proper field investigations should be undertaken in advance of settlement.

Farming and subsistence

Settlers received plots of land of 2–5 ha, to be developed in two stages, the first with government support, the second by themselves. They received a supporting package of inputs for foodcrop development and food for at least a year. Four of the projects combined food and treecrops; Swamps 1 was to be developed mainly for annual crops

Settlers in Transmigration 1 and 3 received cleared land for foodcrops, and a 1 hectare plot of rubber planted by the project on a grant basis. Transmigration 2 settlers received cleared land for foodcrops, with a further 1.5 ha plot to develop for treecrops

Transmigration 4 combined production of subsistence foodcrops with hybrid coconuts, to be developed on a cost recovery basis. The coconut trees were planted, but no processing facility was ever built; the settlers survive on subsistence crops.

Swamps 1 settlers were to receive about 2.25 ha for annual crops plus drainage infrastructure for irrigation. But poor project preparation and soil problems resulted in much smaller plots of land and a different mix of crops being grown.

- Women receive agricultural extension advice, and credit and loans to develop small businesses.
- Strong, stable, and autonomous institutions with a clear settlement strategy and plan make an important contribution to successful project implementation.
- The necessary building of local capacity cannot take place at the same time as the building of the new transmigrant society, as long as resource flows bypass the district administration. Local administration should gradually assume responsibility during project implementation, adequately supported and supervised by a central

authority through a project management unit.

- The Bank's environmental policies and guidelines—introduced after these projects were approved—are adequate but their implementation has not been fully effective. Stronger follow-up would have helped ensure that they were properly applied. In particular, focused monitoring from an early stage of project implementation would have helped to secure government commitment—and allow remedial action to be taken during implementation, rather than leaving business to be resolved after project closure.

Remaining problems

The three major outstanding issues are:

- *Adequate protection for indigenous peoples.* In 1984 the Kubu Rimba requested, and the Governor of Jambi province agreed to provide, an area close to the Duabelas Hills as a conservation area, but no action has yet been taken. In addition, the Dayak communities in East Kalimantan have not yet been compensated for lands acquired for the project.
- *Take steps to establish an economic livelihood for those sponsored by the transmigration projects, particularly the 6,000 families resettled through Transmigration 4.*
- *Provide for adequate protection of the environment in Bank-supported project sites and forestry activities.* Measures for this purpose include appropriate incentives to the private sector for land clearing; improving and accelerating the land titling process; involving local communities and perhaps NGOs in better forest protection and management; having environmental impact assessments be regional rather than project-specific; and allocating 20,000 ha of permanent forest lands to compen-

sate for the area that has been cleared for the development of Muara Wahau in Transmigration 4.

Bank management responds
...Bank management agrees with most of the facts and recommendations of the OED report and considers that most of the lessons learned from the transmigration projects have been taken into account in its assistance strategy for Indonesia. It highlights the changing economic conditions of Indonesia that have produced employment opportunities in industry and services for the rural poor and landless people of Java and Bali, the greater attention being given to development for the existing populations of provinces outside Java, and the attention being given to improved natural resource and land management issues. It stresses the fact that the last project to support transmigration was approved in 1985 and that this project comprised site planning and mapping with an emphasis on consolidation of existing sites.

The assistance strategy does not support agricultural development involving large scale land clearing, and management does not consider OED's recommendation to safeguard the quality of land clearing through community action or incentives to be realistic under current conditions in Indonesia.

With regard to the Kubu, the government is postponing the further development of the transmigration areas concerned and has informed the Bank that it will provide a protected forest area for the Kubu while they wish to continue their traditional way of life. The amount of funding needed for the Dayak communities is small and should be provided by government under an existing program.

With respect to the viability of the settlement established under Transmi-

gration 4, government is continuing to support the establishment of coconut and cocoa trees, and would consider processing facilities when the crop is sufficient. Should difficulties persist in coconut establishment the best course of action is for the government to provide support for community forestry as well as for treecrop and subsistence farming for settlers remaining at the site.

As for the protection of the environment in land clearing and forestry activities, management stresses that the Bank has been following a consistent strategy for forest and land management in Indonesia to achieve sustainable management of the production forests, protection of watersheds, and conservation of biodiversity. These issues have been analyzed in sector work and the Bank has agreed on a broad strategy with government to give priority to increasing the overall pace of land titling, and assisting government to develop the administrative framework to handle these key policy issues. The Bank has a continuing dialogue with government on community participation over a broad range of activities.

The Joint Audit Committee
of the Bank's executive directors discussed the impact evaluation study with OED and Bank management. The committee recognized that management agreed with the broad lessons from the study and that most of these lessons had been reflected in the Bank's current policies and guidelines. It also noted that an effective dialogue was in place between the Bank and Indonesia. Several committee members agreed that the study raised serious questions for which the Bank had some responsibility for follow up. The committee decided not to take a decision on the findings of the study since they were specific and needed to be decided on by management.

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