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PERFORMANCE AUDIT REPORT

INDONESIA

**FIFTH POPULATION PROJECT
(FAMILY PLANNING AND SAFE MOTHERHOOD)
(LOAN 3298—IND)**

**YOGYAKARTA UPLAND AREA DEVELOPMENT PROJECT
(LOAN 3305—IND)**

**VILLAGE INFRASTRUCTURE PROJECT
(LOAN 3888—IND)**

December 29, 2000

*Sector and Thematic Evaluation Group
Operations Evaluation Department*

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Currency Equivalents (annual averages)

Currency Unit: Indonesian Rupiah (Rp)
(Period average)

1994: US\$1.00 = Rp 2,160
1995: US\$1.00 = Rp 2,239
1996: US\$1.00 = Rp 2,348
1997: US\$1.00 = Rp 2,953
1998: US\$1.00 = Rp 9,875
1999: US\$1.00 = Rp 7,809
2000: US\$1.00 = Rp 7,959*
*Average: January-June

Abbreviations and Acronyms

IDT Inpres Desa Tertinggal (Program for Villages Left Behind)
OED Operations Evaluation Department

Fiscal Year

Government of Indonesia: April 1—March 31

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December 29, 2000

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Performance Audit Report on Indonesia
Fifth Population Project (Family Planning and Safe Motherhood) (Loan 3298-IND)
Yogyakarta Upland Area Development Project (Loan 3305-IND)
Village Infrastructure Project (Loan 3888-IND)

Attached is the Performance Audit Report prepared by the Operations Evaluation Department (OED) on the above three projects which involved village-level interventions in three sectors (health, agriculture and infrastructure). The Fifth Population Project was approved on March 5, 1991 and closed on schedule on September 30, 1996; a balance of US\$3.9 million was canceled. (*The audit addressed only Part B of this project—the village midwife component; other parts of the project did not have a village focus*). The Yogyakarta Upland Area Development Project was approved in May 1991 and closed on December 31, 1997, twelve months behind schedule, with cancellation of US\$1.7 million. The Village Infrastructure Project was approved on May 23, 1995 and closed on September 30, 1998, the original closing date; US\$6.8 million was canceled.

The audit addressed the likely poverty impact of these projects, seeking to answer the following questions: (a) Were project objectives consistent with poverty reduction? Has the village midwife program worked? Were roads well-designed and have they resisted erosion? Was there significant local capacity building? The audit obtained questionnaire returns from 197 people (village chiefs, midwives and mothers) in 33 randomly-selected villages; it also inspected 32 roads. The audit methodology assumed, based on secondary data, that all villages may be considered poor; and that success in meeting project objectives plausibly consistent with poverty reduction means that poverty was indeed reduced.

Objectives varied between the three projects. The Fifth Population Project trained midwives to live and work in villages nationwide, aiming to raise the health standards of mothers and children. The Yogyakarta Upland Area Development Project offered a long menu of interventions to raise farm incomes in this province, including road building, erosion control and support to rotating funds. The Village Infrastructure Project which was active throughout Java, financed access roads and other small-scale infrastructure, designed and implemented by village people.

The audit survey found that:

- (a) Village midwives complement rather than substitute traditional birth attendants, although sole use of midwives is growing, partly fueled it would seem by a voucher program targeted at poorer women.
- (b) Both the Yogyakarta project and the Village Infrastructure Project built roads that were adequate in terms of design quality and erosion resistance, and were cost effective

- (c) Revolving funds established by the Yogyakarta project had grown in size in each of the villages visited; but only 18 percent of the women interviewed had borrowed from a revolving fund.
- (d) A majority of village chief and women reported that they were better off than they had been five years ago; this and other sources suggest that the impact of the 1997 financial crisis has been relatively muted in rural areas.

All three projects were relevant. First, objectives were consistent with poverty reduction. The objectives respond to concerns raised by the Bank's 1990 Indonesia poverty strategy. Second, the region covered by the projects generally reflected adequate targeting to the poor (although the targeting of the Yogyakarta project was less precise than that of the other two projects). Third, the audit's survey of villagers' perceived needs indicated that there is a demand for the services provided by the village midwife program; but that demand for drinking water exceeds the demand for roads—which may mean that the Yogyakarta project and the Village Infrastructure Project were somewhat less demand-driven than they claimed to be.

The three projects broadly complied with OED's efficacy criterion. The Fifth Population Project partially achieved its objectives of strengthening the policy framework and strengthening training capacity while slightly exceeding its target of supporting the training of 16,000 village midwives. The Yogyakarta Upland Area Development Project exceeded all its physical targets, stabilizing soils in 518 micro-watershed, distributing seedlings and livestock, building roads, and creating 1,586 hamlet revolving funds. The Village Infrastructure Project also exceeded its targets, its achievements including the building of 3,680 km of rural roads. The audit found that the design quality of roads built under this project and the Yogyakarta project was average to good.

Based on cost effectiveness criteria, the three projects may be rated efficient. The cost of village midwives (who earn private fees to supplement their government stipend) compares favorably with that of other service providers. Road building costs varied substantially between the Yogyakarta project and the Village Infrastructure Project but were lower than the US\$15,000-20,000 per kilometer of road built by the Public Works Department.

On project outcome, OED rates the Village Infrastructure Project and Part B of the Fifth Population Project as highly satisfactory. The Yogyakarta Upland Area Development Project is rated satisfactory: it scores highly on efficacy and efficiency but does less well on relevance because the project aimed to raise agricultural productivity in an area of limited farming potential whose population was already heavily committed to off-farm work.

OED rates the sustainability of all three projects as likely. In the case of village midwives, government's commitment to continue the training program will ensure that dropouts—whose number is low and decreasing—will be replaced. Improvements to rural roads built by the Yogyakarta project and the Village Infrastructure Project have been sustained, both projects scoring equally well on erosion resistance. The revolving funds created by the Yogyakarta project appear to have grown in size in real terms and are probably sustainable.

Institutional development impact is rated high for the Fifth Population Project and the Village Infrastructure Project because both projects contributed to the long-run goal of decentralization. The Yogyakarta project is given a rating of modest because there is little evidence to suggest that local capacity was substantially enhanced.

The audit endorses the evaluation summary's rating of Bank performance, drawing particular attention to the Village Implementation Project's rapid implementation and efficient use of Bank resources.

In summary, the audit found that project objectives were consistent with poverty reduction and, because these objectives were met, it is inferred that the poor benefited. Moreover, in all three projects, these positive results are likely to be sustained. There are four lessons. First, village midwives are an efficient way to improve the general level of healthcare in villages. Second, small-scale infrastructure projects cannot easily be targeted to the poorest individuals but if they are located in the poorest areas they are nevertheless likely to have a significant impact on reducing poverty. Third, there is no case for making incentive payments to villagers who help build roads. Fourth, in Indonesia, working directly with village people rather than through local government has been shown to produce sound, sustainable results and is an approach worthy of replication.

A handwritten signature in black ink, appearing to read 'R. Picciotto', with a long horizontal flourish extending to the right.

Robert Picciotto
By Osvaldo Feinstein

Attachment

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22421; 26797R; 22865

Principal Ratings

	<i>Outcome</i>	<i>Sustainability</i>	<i>Institutional Development</i>	<i>Borrower Performance</i>	<i>Bank Performance</i>
Fifth Population Project (L3298)					
Evaluation Summary	Satisfactory	Likely	Substantial	Satisfactory	Satisfactory
Audit	Highly Satisfactory*	Likely	Substantial	Satisfactory	Satisfactory
Yogyakarta Upland Area Development Project (L3305)					
Evaluation Summary	Satisfactory	Likely	Substantial	Satisfactory	Satisfactory
Audit	Satisfactory	Likely	Modest	Satisfactory	Satisfactory
Village Infrastructure Project (L3888)					
Evaluation Summary	Highly Satisfactory	Likely	Substantial	Highly Satisfactory	Highly Satisfactory
Audit	Highly Satisfactory	Likely	High	Highly Satisfactory	Highly Satisfactory

*Refers only to Part B of the project; the overall project rating is unchanged.

Permitted Ratings

<i>Outcome</i>	Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory
<i>Sustainability</i>	Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable
<i>Institutional Development Impact</i>	High, Substantial, Modest, Negligible
<i>Bank Performance</i>	Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory
<i>Borrower Performance</i>	Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory

Key Staff Responsible

	<i>Task Manager</i>	<i>Division Chief</i>	<i>Country Director</i>
Fifth Population Project (L3298)			
Appraisal	Nydia Maraviglia	Clifford Gilpin	Russell Cheetham
Completion	Fadia Saadah	Samuel Lieberman	Marianne Haug
Yogyakarta Upland Area Dev. Pr. (L3305)			
Appraisal	E. Zimmer-Vorhaus	Anthony Cole	Russell Cheetham
Completion	William Cuddihy	Geoffrey B.Fox	Dennis de Tray
Village Infrastructure Project (L3888)			
Appraisal	Frida Johansen	A. Khanna	Marianne Haug
Completion	Frida Johansen	Jitendra Bajpal	Dennis de Tray

Preface

This is a Performance Audit Report (PAR) of three projects in Indonesia.

- i. The Fifth Population Project (Part B), for which Loan No. 3298-IND in the amount of US\$104 million equivalent was approved on March 5, 1991. The loan was closed on schedule on September 30, 1996. The final disbursement took place on January 28, 1997, at which time a balance of US\$3.9 million was canceled.
- ii. The Yogyakarta Upland Area Development Project, for which Loan No. 3305-IND in the amount of US\$15.5 million equivalent was approved in May 1991. The closing date was December 31, 1997, twelve months behind schedule. The final disbursement from the loan was made on March 31, 1998, and US\$1.7 million was canceled.
- iii. The Village Infrastructure Project, for which Loan No. 3888-IND in the amount of US\$72.5 million equivalent was approved on May 23, 1995. The loan was closed on September 30, 1998, the original closing date. The final disbursement took place on February 22, 1999, at which time the loan balance of US\$6.8 million was canceled.

The PAR presents the findings of a mission by the Operations Evaluation Department that visited Indonesia in July 2000. The mission was staffed by Mr. John R. Heath, Ms. Patricia Daly (Consultant) and Ms. Widyastuti Soerojo (Consultant). The findings are based partly on the results of questionnaires administered during the mission in 33 villages where the projects were active. They also draw on interviews with villagers, project staff, officials of the Government of Indonesia and Bank staff, in Washington and Indonesia. The collaboration of these persons is gratefully acknowledged. In addition, the PAR draws on staff appraisal reports, implementation completion reports and other background data.

Following customary procedures, copies of the draft PAR have been sent to the relevant government officials and agencies for review and comment. No comments were received.

1. Background and Methodology

The aim of this audit is to evaluate the likely poverty impact of projects from three different sectors (health, agriculture and infrastructure), with overlapping village-level interventions on Indonesia's main island, Java. A particular concern was to see if project results had been sustained since the 1997 fiscal crisis.

OED's 1999 Country Assistance Note raised doubts about whether projects were sufficiently geared to poverty reduction. In particular, it noted that agriculture projects had not been well targeted.

“The agricultural projects that were approved in the FY91-97 period did not, as a group, have a focused poverty alleviation objective...Project evaluations (including supervision reports) rarely addressed poverty impacts in the sense of how much the activities reduced poverty, or even if they reached the poor at all.”¹

Is this true only of agriculture or does it apply equally to projects with a rural focus in other sectors?: the need to answer this question was a primary motivation for the audit.

The three projects examined in this report were not targeted to the poorest and, except for the Village Infrastructure Project, poverty reduction was not an explicit objective (Box 1). Nevertheless, the projects were implemented in areas where a large proportion of the rural population is poor.

The main characteristics of the projects are:

- The *Fifth Population Project* trained midwives to live and work in villages nationwide, aiming to raise the health standards of mothers and children.²
- The *Yogyakarta Upland Area Development Project* offered a long menu of interventions to raise farm incomes in this province, including road building, erosion control and support to rotating funds.
- The *Village Infrastructure Project*, which was active throughout Java, financed access roads and other small-scale infrastructure, designed and implemented by village people.

This audit set out to answer the following questions:

- Were project objectives consistent with poverty reduction?
- Has the village midwife program worked?
- Were roads well-designed and have they resisted erosion?
- Was there significant local capacity building?

1. Operations Evaluation Department, *Indonesia: Country Assistance Note* (Report No. 19100), March 29, 1999, p. 21.

2. The audit refers only to Part B of this project; Part A did not have a specifically rural focus.

Box 1. Project Objectives

Fifth Population Project (Part B)

“Part B would assist the Health Ministry develop the workforce needed to provide services which would reduce the risks and incidence of maternal and neonatal mortality, through community midwives who will be based in the villages and will work in close collaboration with family planning workers, the staff of health centers and sub-centers, traditional birth attendants, and village groups. The specific objectives would be to: (a) clarify and resolve policy issues concerning training and deployment of community midwives, including matters relating to their qualifications, number and relationship to other elements of the health and family planning service delivery system, and standards for midwife training schools; (b) strengthen Health Ministry capacity to train community midwives through upgrading learning materials and training trainers; and (c) train a portion (an estimated 16,000) of the total requirement for community midwives.” (*Staff Appraisal Report, February 1991, p. 21*)

Yogyakarta Upland Area Development Project

“The project’s main objective is to improve the incomes and living standards of upland residents, mainly farmers, on a sustainable basis through better resource management. As the sequel to the earlier Yogyakarta Rural Development Project [C946, approved 1979], it aims at addressing the major needs of upland areas: effective and affordable soil and moisture conservation measures, increased farm productivity leading to higher farm incomes, essential social services and infrastructure, and institutional support for planning and implementing site-specific change. It would tackle the major threat to upland productivity over the long term—the degradation of a fragile and eroding resource base—through an innovative and low-cost approach to soil stabilization within microwatersheds. It involves the delivery of on-farm technology options geared to local conditions, physical infrastructure and government services that would enhance productivity in upland hamlets and villages while conserving, possibly enhancing, soil, water and ground cover retention.” (*Staff Appraisal Report, February 1991, p. 9*)

Village Infrastructure Project

“The proposed project aims at reducing poverty, providing village infrastructure and employment paid in cash, and in creasing decentralization, in line with the government objectives. More specifically, the project is a pilot to test in 6 percent of the Javanese villages—the bottom 20 percent of the poorest villages on Java—the following main objectives, with a view to applying lessons learned to future programs:

- a. empowering villagers to decide priority uses of grant funds available under the project for their village , and to implement the works;
- b. providing public infrastructure needed in poor villages;
- c. creating jobs paid in cash for underemployed villagers to construct the public works;
- d. mobilizing village contributions towards the agreed public works; and
- e. supporting the government’s decentralization policies.”

(*Staff Appraisal Report, April 1995, p. 7*)

For logistical reasons and to help control for the influence of the local environment, OED chose to stage the audit in two contiguous provinces of Java where the three projects overlapped: Central Java and Yogyakarta. This approach made it possible to survey 33 villages in the time available (three weeks), collecting questionnaire returns from 197 people and conducting site inspections of 32 roads. A drawback is that the audit findings are not fully representative of results of the Fifth Population Project (which was implemented throughout Indonesia) or the (Java-wide) Village Infrastructure Project. The sample of villages in the Yogyakarta Upland Area Development Project was more representative.

The 33 survey villages were randomly selected by OED from the list of all villages in the selected provinces with experience of one or more of the three projects. Three separate questionnaires were applied, one to village chiefs (N=33), one to village midwives (N=15), and one to mothers of children under five years of age (N=148). The relative weight given to this last group responded to OED's finding that projects in the 1990s had not adequately targeted rural women, who tended to account for a disproportionately large share of the poor.³

The 1995 population census indicates that 14 percent of the rural population in Central Java had incomes beneath the poverty line, compared to a nationwide average of 12 percent; the incidence of income poverty was lower in Yogyakarta (8 percent). However, other poverty indicators (housing quality, schooling) suggest that the income data may understate the extent of poverty (Table 2, Annex E).

The original intention was to compare poor with less poor villages, using a methodology applied by the Indonesian government which identifies "villages left behind" (or "IDT"). A comparison on these lines proved not to be practical because the Village Infrastructure Project was explicitly targeted at the IDT group (it contained no "less poor" villages). Thus, there was no ready way that the audit could stratify its sample by sorting the rural population into poor and less poor groups.

Of the 33 villages surveyed, 76 percent were IDT. There proved to be no statistically significant difference between IDT and non-IDT villages.⁴ Also, although, according to census and survey data, rural areas in Yogyakarta are, in aggregate, better off than those in Central Java (Table 2, Annex C), in terms of responses to questionnaire items, the audit found no significant difference between the provinces. For this reason this report will refer to the mean results for all 33 villages rather than presenting the findings in disaggregated form.

The design of the audit methodology was constrained by this problem of sample stratification. For want of a practical way around the problem, it was assumed that all the villages sampled are poor. By extension, success in meeting project objectives *plausibly consistent with poverty reduction* is taken to mean that poverty was indeed reduced. This requires a detailed examination of the extent that project objectives were relevant for poverty reduction.

2. Relevance

OED Definition *"The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sector assistance strategies and corporate goals."*

All three projects flowed logically from, and were consistent with, the country assistance strategy. This audit focuses on the projects' relevance to the poor: (a) by asking if the projects were consistent with recommendations made in the Bank's 1990 poverty strategy for Indonesia; (b) by examining whether the design of these three projects effectively targeted the poor; and, (c) by extrapolating from survey findings to assess whether, at the time when the projects were designed, villagers actually perceived a need for what the projects offered.

3. OED, 1999, *ibid.*, p. 21.

4. Based on the Chi-Square test, taking $p=0.05$ as the cutoff.

Consistency with Bank poverty strategy

None of the three projects refer to the 1990 Indonesia poverty strategy. But they are all broadly consistent with it. The strategy contains nothing on village midwives but does highlight the “low level of utilization of health services by the poor in Indonesia” and the need “to improve the logistical support to preventive health services in the villages”, both issues addressed through the Fifth Population Project.⁵ The strategy also provides a qualified mandate for integrated area development projects of which Yogyakarta Upland is an example.⁶ The strategy notes that “community-based, revolving fund programs...have in some cases demonstrated success in helping poor families finance productive activities, with only modest financial support from external sources.”⁷ The Yogyakarta project’s support for revolving funds apparently heeded this observation.

In addition to responding to the Bank’s strategy, the village midwife component of the Fifth Population Project, which was prepared in 1990, anticipated the trend of government strategy. The village midwife program was stepped up following a 1993 presidential decree which pledged to place a midwife in every village by 1996.

Adequacy of targeting

The 1990 report contained a clear statement about the distribution of poverty:

“geographically, poverty has become more concentrated in specific locations in Java, and in the eastern areas of Indonesia; and, sectorally, poverty is concentrated in agriculture, as the majority of all poor households identify agriculture as their principal source of income...the bulk of the poor, about 66 percent, still reside on Java. However, unlike the situation in the 1970s where poverty was widespread in Java, it is now concentrated in specific areas that could be more effectively reached by existing government programs.”⁸

The geographical targeting of the three projects was consistent with this analysis. However, none made an explicit attempt to focus benefits on the poor, although the poor stood to benefit indirectly. Part B of the Fifth Population Project—which absorbed 24 percent of total project costs—supported village midwives rather than the staffing of hospitals and health centers. This decision could be defended on the grounds that there were more poor people in the countryside than in the towns. In 1990, there were respectively 27.2 million and 17.8 million persons beneath the poverty line in rural and urban areas.⁹ Fifth Population sponsored village midwife training in 12 of the 27 provinces, privileging areas of above average fertility and maternal mortality.¹⁰ Central Java was included but not Yogyakarta, which is consistent with sound targeting since the former is demonstrably poorer (Tables 2 and 3, Annex C); also, in 1990, Central Java was 4,029

5. Asia Regional Office, *Indonesia: Poverty Assessment and Strategy Report* (No. 8034), May 11, 1990, p. xiv.

6. Asia Regional Office, 1990, *ibid.*, p. 69.

7. Asia Regional Office, 1990, *ibid.*, p. 61.

8. Asia Regional Office, 1990, *ibid.*, pp. xiii-x.

9. However, the proportion of the rural population beneath the line was slightly lower in the countryside—14 percent—compared to towns—17 percent (Ministry of Agriculture, *Agricultural Sector Strategy Review*, Jakarta, March 1998, Table 2.1).

10. Staff Appraisal Report (No. 9178), February 8, 1991, p. 21.

short of the complement of midwives needed to meet the target of one per village whereas Yogyakarta had already exceeded the target by 16.¹¹

The Yogyakarta Upland Area Development Project was the least targeted of the three projects. It covered all four districts in the province even though Gunung Kidul and Kulon Progo were conspicuously poorer than the other two (Table 3, Annex E). It did not attempt to distinguish between poor and less poor villages.

The Village Infrastructure Project was limited to IDT villages—those classified by government as “marginal”—although the Bank had originally refused to endorse this system of targeting, concerned that it might be politically biased. However, the implementation completion report implies that the project focused on the poorest IDT villages: “The villages were the bottom third in each district, identified through a census based on a number of indicators.”¹² The project’s exclusive concentration on Java was initially challenged within the Bank, on the grounds that poverty incidence was greater in the outer islands. However, the “sheer number of poor, population densities, economies of scale, lower prices, supervision possibilities and probability of success being greater on Java” ensured that the original focus was maintained—subject to an understanding that Japanese aid would fund a project for the outer islands. The logic for selecting districts to include in the project was always transparent. In Yogyakarta province, only one district was covered—why was Gunung Kidul preferred to poorer Kulon Progo?

Villagers perceived needs

The audit survey asked village chiefs, midwives and mothers the following question:

“Imagine this village had

- No access roads
- No drinking water supply in the village
- No latrines
- No primary school
- No health post

If funds were only sufficient to cover the cost of *one* of these five items, which one would you want the money to go to?”

Each of the respondent groups named drinking water their top priority: overall, 53 percent placed this first, with little between group variation.¹³ Chiefs and mothers gave second place to roads (respectively, 33 percent and 15 percent backed this option). For midwives, health posts ranked second (capturing 27 percent of their vote). Primary school came last, with only 6 percent of all respondents making it their top priority (Table 7, Annex C).

11. East Asia and Pacific Regional Office, *Indonesia's Health Work Force: Issues and Options* (Report No. 12835), November 28, 1994, Table 3.6.

12. Implementation Completion Report (No. 19099), March 25, 1999, p. 1. The same source notes on p. 2 that “The first year villages were selected by Bappenas [the National Development Planning Agency] in order to facilitate an early start; for the second year the provinces and districts made the selection from a long list of eligible (IDT) villages prepared in Bappenas.”

13. However, it may be that the ranking of priorities was influenced more by current conditions in the village than by any consideration of the hypothetical village in the question: villagers already served by roads may have been inclined to give drinking water as their first priority even though, in the absence of roads they would have given top billing to improving access.

The key constituency from the perspective of assessing the needs of the poor are the mothers. In the audit survey, almost 60 percent of these made drinking water their first priority—an option that was not central to any of the three projects. Although drinking water supply is listed as one of the eligible village projects in Yogyakarta Upland Area Development,¹⁴ there are no data in the completion report to indicate how many systems were built; the main infrastructure built was roads (voted first priority by one-third of village chiefs in the audit survey). Many villages in the limestone regions of Gunung Kidul are seriously short of drinking water—as several villagers pointed out to the audit mission—and it is therefore surprising that this was not reflected in the allocation of project funds. The mission estimated that in the sub-district of Rongkop a household would have to spend the equivalent of 5 percent of the minimum wage on purchasing—from tankers—the 25 liters of water needed to cover daily needs. This calls into question whether the project was really demand-driven (The implementation completion report says project community development funds were “used in activities that reflected the felt needs of the people”).¹⁵

In the Village Infrastructure Project the menu of infrastructure options was completely open¹⁶ and yet only 13 percent of the village grant amounts was used to finance drinking water and sanitation, compared to 76 percent for roads. The implementation completion report notes that “women are the main beneficiaries from water supply installations”¹⁷ which may explain why so many of the 149 mothers interviewed by the audit mission gave drinking water as their top priority. The emphasis given to roads may reflect the biases of village chiefs and the field engineers retained by the project. The mission learned that, in their consultation with villagers, project and government staff did not promote the openness of the community infrastructure menu as fully as they might have done.¹⁸

In the case of the Fifth Population Project, the audit compared reported use of the midwives with use of traditional providers to see if villagers are expressing a demand for the new service. There were three findings. First, women are more likely to use a combination of services from traditional and new sources, rather than making sole use of one or the other. (This seems to be because midwives are treated as complements, not substitutes, for traditional providers: the latter offer support for a month or so after the birth—baby care, help with chores, massages). Second, *poor* women are more likely to use traditional attendants than trained midwives. Third, comparing mother’s plans for future births with what they did in the past, support for making *sole* use of trained midwives appears to be growing (Table 8, Annex C). Thus, the project passes the relevance test because it appears to have correctly anticipated a latent demand for trained midwives. Moreover, previous attempts to upgrade the services provided by traditional providers—for example, through hygiene training—had not been successful.

Of the three projects, Yogyakarta Upland Area Development is the least relevant. The major emphasis given to boosting farming productivity begs questions. The natural resource base is unpromising—large “farming” areas of Gunung Kidul are almost bare rock.¹⁹ In the villages

14. Staff Appraisal Report (No. 9113), February 22, 1991, Annex 5, p. 78.

15. Report No. 18085, June 26, 1998, p. 4.

16. Staff Appraisal Report (No. 13776), April 26, 1995 (“the subproject must be a public infrastructure justified by the number of users and the cost per user”, p. 9).

17. Report No. 19099, March 25, 1999, p. 26.

18. However, a Water Supply and Sanitation for Low Income Communities Project, covering rural Java, was appraised in 1993 (Loan No. 3629); the implementation completion report was issued on June 16, 2000.

19. The implementation completion report acknowledges “the limited agricultural potential of the upland areas” (Report No. 18085, June 26, 1998, p. 1).

visited by the audit mission, chiefs repeatedly talked of the need to diversify out of agriculture.²⁰ Census data show that this district is the least diversified of the eight that were targeted by the audit (Table 4, Annex E). On the other hand, diversification is proceeding apace. Fifty-two percent of the mothers surveyed say that the head of their household's main source of income comes from off the farm (Table 5, Annex C). The project's support for backyard livestock (goats) possibly made sense given that this is not a land-intensive activity (and, moreover, because it targets women). But the case for investing heavily in soil stabilization is harder to demonstrate. A majority of village chiefs in Yogyakarta (59 percent) reported that soil erosion was not a major problem. In many cases this was probably not a reflection of the project's success: many villages had developed impressive control measures (e.g., stone facing of terrace risers) well before the project.

3. Efficacy

OED Definition *"The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance."*

Fifth Population Project (Part B)

Box 1 lists three "specific objectives" for Part B—although arguably they are better described as outputs in support of the development objective of reducing maternal and neonatal mortality. The first "objective"—strengthening the policy framework—was largely accomplished. Ministry of Health Decree 572, regulating the registration and practice of midwives, was issued in June 1996. Compared to the previous legislation, this decree gave more autonomy to midwives, particularly in handling abnormal deliveries. More work is needed on quality control. The project aimed to set up a Midwifery Board, but this did not happen. Also, although the ministerial decree requires that midwife licenses be renewed every five years, the renewal decision is not informed by a survey of customer satisfaction.

The second objective—strengthening training capacity—was partially achieved. The project developed an accreditation system for training schools, with 10 percent of schools being formally accredited by project close. In 1994 a more systematic and process-oriented curriculum replaced that of 1991, reducing the training period for midwives from two to three years to one year. This was in response to the government's push to accelerate the deployment of midwives to the villages, a process that threatened to overwhelm training capacity. Not enough teachers had received exposure to difficult births and many had not had enough experience of assisting deliveries in communities; a stepped-up program of overseas teacher training helped to redress the first of these deficiencies, but could not address the second. A midwife supervisor was assigned to each province for supervising implementation of the training program, but the audit was not able to assess the success of this initiative.

Attempts to accelerate deployment of midwives created several problems. It was difficult to enforce high entry standards, many trainees having completed only junior high school—

20. Cf observation in the poverty assessment concerning the requirements for integrated area development projects (of which Yogyakarta Upland was an example): "the development strategy for individual areas needs to encompass the full range of development possibilities, including industrial development and services, and not rely exclusively on agriculture. This applies particularly in areas of low agricultural potential, including many upland areas, where it may be difficult to achieve profitable farm systems on a sustainable basis" (Asia Regional Office, 1990, *op.cit.*, p. 69).

equivalent to nine years of schooling. (Since 1998, however, completion of senior high school—twelve years of schooling—has been mandatory). Acceleration of the training program led to dropping of the requirement that entrants work for two years as nurses before training as midwives. Class sizes doubled. Because of the limited number of training centers, many midwives were not trained in the district where they would be deployed. Most graduates entered service without adequate clinical experience or in-village training. Graduates were, typically, 18 and unmarried—their lack of life experience making them likely to be perceived by clients as less effective than traditional birth attendants.

The audit survey found that while the midwives were indeed young—and although the survey did not attempt to assess the quality of the training they had received—they seemed well placed to give effective service to the village where they had been deployed. Of the 15 midwives interviewed, 70 percent were aged under thirty, all had graduated from senior secondary school, as well as nursing school, 53 percent had received two or more post-assignment training courses, 53 percent had been born in the district where they were now working, 93 percent spoke the local language, and 60 percent had been offered housing by the village on arrival (Table 9, Annex C).

The third objective was fully achieved: the project set out to support the training of 16,000 village midwives and it helped train 16,085, or 30 percent of the total number of midwives the government sought to deploy in 1996. Training was spread over 97 nursing schools in the 13 project provinces. (Thus, the audit survey of 15 midwives in Java may not be representative).

Overall, project efficacy must be rated highly because it helped to increase access to midwives, a service that is effective and for which there is growing demand. Nationwide, between 1994 and 1997, the proportion of births attended by a village midwife rose from 34 percent to 40 percent, reaching almost 65 percent in parts of Java and Bali. The communities receiving midwives between 1993 and 1997 were predominantly those that were relatively poor and remote. Evidence shows that the presence of a village midwife is associated with increased birth weight as well as an increase in the body-mass index of women of childbearing age.²¹ This suggests that the project's development objective was met. Increased birth weight is associated with lower neonatal mortality and the higher the mother's body-mass the less likely she will die in childbirth.

The services offered go well beyond midwifery: 80 percent of women considered village midwives to be a good source of information on family planning.²² Moreover, the audit survey found that midwives are important general healthcare providers, the number of consultations with sick persons exceeding births attended and family planning consultations (Table 9, Annex C).

The program has been less successful than the project in meeting its targets. The goal of placing a midwife in every village by 1996 was not met: nationwide, 37,239 midwives had been assigned to villages by 2000, 69 percent of the number required. (This goal may actually be hard to justify: in many densely-populated areas a single midwife can potentially cover two or three villages). Village midwives are not evenly distributed, with significant oversupply in eastern Indonesia (Table 6, Annex E).

21. Based on data from the Indonesian Family Life Survey and a monograph by E. Frankenberg and D. Thomas (*Women's health and pregnancy outcomes: does access to services make a difference?*, Santa Monica, CA: Rand Institute, May 2000).

22. Indonesia Demographic and Health Survey, 1997.

Yogyakarta Upland Area Development Project

The project covered 230 villages in Yogyakarta, compared to an appraisal estimate of 140. The completion report describes the physical achievements as “substantial and impressive.” With respect to the objective of soil stabilization, the project completed conservation measures in 518 micro-watersheds, against an appraisal target of 500. These measures included construction of bench and contour terraces, improved waterways and drop structures, infiltration pits and terrace risers. The research and extension objective, which sought to promote alternative land use strategies in the watersheds, was supported through the creation of 150 village demonstration plots (target 140) and 111 hamlet nurseries (target 80). Finally, with respect to community development, the completion report notes that “while no projections had been made of the exact investments to be supported...the achievements were impressive,”²³ ranging from distribution of seedlings and livestock, construction and rehabilitation of roads and bridges, improvements to water supply and sanitation, and creation of 1,586 hamlet revolving funds benefiting 175,000 farm families.

In terms of actual impact, the soil stabilization and community development initiatives were reportedly more successful than research and extension. Although there was apparently a significant increase in crop yields (from one to two tons per hectares in the case of rice) and a somewhat lesser increase in cropping intensity, the demonstration plots were not used effectively to promote new technologies and there was little spread to surrounding areas not directly targeted by the project. The completion report candidly attributes the weak demonstration effect to the labor-intensive nature of the technologies (which conflicted with farmers’ extensive off-farm commitments), and the evidence that farmers would not take up new technologies without subsidy.²⁴

Based on site inspections and interviews in seventeen Yogyakarta villages, the audit concludes that: in project areas terraces appear to be maintained, and there was ample evidence of grasses and perennial crops—which may enhance soil stability—but it was not clear to what extent these measures predated the project; the roads that were built are of adequate quality (Table 1, Annex C and Annex D); there has been no significant increase in the goat herd as a result of the project (Table 6, Annex C); and revolving funds—whether or not they were created by the project—have continued to grow (Table 4, Annex C).

Village Infrastructure Project

The project covered 1,230 villages throughout Java (compared to an appraisal estimate of 1,200), assisting the building of 3,680 km of rural roads, 7,790 m of bridges, 2,427 water systems, 1,230 communal sanitation units and two piers. In addition, there was a substantial short-term employment impact: unskilled laborers received an “incentive payment” in exchange for 13.4 million person-days of labor and, over a two-year period, 246 field engineers were employed.

The audit mission inspected 20 roads built by the project, finding that design quality was mainly average to good. Based on the audit team’s roadside evaluation, road quality was comparable to that in the Yogyakarta project (Table 1). However, village chiefs in Yogyakarta rated road quality more highly than their counterparts in Central Java (Table 1, Annex C).

23. Report No. 18085, 1998, p. 7. (However, Table 5, p. 17, indicates that community development targets *were* set at appraisal; if this was truly a demand-driven project—with beneficiaries selecting from a broad menu of options—these can only have been indicative).

24. *Ibid.*, p. 4.

Table 1. Road Quality

	<i>Yogyakarta Upland Area Development Project (N=12 roads)</i>	<i>Village Infrastructure Project (N=20 roads)</i>
Design quality		
Good	0%	35%
Average	92%	45%
Poor	8%	20%
Erosion resistance		
Good	50%	45%
Average	25%	45%
Poor	25%	10%

Source: Annex D.

In Gunung Kidul district, in eight villages that had been served by both projects, the audit team asked villagers which of the two had had the bigger positive impact on their lives. There was no clear preference between the projects: of the 14 persons interviewed, 7 preferred the Village Infrastructure Project, 5 preferred the Yogyakarta project, and two said there was no significant difference in impact between the projects. Even in the same village there was not always a consensus: in three of the eight villages, preferences were evenly divided between the two projects. Those who favored the Village Infrastructure Project tended to single out the large volume of paid short-term employment created by road building. Those who preferred the Yogyakarta project were more likely to emphasize the longer-term benefits and the direct impact on farming productivity.

4. Efficiency

OED Definition *“The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives.”*

In the completion report, economic rates of return are estimated for two of the three projects. Based on the incremental farm output, the return for the Yogyakarta project was estimated at between 9 and 13 percent, depending on the exchange rate assumed (the return increasing with devaluation). No attempt was made to recalculate the rate of return to the roads component (estimated at 15 percent at appraisal) “because the estimation of benefits from reduced transport costs, improved access to markets...less spoilage, improved extension coverage...easier access to health, credit services...and the stimulation of non-agricultural activities were considered too speculative for quantification.”²⁵ In contrast, the Village Infrastructure Project bases its estimate of the economic rate of return on roads (giving primary emphasis to transport cost savings), calculating “a minimum 20 percent, even if the infrastructure were to last only 3 years.”²⁶

The audit did not re-estimate economic rates of return but probed cost-effectiveness. According to the completion reports, both projects with road-building components spent between US\$10,000 and US\$15,000 per km. The mission found that, for the Village Infrastructure Project, this estimate is reasonably close to the costs reported in the villages visited: the range detected was

25. *Ibid.*, p. 6.

26. Report No. 19099, 1999, p. 4.

US\$7,500 to US\$15,000 per km. The variation reflects not only differences in the slope of the terrain, it also shows how each village made its own tradeoff between quality and quantity—villages could choose to use the fixed budget of about US\$55,000 either to build a long road to lower specifications or a shorter, better road. The cost per km of the road component in the Yogyakarta project fell mainly in the range US\$1,000-2,000, suggesting that the money was used primarily to improve existing roads rather than build new ones. It is not clear why there is such a large discrepancy between what the completion report says and what the audit mission found in the field. The field findings suggest that, with such low costs per km, the road component in the Yogyakarta project was skimmed; and yet inspections found road quality to be comparable with that in the Village Infrastructure Project. The cost gap is partly because the Yogyakarta project did not pay villagers who helped build the road. Also, it may reflect inconsistencies between projects in the exchange rate applied. Whatever the truth of the matter, the unit costs reported by the two projects are lower than the US\$15,000-20,000/km spent on roads built by the Public Works Department (using hired contractors).

There is a plausible case to make for the cost-efficiency of village midwives; but the absence of data on the cost of alternative service providers makes it hard to substantiate. Midwives are hired on three-year renewable contracts during which time they receive a government stipend of Rp 250,000 (US\$31) per month—although those working in remote locations are paid Rp 450,000 (US\$57 per month). Village midwives occupy the same pay grade as another group of fieldworkers, agricultural extension agents; with the difference that the midwives are on a short-term contract and are expected ultimately to support themselves from private fees. (It was originally intended that the stipend would be withdrawn at the end of the second three-year contract; however, the stipend has recently been extended for a third three-year period) Assuming that the stipend is ultimately withdrawn and that the training costs of village midwives (roughly US\$1,300 per midwife) do not exceed those of extension workers, the midwives will, in the long term, be less of a fiscal burden than extension staff.

Another way to approach the issue of efficiency is to consider whether alternative village-level health providers do as a good a job. One option (probably cheaper) would be to train traditional birth attendants to provide better, and more all-round, care. But this has already been tried and the results were not good, traditional providers being found to be too old and too set in their ways for their services to be effectively upgraded. Another possibility (more expensive) would be to locate health centers in at least some villages. Data from a survey of 2,856 sub-districts suggest that this is not effective either:

"Surprisingly, the presence in the village of a health center did not have the expected negative impact on child mortality... This might have been expected in a single data cross-section because of the possibility that health centers were introduced first in high mortality settings. But what is noteworthy is that the result was sustained even after rigorous econometric techniques removed possible bias due to program placement".²⁷

Given that the presence of village midwives *has* been shown to improve health outcomes²⁸ there are good grounds to infer that they are cost-efficient compared to alternatives.

Two other points need making about the efficiency of the Village Infrastructure Project. First, the project met its physical objectives in a very short period, taking only 4 years from identification to completion when the average length of the Bank project cycle is 7 years. Second, on a less

27. M. Pitt, M. Rosenzweig, and D. Gibbons, The determinants and consequences of the placement of government programs in Indonesia", *The World Bank Economic Review*, Vol. 7, No. 3, 1993, pp. 319-348.

28. Indonesia Family Life Survey; Frankenberg and Thomas, 2000, *op. cit.*

positive note, there is a concern that “incentive payments” to villagers to build roads are hard to justify. In Bank projects in many other countries villagers put in their labor free of charge—this is the beneficiary contribution that, theory says, proves that beneficiaries “own” the project and are more likely to maintain it. Villagers told the audit mission that they would have worked for free if road building was a village and not a government initiative: it is expected that projects emanating outside the village must bring in cash. Indeed, the task manager notes that there were cases where, pending arrival of project funds, village chiefs mobilized labor without payment.²⁹

Administering the incentive payments created some challenges for village officials. The payments were supposed to be self-targeting: because payments were lower than the minimum wage—the audit found no cases where this was not so—only the unemployed were supposed to show up for work. In practice, there was an excess demand to work on the roads and officials had to assign people to rotating shifts, giving everyone a chance to participate. Clearly, the minimum wage much exceeded the opportunity cost of labor. The need to ration out the available work suggests that there was scope for influence peddling, possibly defeating the project’s objective of targeting payments to the poorest.

5. Ratings

Outcome

OED Definition *“The extent to which the project’s major relevant objectives were achieved, or are expected to be achieved, efficiently.”*

The audit finds that the Village Infrastructure Project and Part B of the Fifth Population Project³⁰ were highly satisfactory, because each scored highly on relevance, efficacy and efficiency. The Yogyakarta Upland Area Development project is rated satisfactory: some doubts remain about its relevance but it measures up well against the criteria of efficacy and efficiency.

Sustainability

OED Definition *“The resilience to risk of net benefit flows over time.”*

Sustainability can be assessed by examining government commitment to continue training midwives; inevitably, some midwives will dropout and unless government continues to train new candidates the program must ultimately collapse. The government recently ended its accelerated training program—partly because the Ministry of Health and professional associations had criticized the curriculum’s lack of rigor. However, an improved training program (the D3) has taken its place and should ensure that dropouts are replaced.

The number of midwives who fail to extend their contract when their first three years are up has progressively declined: nationwide, 24 percent of midwives trained in 1994-95 dropped out, the rate falling to 18 percent for 1995-96 trainees and 15 percent for those trained in 1996-97. However, the rate varies substantially between provinces, the figures for 1996-97 trainees being highest in South Sulawesi (55 percent) and lowest in Maluku (1 percent). In Central Java, 23

29. E-mail from Frida Felicia Johansen, November 13, 2000.

30. This will not affect the overall project outcome rating (satisfactory) because the audit only examined Part B.

percent of the 1996-97 intake failed to extend.³¹ The audit survey found that 8 of the 15 midwives interviewed had been in the village more than three years (that is, had remained when their first contract expired), and 10 indicated that they would stay in the village at the end of their current contract. There is also clearly a demand for the service from fee-paying clients. In the audit villages, 9 of the 15 midwives indicated that their income from private fees was at least double the amount of their government stipend. Another survey, funded by the ongoing Safe Motherhood Project, also found that midwives' fee earnings are enough for them to be able to do without the stipend.³² Taking into account the evidence on training, the dropout rate, and the payment of fees, the audit agrees with the evaluation summary's verdict that sustainability is likely.

The improvement to *rural roads* made by both the Yogyakarta project and Village Infrastructure seems to have been sustained. In the areas visited by the mission, maintenance is carried out regularly, mainly by unpaid villagers drafted by the village chief. Maintenance activities seem rarely to extend beyond the filling of potholes with sand and small stones; without mechanized compaction—no evidence of which was found—this is barely adequate for steeply sloping roads. Nevertheless, almost three-quarters of village chiefs interviewed claimed that roads are better maintained now than they were 5 years ago (Table 1, Annex C). In some places, villagers have used their own funds to asphalt the steepest inclines: this was true of roads built under both projects.³³ Also, both projects score roughly the same on the erosion resistance (Annex D). In both cases, therefore, sustainability is rated as likely.

The *revolving funds* set up by the Yogyakarta project are still being maintained. In Kepek village, a goat farmer told the mission that the local revolving fund had received Rp 700,000 from the Yogyakarta project and now had a paid up capital of Rp 3 million, a growth rate of 16 percent in real terms. Ten of the 24 households in the fund had borrowed sums of RP 40,000-60,000, paying back a minimum of RP 1,000 per month plus an interest charge of 0.5%. Two of the ten borrowers had temporary repayment problems but these had been resolved using a combination of group support and sanctions. Similar stories were repeated in other villages and in no cases were funds said to have collapsed. Therefore, the sustainability of this component of the project is rated likely.

The ease of access to loans from revolving funds and, in some cases, banks has probably enhanced the sustainability of the all three projects. Each of the 33 villages visited had an active revolving fund and, in every case, village chiefs indicated the fund had grown in size during the previous five years (Table 4, Annex C). Not all villagers have the same demand for, or access to, these funds. Of the mothers interviewed, 38 percent indicated that they had taken a loan in the last five years but only 18 percent had borrowed from the revolving fund: this may be some reflection of the lower demand by (or more limited access of) poorer villagers, since the village mothers survey is more likely to have included poor persons than the other surveys. Village midwives prefer to borrow from banks: almost half of those interviewed had taken loans but none had borrowed from revolving funds.³⁴ They have used loans to buy midwifery equipment and supplies, renovate clinic space, and to purchase the bicycles and motorbikes that are indispensable for their work.

31. Data from D. Menelaws, Final Report: TPC Best Management Practices and Proposed Remedial Actions, Safe Motherhood Project, Ministry of Health, Indonesia, 2000.

32. Personal communication from Patricia Daly, consultant, on October 27, 2000.

33. The Second Village Infrastructure Project allows part of the village grant to be used for laying asphalt.

34. The USAID-funded Profit Project found that village midwives are able to meet the lending requirements of BRI, the main bank, and are able to repay their loans.

Finally, sustainability is rated likely for two components specific to the Yogyakarta project. Field inspections and interviews suggested that *soil conservation* measures are being maintained (Table 2, Annex C). Village chiefs and mothers told a different story about trends in the size of the *goat herd* (Table 6, Annex C) but none of the interviews with households that had received goats from the project indicate a reduction in their herd since the project closed. Grasses and perennial trees used to stabilize soils are commonly used as fodder for goats and other livestock.

Institutional Development

OED Definition *“The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial and natural resources.”*

To what extent have these three projects helped to increase local capacity for managing resources? Have they contributed significantly to decentralization? By promoting village midwives, the Fifth Population Project helped to shift the balance of healthcare provision from urban to rural areas. The percentage of all midwives located in villages increased from 26 to 73 percent between 1992 and 1999; in the same period, the proportion operating from health centers fell from 62 percent to 27 percent.³⁵ The capacity for midwives to serve the rural population effectively varies substantially between provinces. Midwives in Kalimantan are expected to cover an area that is almost ten times larger than that served by their counterparts in Java and Bali. The acid test for effective decentralization is whether village governments can be persuaded to bear part of the cost for maintaining midwives: the audit found no evidence that they are yet prepared to do so. The project’s failure to establish an independent midwifery board for registering and licensing midwives reflects the Ministry of Health’s reluctance to relinquish regulatory responsibility, which suggests there are still obstacles to decentralization. Nevertheless, based on the plausible inference that village midwives have had some positive impact on villagers’ health status and attitudes to health care, and the significant village experience gained by midwives—which should serve them throughout their career—the audit rates institutional development impact as substantial, agreeing with the evaluation summary’s verdict.

In some aspects of decentralization, progress was made in the period that elapsed between the Yogyakarta and the Village Infrastructure Project. Yogyakarta stuck with the old approach of working through the multiple layers of Indonesian government. “Project implementation was undertaken by a total of some 24 focal coordination/management units, four each in the four districts, seven at the provincial level and one at the national level.”³⁶ This was a remarkably ornate structure for a project covering a single province; inevitably it led to coordination problems and some duplication of effort. The audit mission found that the project had left little impression on the institutional memory of authorities at the provincial, district and sub-district level: the large entourage of uniformed officials who accompanied the mission on village visits seemed poorly informed about the project and showed little engagement with local development issues. It is therefore difficult to endorse the completion report’s claim that “The project made significant contributions towards achieving the objective of strengthening local level institutions and improving multi-sectoral planning at the provincial and district levels.”³⁷ Nevertheless, village people were given a role in prioritizing subprojects. On balance, the audit rates institutional development as modest, not, as the evaluation summary claims, substantial.

35. Ministry of Health data.

36. Report No. 18085, 1998, p. 7.

37. *Ibid.*, p. 7.

The Village Infrastructure Project tried a new approach, bypassing the various layers of government and disbursing grants for infrastructure development to the villagers from the local branch of a commercial bank; consultant engineers, rather than government officials, were responsible for reviewing the subproject proposals prepared by villagers. The central government has recently decreed that the procurement and disbursement model developed by Village Infrastructure should serve as the standard for all future rural development projects. If implemented this will surely reduce the influence of the provincial, district and sub-district governments in project design and implementation, with more power shifting to the village level. Also, the on-the-job training received by the field engineers—whose number had reached 800 by the second project—will presumably help them to work effectively with villagers on future projects. The audit's rating for institutional development impact is high, upgrading the evaluation summary's rating of substantial.

Bank Performance

OED Definition *“The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project).”*

The audit endorses the ratings given by the evaluation summaries: satisfactory for Fifth Population and Yogyakarta, and highly satisfactory for Village Infrastructure. The openness to experiment with new approaches, and the strong commitment to the project shown by the Bank's implementation team (including the consultant field engineers), are what distinguishes the Village Infrastructure Project. The high return obtained from the limited resource input is striking. In the East Asia and Pacific Region the average number of staff weeks devoted to a project from start to finish (averaging a seven-year cycle) is 240. In a space of four years, from identification to completion, Village Infrastructure absorbed just 99 weeks of staff time (US\$414,000) compared to the 356 staff weeks (US\$572,000) invested by Fifth Population over a period of seven years; there are no data for Yogyakarta, which also took seven years to implement. The record shows that Village Infrastructure took only 11 weeks to appraise compared to 53 weeks for Fifth Population: even allowing for the imprecision of the Bank's time budgeting, the order of magnitude—almost a five-fold difference—suggests that Village Infrastructure was a model of parsimony, reflecting the simplicity of its design (Staff Inputs, Annex A).

Borrower Performance

OED Definition *“The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability.”*

The audit found nothing that would call into question the statements in the completion reports and evaluation summaries and therefore there is no reason not to ratify the satisfactory rating given to Fifth Population and Yogyakarta and the rating of Village Infrastructure as highly satisfactory. The completion report for the Village Infrastructure Project provides a more than usually detailed examination of borrower performance.

6. Findings and Lessons

Based on questionnaire surveys applied to 197 people in 33 villages, this audit has sought to evaluate the likely poverty impact of three projects. It cannot pretend to be an impact evaluation: there is no comparison of "with project" and "without project" scenarios and, for reasons indicated in Chapter 1, no attempt to stratify beneficiaries into poor and less poor groups. Nevertheless, the audit has hopefully demonstrated that project objectives were consistent with poverty reduction and, because these objectives were met, it is reasonable to infer that the poor benefited and that, in two of the three projects, these positive results will be sustained. The audit has found that the village midwife program is effective, that the roads built have in most cases been adequately designed and adequately maintained, and that in two projects there has been significant local capacity building.

Project results do not appear to have been adversely affected by the 1997 East Asian financial crisis. Probably the crisis was felt more in the cities than in the countryside. In rural Central Java, at least, a separate Bank consultation found agreement among men, women and young people that wellbeing had increased in the ten years up to 1999, with a 10-15 percent fall in the proportion of poor households.³⁸ This is borne out by the audit survey, which found a majority of village chiefs and women reporting that most people were better off than they had been five years before (Table 3, Annex C). It was striking that all of the 33 villages visited had robust financial institutions, including well-capitalized revolving funds that are accessible to people of diverse income groups. This provides a sound context for further development and continued work to reduce poverty.

Four lessons have been learned. First, village midwives are an efficient way to improve the general level of healthcare in villages: they are accepted by the authorities, work effectively with traditional birth attendants and can partially support themselves from private fees. Even in poorer, more remote areas government is obliged to continue paying a stipend to midwives this is an investment worth making, given the evidence that villages with trained midwives have healthier mothers and children and, contrary to what the completion report found, have *not* "had difficulties in gaining credibility as health providers and integrating into the village community."³⁹

Second, small-scale infrastructure projects cannot easily be targeted to the poorest individuals but if they are located in the poorest areas and villages they are nevertheless likely to have a significant impact on reducing poverty. However, care needs to be taken that the menu of options is fully presented to villagers and the selection process is truly demand-driven. In some of the villages visited by the audit mission, water and sanitation were the highest priority. Although this type of infrastructure was on the list of options presented by the Yogyakarta and Village Infrastructure projects, for some reason the final cut of village subprojects did not give the weight to them that the villagers' stated preferences would indicate.

Third, there is no case for making incentive payments to villagers who help build roads. In the two audited projects with road components, one made such payments and the other did not; yet there is little difference between them in road quality or the frequency of maintenance. Ownership is not increased by making such payments and may create the perception that this is a 'government' project. Also, unless the payment is substantially below the minimum wage there will be no targeting of job creation to the poorest.

38. Based on interviews with 72 people in rural Genengsari, Central Java (Indonesia: Consultations With the Poor, Report presented to Global Synthesis Workshop, September 22-23, 1999, Poverty Group, World Bank, p. 36).

39. Report No. 16801, 1997, p. 11.

Fourth, in Indonesia, working directly with village people rather than through local government has been shown to produce sound, sustainable results and is an approach worthy of replication. This is now acknowledged by central government and the Village Infrastructure Prove may prove to have been a catalyst for decentralization. Disbursing to local banks rather than through local government is feasible. Training local engineers to vet subprojects and supervise implementation is preferable to using local government officials with a lesser commitment to transparency and weak engagement with the development agenda. Building capacity at the village level may make villagers more able to guide development and to exert pressure on district and sub-district governments to be more responsive to their needs.

Basic Data Sheets

Indonesia—Fifth Population Project (Loan 3298–IND)

Key Project Data

	<i>Appraisal Estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of Appraisal estimate</i>
Total project costs (US\$)	148.4	134.0	90%
Loan amount (US\$)	104.0	99.9	96%
Cancellation (US\$)	-	4.1	-
Date physical components completed: September 1996			

Cumulative Estimated and Actual Disbursements (US\$ million)

	<i>FY91</i>	<i>FY92</i>	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>
Appraisal estimate	6,500	12,500	26,500	51,000	80,100	97,800	104,000
Actual	6,500	11,630	29,420	56,800	79,920	97,960	99,890
Actual as % of Estimate	100%	93%	113%	111%	100%	100%	96% ^a
Date of final disbursement	January 1997						

a. USD \$200 thousand was canceled in November 1995

Balance of US\$3,909,615.21 was canceled in January 1997

Project Dates

<i>Steps in project cycle</i>	<i>Original</i>	<i>Actual</i>
Identification/Preparation	n.a.	September 1989
Preappraisal	n.a.	April 1990
Appraisal	August 1990	August 1990
Negotiations	April 1991	April 1991
Board presentation	May 1991	May 1991
Signing	May 1991	May 1991
Effectiveness	June 1991	June 1991
Midterm review	July 1994	July 1994
Project Completion	September 1996	September 1996
Loan closing	September 1996	September 1996

Staff Inputs (staff weeks)

<i>Stage of project cycle</i>	<i>Planned</i>		<i>Actual</i>	
	<i>Weeks</i>	<i>US\$(000s)</i>	<i>Weeks</i>	<i>US\$(000s)</i>
Preparation to Appraisal	n.a.	n.a.	59.6	110.7
Appraisal	n.a.	n.a.	53.3	110.2
Negotiations through Board Approval	n.a.	n.a.	11.0	20.5
Supervision	n.a.	n.a.	225.0	317.6
Completion	8.0	15.6	7.3	13.0
Total			356.2	572.0

Mission Data

Stage of project cycle	Date (month/year)	No. of staff in field	Duration of mission (# of days)	Specializations represented ^a	Performance ratings		Types of problems ^c
					Implement. Status	Develop. Objectives	
Identification/preparation	9/89	4	21 ^b	P,H,T	-	-	-
Preappraisal	4/90	6		P,E,A,F,I	-	-	-
Appraisal	9/90	7		P,E,A,F,I,J	-	-	-
Supervision 1	8/91	4	22	P,H,N,	1	1	-
Supervision 2	5/92	3	20	P,O	1	1	-
Supervision 3	11/92	4	16	P,O,N	1	1	-
Supervision 4	6/93	3		P,O	1	1	-
Supervision 5	11/93	5	21	P,H,O	1	2	c
Supervision 6	7/94	2	18	P,H	HS	S	c
Supervision 7	2/95	1	5	H,O	HS	S	c
Supervision 8	11/95	3	18	H,P,O	HS	S	c
Supervision 9	6/96	2	12	H,O	HS	S	c
Supervision 10	8/96	2		H,O	HS	S	c
Completion	11/96	3	19	P,O,N	-	-	-

a. A=Agriculture; E=Economics; F=Family Planning; H=Health; I=IEC; N=Nursing/midwifery; O=Operations P=Population; T=Training;

b. Include other projects.

c. Components related to service delivery to the hard to reach not all successful.

Other Project Data

Borrower/Executing Agency:

Related Bank Credits

Credit title	Credit	Purpose	Year of approval	Status
Population I	C300	To assist GOI in establishing clinic-based family planning in six provinces in Java-Bali; improve information and motivation.	1972	Closed
Population II	L1472	To expand family planning program to ten additional provinces; to establish contraceptive distribution centers in Java-Bali; strengthen population education and motivation.	1977	Closed
Population III	L1869	To expand family planning program to remaining provinces; to assist GOI decentralize management of family planning program; to strengthen planning program; to strengthen maternal and child health services.	1980	Closed
Population IV	L2529	To expand family planning program in Outer Islands; finance field operations, staff development, IEC; assist Ministry of Population and Environment to perform its policy and coordinating role.	1985	Closed
Third Health	L3042	Raise health status in East Kalimantan and Nusa Tenggara Barat by improving delivery of health services and strengthening sector management.	1989	Closed
Third Community Health and Nutrition	L3550	To enhance programs for child survival, safe motherhood and nutrition in five provinces; build provincial capacity to plan, monitor, and evaluate services; strengthen central MOH to provide technical support to provinces.	1992	Ongoing
Health IV	L3905	To increase the capacity of provincial and district health offices; improve access and utilization of health services by the poor; improve efficiency in service delivery of basic health services.	1995	Ongoing

<i>Credit title</i>	<i>Credit</i>	<i>Purpose</i>	<i>Year of approval</i>	<i>Status</i>
STD/AIDS	L3981	Lower STD and HIV incidence in two areas: Jakarta and Riau and to operationalize GOI's national AIDS strategy.	1996	Ongoing
Intensified Iodine Def. Control Project	L4125	To lower the prevalence of iodine deficiency through: (a) monitoring of iodine status; (b) increasing consumption of iodized salt; (c) targeted distribution of iodine capsules; and (d) improved coordination of activities among partners.	1997	Ongoing

Yogyakarta Upland Area Development Project (Loan 3305-Ind)

Key Project Data

	<i>Appraisal Estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs (US\$)	25.1	20.3	81%
Loan amount (US\$)	15.5	13.8	97%
Cancellation (US\$)	-	1.7	-
Date physical components completed: December 31, 1997			

Cumulative Estimated and Actual Disbursements (US\$ million)

	<i>FY9</i>	<i>FY92</i>	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>
Appraisal estimate	0	1,000	3,646	7,516	10,696	13,632	14,195
Actual	1,000	1,669	3,521	7,028	9,913	11,993	13,800
Actual as % of estimate	1,000	167	96.6	93.5	92.7	87.5	97
Date of final disbursement: 31 March 1998							

Project Dates

<i>Steps in project cycle</i>	<i>Original</i>	<i>Actual</i>
Identification (Executive Project Summary)		April-May 1986
Preparation		April 1988-Sept. 1989
Appraisal		February 1990
Negotiations	10 December 1990	28-30 January 1991
Board presentation		19 March 1991
Signing		3 May 1991
Effectiveness	1 April 1991	24 June 1991
Mid-term review (if applicable)	June 1993	15 April 1994
Loan closing	31 December 1996	31 December 1997

Staff Inputs (staff weeks)

<i>Stage of project cycle</i>	<i>Actual</i>	<i>Revised</i>	<i>Planned</i>
To Appraisal	n.a.	n.a.	n.a.
Appraisal to Board Approval	n.a.	n.a.	n.a.
Board Approval to Effectiveness	n.a.	n.a.	n.a.
Supervision	n.a.	n.a.	n.a.
Completion	n.a.	n.a.	n.a.

Mission Data

Stage of project cycle	Date (month/year)	No. of staff in field	Duration of mission (# of days)	Specializations represented ^e	Performance ratings ^A		Types of problems ^c
					Implement. Status	Develop. Objectives	
Through Appraisal	Feb. 20						
Appraisal through Board Approval	Mar. 91						
Supervision 1	June 91	4	10		2	1	
Supervision 2	October 91	3	7		2	1	
Supervision 3	July 92	2	4		2	1	
Supervision 4	Nov. 92	1	4		2	1	
Supervision 5	Feb. 93	4	8		HS	2	
Supervision 6	July 93	3	6		S	HS	
Supervision 7	Nov. 94	1	6		HS	HS	
Supervision 8	May 95	2	5		S	S	
Supervision 9	May 96	4	6		S	S	
Supervision 10	January 97	1	4		S	S	
Supervision 11	August 97	2	5		S	S	

A. 1 = no problems; 2 = satisfactory; S = satisfactory; HS = highly satisfactory

Other Project Data

Related Bank Credits

Loan title	Purpose	Year of approval	Status
Preceding operations			
Yogyakarta Rural Development Project	Improve (i) the incomes and living standards of the people and the socio-economic and physical infrastructure in two of the poorest Kabupaten in province; (ii) promote soil conservation measure; and (iii) strengthen local level institutions and framework for community participation.	1979	Closed
Upland Agriculture and Conservation Project	To increase farm production and incomes, while minimizing soil erosion, in sensely populated upland area in Java by improving farming systems, farm technology and management.	1985	Closed
Nusa Tenggara Agriculture Support Pr.	To raise smallholder incomes, promote equitable regional development, strengthen local-level institutions and improve multi-sectoral planning and implementation at both the national and local levels.	1986	Closed
Following Operations			
Nusa Tenggara Agric. Area Development Pr.	To raise smallholder incomes, strengthening local level institutions and foster broad-baed participation at the grassroots level.	1996	Ongoing
Sulawesi Agric. Area Deveopment Project	To reduce the incidence of poverty in the provinces of Central and Southeast Sulawesi through the increase of rural incomes, the promotion of equitable regional development.	1996	Ongoing
Maluku Regional Development Project	*	*	Negotiated
Bengkulu Area Development Project	*	*	Appraised
Kalimantan Area Development Project	*	*	Under Preparation

* This information is missing from the Implementation Completion Report.

Indonesia—Village Infrastructure Project (Loan 3888-Ind)

Key Project Data

	Appraisal Estimate	Actual or current estimate	Actual as % of Appraisal estimate
Total project costs (US\$)	83.8	75.2	90%
Loan amount (US\$)	72.5	65.6	91%
Cancellation (US\$)	-	6.8	-
Date physical components completed: March 31, 1998			

Cumulative Estimated and Actual Disbursements (US\$ million)

	FY96	FY97	FY98	FY99
Appraisal estimate	30.00	65.00	70.00	72.50
Revised	20.00	60.00	70.00	72.50
Actual ^a	25.35	68.60	68.81	65.65
Actual as % of estimate	85	106	98	91
Date of final disbursement: February 1999				

a. Including disbursements into the Special Account, the balance of which (\$3.61 million) was refunded by the closing date.

Project Dates

Steps in project cycle	Original	Actual
Identification	N/A	February 15, 1994
Preparation	October 1994	October 1, 1994
Appraisal	January 5, 1995	February 14, 1995
Negotiations	April 20, 1995	April 21, 1995
Board presentation	May 9, 1995	May 23, 1995
Signing	June 1995	June 29, 1995
Effectiveness	June 1995	August 25, 1995
First Loan Amendment ^a		August 25, 1995
Second Loan Amendment ^b		December 2, 1997
Project Completion	March 31, 1998	March 31, 1998
Credit closing	September 30, 1998	September 30, 1998

Staff Inputs (staff weeks)

Stage of project cycle	Actual	
	Weeks	US\$000 ^a
Pre-appraisal	30.5	111.8
Appraisal	11.0	41.5
Appraisal-Effectiveness	3.0	5.6
Supervision	51.5	240.1 ^b
Completion	3.0	15.0 ^c
Total	99.0	414.0

a. Including travel expenses.

b. FY	000\$	c. 08	3.9
95	12.1	to 2/99	5.8
96	74.9		9.7
97	105.5		
98	37.6		
99	10.0		
	240.1		

Mission Data

Stage of project cycle	Date (mth/yr)	No. of staff in field	Duration of mission (# of days)	Specializ. Represented	Performance ratings		Types of problems ^e
					Implement. Status	Develop. Objectives	
Preparation	03/15/94	1	NA	E	---	---	---
	10/14/94	2	NA	E	---	---	---
Appraisal through Board Approval	01/20/95	3	NA	E, HE, A	---	---	---
Board Approval Through Effectiveness	06/20/95	2	0.40	E	---	---	---
Supervision I	09/29/95	3	4.50	E, H, HE	HS	HS	Strengthening of engineering team through hiring another EMC senior engineer per province & defining responsibilities for dealing with problems. Addressing the desire for road asphaltting by villagers; updating the draft manual by end of Nov. 1995; and increased transparency to allow villagers to know the flows of expenditures.
Supervision II – mid-term	02/09/96	3	6.30	E, A, HE	HS	HS	Main concerns: quality of civil works, in particular roads; Admin. LKMD withdrew standard monthly installments from BRI; in one village, increased benefits could have been achieved with a subproject type not specified in the Manual (a flood gate); VIP related operational budgets were made available late, and not clearly allocated to the agencies involved.
Supervision III	07/20/96	3	2.40	E, A, HE	HS	HS	In few kabupaten Pimpro's formal appointment had not been completed; delays in release of the advance to some villages; some concern about the quality of the civil works.
Supervision IV	11/15/96	3	9.50	E, A, ENV	Hs	HS	The project is ahead fo schedule, except for a slightly delayed audit by BPKP. Issues: a) quality of road works a problem in some villages, improvement is not easy as often soil conditions are the cause; b) the foreseen balance of \$3 million may be used for TA start-up under VIP II if agreed.
Supervision V	03/20/97	5	2.0	E, A, EG, IS	HS	HS	None. All works were completed, within original cost estimates and ahead of schedule. A balance of over \$3 million of "unallocated" funds is to be used for preparation of follow-on pilot Kecamatan project and a related study.
Supervision VI ^b	10/97	2	20	E, A	S*	S*	KDP pilot: problems of definition, with consultants; good progress with local institutions study.
Supervision VII	01/20/98	3	7.0	E, A, EG	HS	HS	None. The original project was completed ahead of schedule. The added pilot and study are under implementation.

Stage of project cycle	Date (mth/yr)	No. of staff in field	Duration of mission (# of days)	Specializ. Represented	Performance ratings		Types of problems ^c
					Implement. Status	Develop. Objectives	
Supervision VIII	3/98	1	1	E	HS	HS	MoF overdue in withdrawing from SA. Project villages to be revisited; KDP experiencing implementation difficulties; local inst. Study draft interim reports available (VIP2 proceeding).
Supervision IX	8/98	1	1	E	S*	S*	Funds were invested, but the poorer wer bypassed.
Supervision X	9/98	1	1	E	HS	HS	Start of ICR
Supervision XI	2/99	1	1	E	HS	HS	Final discussion of ICR with GOI

a. Some 5 field visits for the pilot and the local institutions study were undertaken by team members and independent parties residing in Jakarta.

* Rating applies to pilot only.

Other Project Data

Borrower/Executing Agency:

Related Bank Credits

Credit title	Loan No.	Purpose	Year of approval	Status
<i>Preceding operations</i>				
None				
Second Village Infrastructure Project	L4100	This is a targeted poverty reduction intervention project. The main objective is to build small infrastructure in poor villages on Java and Sumatra. Other objectives are to increase decentralization and community participation, as under VIP.	1996	Completed July 2000, Satisfactory
Kecamatan Development Project	L4330	This is a targeted Poverty reduction project and capacity building project. It expands the VIP into economic activities and into allowing villages collectively in selected subdistricts to choose what to do, with village implementation.	1998	Ongoing, Satisfactory
Municipal Innovations Project	L4440	This is a learning an innovation loan. It focuses on capacity building, governance, service delivery. Some of the "municipalities" are substantially rural.	1999	Starting
Urban Poverty project	NA	This project is also a targeted poverty reduction project, but in urban areas. It follows the community participation approach and capacity building. A loan was negotiated in October 1998, conversion into a credit, for which Indonesia is newly eligible, has delayed processing.	NA	Ongoing

Note: Several agricultural and education projects have also adopted VIP modalities, in particular the disbursement and community implementation, some through amendments and some new ones.

Villages Visited and their Location

<i>Province</i>	<i>District</i>	<i>Sub-District</i>	<i>Village</i>	
Central Java	Wonosobo	Leksono	Jebeng Plampitan	
			Plodongan	
			Tindakan Lor	
	Banjarnegara	Banjarnegara	Kebutuh Duwur	
			Twelagiri	
			Gunung Jati	
			Duren	
			Sidoagung	
	Kebumen	Sruweng	Ambal	
			Bener Wetan	
			Blengor Kulon	
			Mirit Petikusan	
	Purworejo	Kemiri	Lembu Purwo	
			Dilem	
Loning				
Girijoyo				
Tamansari				
Bendingan				
Mertelu				
Yogyakarta	Gunung Kidul	Gedangsari	Watugajah	
			Pilangrejo	
			Mongol	
			Giring	
		Rongkop	Planjan	
			Kepek	
			Ng lindur	
			Jeruk Wudel	
			Tileng	
		Kulon Progo	Samigaluh	Pucung
				Banjarsari
				Pagerharjo
		Sleman	Cangkringan	Sidoarjo
				Glagaharjo
Kepuh				
Umbulharjo				

Tables From Audit Survey Data

Table 1. Construction and maintenance of village roads

	<i>Central Java</i> (N=16)	<i>Yogyakarta</i> (N=17)	<i>Total</i> (N=33)
Village chiefs			
Were roads well made?	/		
—Yes	56%	100%	79%
—No	44%	0%	21%
Compared to 5 years ago, how is the state of road maintenance?			
—Better	75%	71%	73%
—Same	13%	18%	15%
—Worse	13%	12%	12%
Who is responsible for road maintenance?			
—Villagers (unpaid)	69%	82%	76%
—Villagers (paid)	13%	12%	12%
—Government	19%	6%	12%

Table 2. Soil erosion

	<i>Central Java</i> (N=16)	<i>Yogyakarta</i> (N=17)	<i>Total</i> (N=33)
Village chiefs			
Is there a major problem of soil erosion in this village?			
—Yes	44%	41%	42%
—No	56%	59%	58%
<i>(Villages with major soil erosion only)</i>	(N=7)	(N=7)	(N=14)
Compared to 5 years ago, how is the state of soil erosion?			
—Better	57%	86%	71%
—Same	29%	0%	14%
—Worse	14%	14%	14%

Table 3. Perceived trend in living standards (1995-2000)

	<i>Central Java</i> (N=16)	<i>Yogyakarta</i> (N=17)	<i>Total</i> (N=33)
Village chiefs			
Compared to 5 years ago, are most people in this village			
—Better off now?	63%	94%	79%
—About the same?	27%	0%	12%
—Worse off now?	13%	6%	9%
Mothers of children under 5	(N=93)	(N=56)	(N=149)
Taking into account all the income you receive, are you			
—Better off now than 5 years ago?	52%	54%	52%
—About as well off now as 5 years ago?	16%	41%	26%
—Worse off now than 5 years ago?	32%	5%	22%

Table 4. Borrowing

	<i>Central Java</i>	<i>Yogyakarta</i>	<i>Total</i>
Village chiefs	(N=16)	(N=17)	(N=33)
Percentage indicating that there is a rotating fund in the village	100%	100%	100%
Percentage indicating that rotating fund(s) have grown in size over last 5 years	100%	100%	100%
Mothers of children under 5	(N=56)	(N=93)	(N=149)
Percentage indicating that they have borrowed in the last 5 years	70%	19%	38%
Percentage indicating that they have borrowed from a rotating fund in the last 5 years	38%	6%	18%
Midwives	(N=15)	-	(N=15)
Percentage indicating that they have borrowed while in the village	47%	-	47%
Percentage indicating that they have borrowed from a village rotating fund	0%	-	0%

Table 5. Source of household income

	<i>Central Java</i>	<i>Yogyakarta</i>	<i>Total</i>
Village chiefs	(N=16)	(N=17)	(N=33)
Percentage indicating that a majority of men in the village earn most of their income from farming	100%	100%	100%
Mothers of children under 5	(N=93)	(N=56)	(N=149)
Percentage indicating that head of household's main source of income is			
—Farming own land	29%	20%	26%
—Working on others' farmland	25%	20%	23%
—Non-farm source	46%	61%	52%

Table 6. Goats

	<i>Central Java</i>	<i>Yogyakarta</i>	<i>Total</i>
Village chiefs	(N=16)	(N=17)	(N=33)
Percentage indicating that most households keep goats	75%	100%	88%
Percentage indicating that the village's total inventory of goats has increased in the last 5 years	56%	71%	64%
Mothers of children under 5	(N=56)	(N=93)	(N=149)
Percentage indicating that household keeps goats	27%	23%	24%
Percentage indicating that household has a significant herd (4-10 goats)	7%	6%	7%
Percentage indicating that herd has increased in last 5 years	14%	6%	9%

Table 7. Perceived development priorities

	<i>Chiefs</i>	<i>Midwives</i>	<i>Mothers</i>	<i>Total</i>
	(N=33)	(N=15)	(N=149)	(N=197)
Question: "Imagine that your village had none of the following five facilities, and that funds were only sufficient to supply one of the five. Which would you choose..."				
... Roads?	33%	7%	15%	18%
... Drinking water supply?	43%	53%	57%	53%
... Latrines?	-	-	13%	10%
... Primary school?	12%	13%	4%	6%
... Health post?	12%	27%	11%	13%

Table 8. Use of delivery care

	Central Java (N=16)	Yogyakarta (N=17)	Total (N=33)
Village chiefs			
<i>(a) With reference to women in general</i>			
Percentage indicating that women use <i>dukun</i> alone	13%	6%	9%
Percentage indicating that women use <i>bidan di desa</i> alone	13%	53%	33%
Percentage indicating that women use <i>dukun</i> plus <i>bidan di desa</i>	69%	35%	52%
Percentage indicating that women use other service providers	6%	6%	6%
<i>(a) With reference to the poorest women</i>			
Percentage indicating that women use <i>dukun</i> alone	19%	35%	27%
Percentage indicating that women use <i>bidan di desa</i> alone	25%	41%	33%
Percentage indicating that women use <i>dukun</i> plus <i>bidan di desa</i>	50%	18%	33%
Percentage indicating that women use other service providers	6%	6%	6%
Midwives	(N=15)	-	(N=15)
<i>With reference to the poorest women</i>			
Percentage indicating that women use <i>dukun</i> alone	13%	-	13%
Percentage indicating that women use <i>bidan di desa</i> alone	20%	-	20%
Percentage indicating that women use <i>dukun</i> plus <i>bidan di desa</i>	67%	-	67%
Percentage indicating that women use other service providers	0%	-	0%
Mothers of children under 5	(N=93)	(N=56)	(N=149)
<i>(a) At last birth</i>			
Percentage indicating that they used <i>dukun</i> alone	41%	27%	36%
Percentage indicating that they used <i>bidan di desa</i> alone	13%	16%	14%
Percentage indicating that they used <i>dukun</i> plus <i>bidan di desa</i>	23%	2%	15%
Percentage indicating that they used other service providers	24%	55%	36%
<i>(b) Plans for next birth</i>			
Percentage indicating they would use <i>dukun</i> alone	30%	20%	26%
Percentage indicating they would use <i>bidan di desa</i> alone	30%	32%	31%
Percentage indicating that they would use <i>dukun</i> plus <i>bidan di desa</i>	15%	5%	11%
Percentage indicating that they would use other service providers	25%	43%	32%

Table 9. Questions to midwives in Central Java (N=15)

	Percentage
Age	
—Under 18	0
—18-22	20
—23-30	50
—Over 30	13
Highest level of schooling before training as midwife	
—Junior Secondary	0
—Senior Secondary	0
—Nursing School (SPK)	100
Number born in district to which they are currently assigned	53
Number speaking same language as majority of villagers	93
Number provided with housing by the village on arrival	60
Length of time working as a midwife in this village	
—Less than one year	13
—1 to 3 years	33
—Over 3 years	53
Current employment status	
—Contract midwife (PTT)	80
—Civil servant (PNS)	20
—Private midwife (<i>swasta</i>)	0
Average number of births attended each month (last six months)	
—None	7
—1	20
—2 to 3	53
—Over 3	20
Average number of family planning consultations given each month (last six months)	
—None	0
—1 to 9	27
—10-20	40
—Over 20	33
Average number of sick patients treated each month (last six months)	
—None	0
—1-20	0
—20-30	13
—Over 30	87
Income from private fees as a proportion of government stipend	
—Zero (no private practice)	0
—Less than one-half	20
—Equal	20
—Double	60
Number of <i>dukun</i> in the village	
—None	20
—1	13
—2 to 3	47
—Over 3	20
Number of <i>dukun</i> with whom midwife works regularly	
—None	13
—1	40
—2 to 3	40
—Over 3	7
Average number of <i>posyandus</i> attended each month (last twelve months)	
—None	0
—1 to 3	33
—Over 3	66
Midwives reporting that <i>dukun</i> participate in <i>posyandus</i>	27
Number of post-assignment training courses received	
—None	13
—1	40
—2 to 3	40
—Over 3	13

Road Quality Scores

Project/Slope/Village	Design Quality			Aggregate Score	Erosion Resistance		
	Camber	Side ditch	Side slope reinforcement		Surface	Culvert	Aggregate Score
UADP ROAD							
High Slope (10 degrees or over)							
1 Kepek	2	1	3	6	2	3	5
2 Mongol	1	1	1	3	2	0	2
3 Nglindur	1	1	3	5	3	1	4
4 Glagaharjo	2	2	2	6	3	2	5
5 Kepuh	2	2	2	6	3	2	5
6 Umbulharjo	2	2	2	6	3	2	5
7 Banjarsari	1	1	2	4	2	2	4
8 Sidoarjo	1	2	1	4	2	0	2
Mean	1.5	1.5	2.0	5.0	2.5	1.5	4.0
Low Slope (Under 10 degrees)							
9 Mertelu	2	2	2	6	3	2	5
10 Pilangrejo	1	2	2	5	2	1	3
11 Watugajah	2	1	1	4	1	1	2
12 Jeruk Wudel	2	1	3	6	3	3	6
Mean	1.8	1.5	2.0	5.3	2.3	1.8	4.1
UADP Overall	1.6	1.5	2.0	5.1	2.4	1.7	4.0
VIP ROAD							
High slope (10 degrees or over)							
13 Pucung	3	1	3	7	2	3	5
14 Nglindur	2	1	3	6	2	3	5
15 Giring	3	1	3	7	2	3	5
16 Mertelu	1	1	1	3	1	3	4
17 Watugajah	1	1	1	3	1	3	4
18 Girijoyo	2	1	3	6	2	1	3
19 Plodongan	1	1	0	2	1	1	2
20 Jebeng Plampitan	2	3	3	8	3	3	6
21 Duren	2	1	1	4	1	2	3
22 Gunungjati	1	1	3	5	2	1	3
Mean	1.8	1.2	2.1	5.1	1.7	2.3	4.0
Low slope (Under 10 degrees)							
23 Tileng	2	1	3	6	2	3	5
24 Jeruk Wudel	3	1	3	7	2	3	5
25 Mongol	3	1	3	7	2	3	5
26 Planjan	2	1	3	6	1	3	4
27 Kepek	2	1	3	6	1	3	4
28 Bendungan	2	3	0	5	2	3	5
29 Dilem	2	3	2	7	1	3	4
30 Blengor Kulon	2	1	0	3	3	1	4
31 Bener Wetan	3	2	0	5	1	0	1
32 Sidoagung	2	3	3	8	2	3	5
Mean	2.3	1.7	2.0	6.0	1.7	2.5	4.2
VIP Overall	2.1	1.5	2.1	5.7	1.7	2.4	4.1

UADP Upland Area Development Project. VIP Village Infrastructure Project.

Ratings on individual characteristics: 3=good; 2=average; 1=poor; 0=not applicable

Aggregate scores: Design quality: 1-3=poor; 4-6=average; 7-9=good. Erosion: 1-2=poor; 3-4=average; 5-6=good.

Note: The correlation coefficient between the aggregate scores for design quality and erosion resistance is 0.65.

Supplementary Tables

Table 1. Relation of audit provinces to Indonesia as a whole

	Land area (km ²)	Percentage of total area of Indonesia	Number of villages	Percentage of all villages in Indonesia
Central Java	34,206	1.8	8,513	13.1
Yogyakarta	590	0.2	265	<0.1
Indonesia	1,919,317	100.0	65,198	100.0

Source: BPS, Statistical Yearbook of Indonesia, 1994

Table 2. Poverty status of audit provinces

	Linear km of roads per km ² , 1994	Number of persons per public health center, 1992	Percentage of rural population that are poor, 1996	Percentage of rural households with earth floors	Percentage of rural population aged 10 years and over that has no schooling, 1995
Central Java	0.6	38,661	14.4	61.1	Male, 9.7 Female, 22.1
Yogyakarta	18.6	23,334	8.5	42.7	Male, 11.5 Female, 30.1
Indonesia	0.2	31,330	12.3	NA	NA

Source: BPS, Statistical Yearbook of Indonesia, 1994; BPS, Results of 1995 Intercensal Population Survey; Agriculture Sector Strategy Review, World Bank/Ministry of Agriculture, 1998.

Table 3. Rural households with earth floors by province and district, 1995.

Province	(1) N. of rural households ('000)	(2) N. of rural households with earth floors ('000)	(3) (2)/(1) (%)
Central Java	4,917	3,005	61.1
Banjarnegara	169	96	57.3
Kebumen	237	136	57.7
Purworejo	151	76	50.7
Wonosobo	148	76	51.5
Yogyakarta	321	137	42.7
Kulon Progo	60	34	57.3
Bantul	69	25	37.5
Gunung Kidul	95	52	54.9
Sleman	96	24	25.1

Source: BPS, Results of 1995 Intercensal Population Survey

Table 4. Sources of rural household income by province and district, 1995.

Province	Agriculture (% of households)	Non-Agriculture (% of households)	Mixed (% of households)	Total (% of households)
District				
			Mainly agriculture	Mainly non-agriculture
Central Java	39.3	28.6	15.6	16.5
Banjarnegara	43.6	34.1	10.9	11.4
Kebumen	44.4	19.4	18.6	17.5
Purworejo	41.6	23.1	19.8	15.5
Wonosobo	44.0	24.9	16.8	14.2
Yogyakarta	32.2	23.2	18.6	26.0
Kulon Progo	40.8	14.5	20.6	24.2
Bantul	16.2	26.2	24.6	33.0
Gunung Kidul	53.5	9.3	18.7	18.5
Sleman	17.4	40.4	12.8	29.4

Source: BPS, Results of 1995 Intercensal Population Survey

Table 5. Village government development expenditures per rural household, 1995

	(1) N of rural households (^{'000})	(2) Development spending (US\$ ^{'000})	(3) Spending per household (US\$) =(2)/(1)
Central Java			
Banjarnegara	169	1,612	9.54
Kebumen	237	2,551	10.74
Purworejo	151	2,327	15.32
Wonosobo	148	2,339	15.76
Yogyakarta			
Kulon Progo	60	1,051	17.41
Bantul	69	435	6.28
Gunung Kidul	95	1,316	13.82
Sleman	96	1,143	11.85

Source: BPS, Village Government Financial Statistics, 1995/1996.

Note: Exchange rate used US\$1.00=Rupiah 2,239; Development expenditures comprise government physical infrastructure, production infrastructure, transportation infrastructure, marketing infrastructure, social infrastructure, and others.

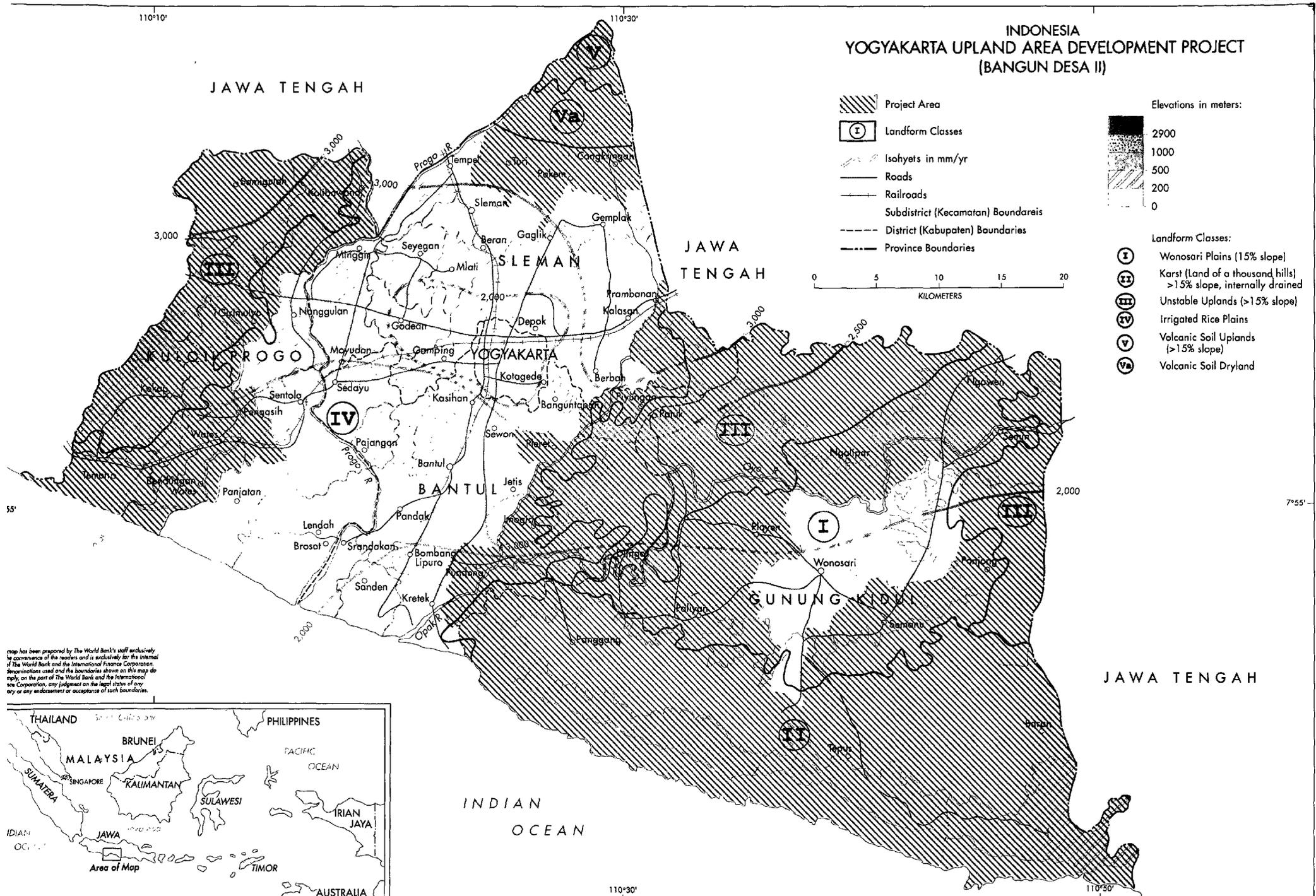
There is a strong negative correlation ($r=-0.84$) between the proportion of rural households with earth floors and the proportion of rural households where non-agriculture (defined as "non-agriculture" plus "mixed, mainly non-agriculture") is the primary source of income. This suggests that diversifying out of agriculture makes people better off.

There is a weak positive correlation ($r=0.36$) between the proportion of rural households with earth floors and the level of development spending per rural household by village governments. If earth floors are an adequate measure of poverty (and the audit found that is the single best physical discriminator between rich and poor households), this indicates that the targeting of development spending is imprecise.

Table 6. Number of village midwives by region in 2000

Region	N of villages	Estimated N of village midwives needed	N of village midwives deployed	Percent of estimated need
Java/Bali	25,198	19,093	11,161	58%
Sumatra	22,779	19,371	13,297	69%
Kalimantan	9,276	8,006	3,681	46%
Sulawesi	4,646	3,391	3,756	111%
Eastern Islands	4,963	3,956	5,344	135%
Total	66,862	53,817	37,239	69%

Source: Ministry of Health; D. Meneiaw, Final Report: TPC Best Management Practices and Proposed Remedial Actions, Safe Motherhood Project, 2000.



INDONESIA
YOGYAKARTA UPLAND AREA DEVELOPMENT PROJECT
(BANGUN DESA II)

Project Area

Landform Classes

Elevations in meters:

- 2900
- 1000
- 500
- 200
- 0

Landform Classes:

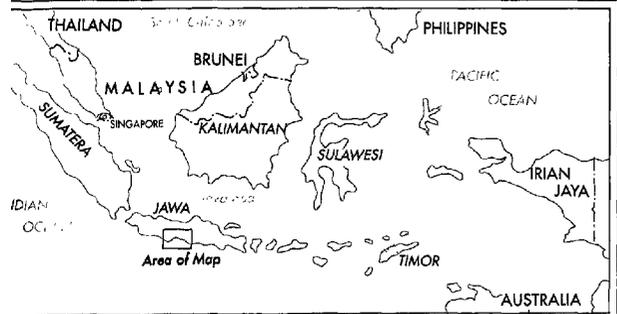
- I Wonosari Plains (1.5% slope)
- II Karst (Land of a thousand hills) >1.5% slope, internally drained
- III Unstable Uplands (>1.5% slope)
- IV Irrigated Rice Plains
- V Volcanic Soil Uplands (>1.5% slope)
- Va Volcanic Soil Dryland

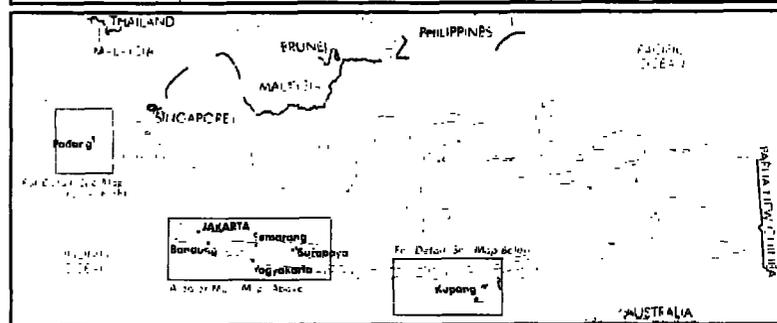
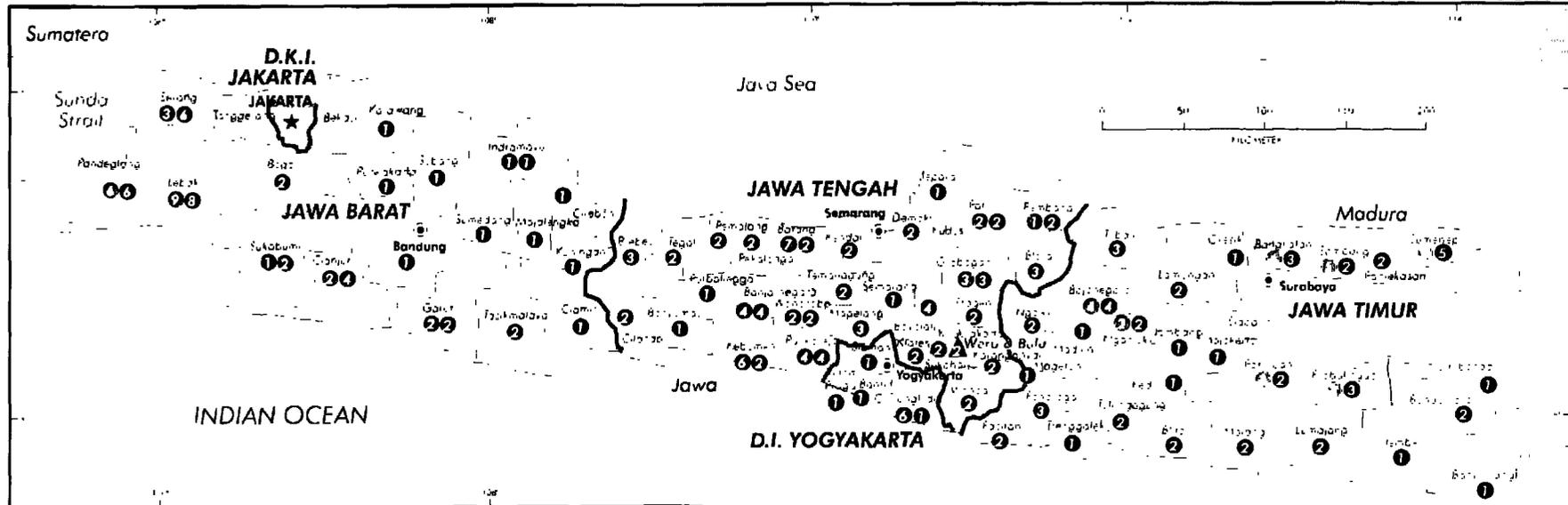
Legend:

- Isohyets in mm/yr
- Roads
- Railroads
- Subdistrict (Kecamatan) Boundaries
- District (Kabupaten) Boundaries
- Province Boundaries

Scale: 0 5 10 15 20 KILOMETERS

map has been prepared by The World Bank's staff exclusively for the convenience of the readers and is exclusively for the internal use of The World Bank and the International Finance Corporation. Representations used and the boundaries shown on this map do not imply, on the part of The World Bank and the International Finance Corporation, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

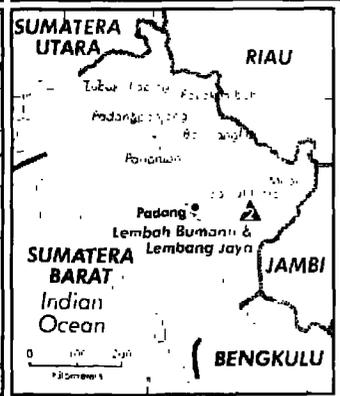
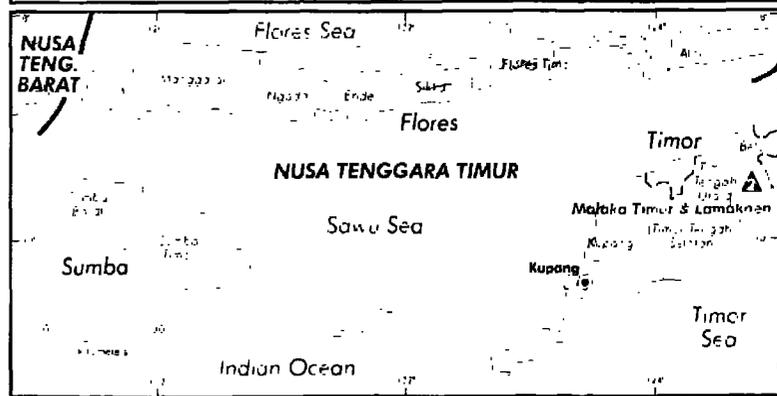




INDONESIA
VILLAGE INFRASTRUCTURE PROJECT COMPLETION REPORT

- ③ Number of Clusters, 1995, 1996 (One Cluster = 5 Villages)
- ③ Number of Clusters, 1996-1997 (One Cluster = 5 Villages)
- ▲ Pilot Keramatan (Subdistrict) Development Project Sites 1997-1998

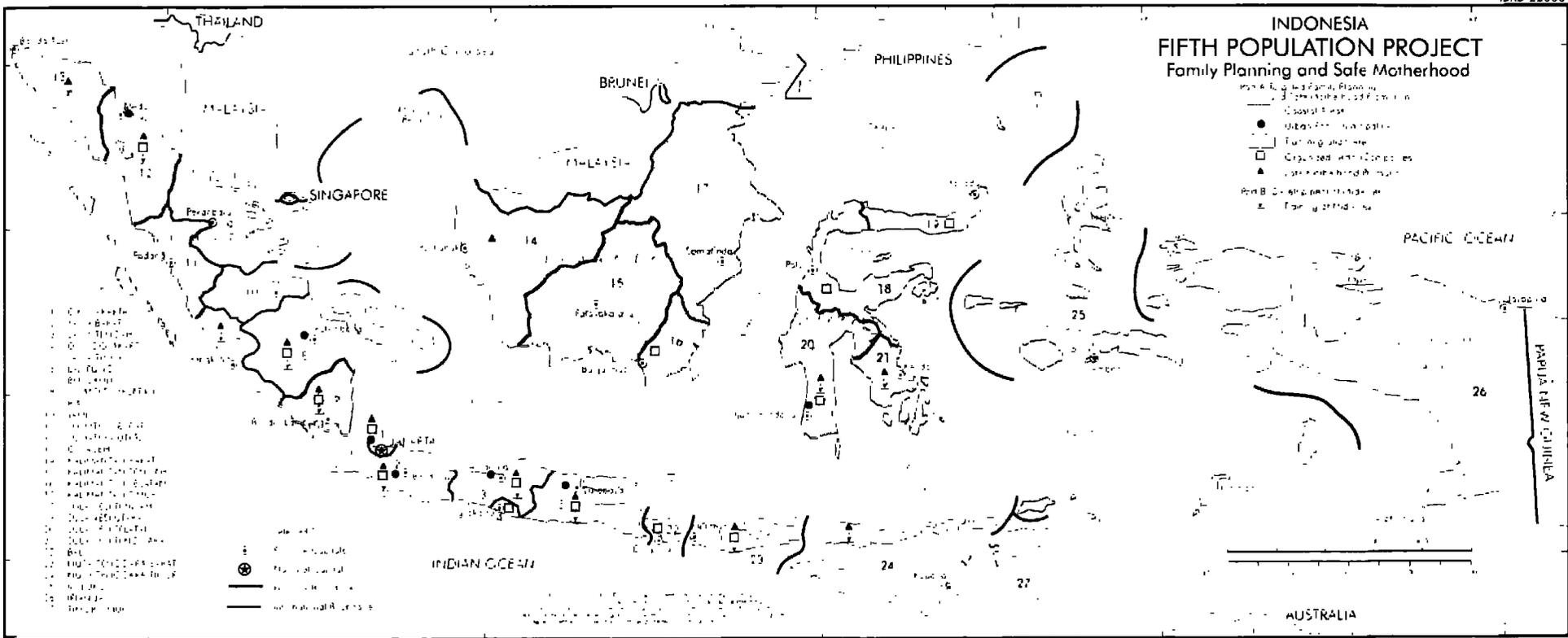
- Propinsi (Province) Capitals
- ★ National Capital
- Kabupaten (District) Boundaries
- Propinsi (Province) Boundaries (1998)
- International Boundaries



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INDONESIA FIFTH POPULATION PROJECT Family Planning and Safe Motherhood

- Part A - Family Planning Planning
- Training and/or demonstration
 - Organized with a Consultant
 - ▲ User oriented demonstration
- Part B - Safe Motherhood Planning
- Training and/or demonstration



1. Family Planning Planning
2. Family Planning Planning
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27. Family Planning Planning

- Training and/or demonstration
- Organized with a Consultant
- ▲ User oriented demonstration

