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PADAT KARYA GAYA BARU



EVALUATION 1977

JAKARTA, INDONESIA
December 1977

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CONTENTS

	<u>Page</u>
I. Introduction	1
II. PKGB Beneficiaries	1
III. The Two Faces of PKGB	2
IV. A Look at 1976-1977 Subprojects	3
V. Accomplishments	5
VI. Recommendations	6
 Appendices	
1. Beneficiaries and Benefits	8
2. Para-Technicians Training	20
3. 1976-77 Evaluation Methodology	26
4. Technical Descriptions (Separate Report)	

I. INTRODUCTION

This is the 1977 evaluation report of the Padat Karya Gaya Baru (PKGB), labor intensive rural works program, Department of Manpower, Ministry of Manpower, Transmigration and Cooperatives of the Government of Indonesia. Data have been collected from field interviews/observations and consultations with Government of Indonesia and USAID officials. The principal participants in the evaluation process have been 24 TAPs, or village development officers and staff of PKGB, Messrs. R. Joseph Bergquist and Louis L. Mitchell, former technical advisors to the Department of Manpower and Dr. F.E. Okada, consultant anthropologist to USAID.

The report has five foci.

- PKGB Beneficiaries
- The Two Faces of PKGB
- Thirty-four 1976-1977 PKGB subprojects
- PKGB Accomplishments
- Recommendations

II. PKGB Beneficiaries

Evaluation 1977 shows the PKGB Program is providing short term employment and increased incomes to the rural poor, and especially to the poorest.

In appraising subprojects in 34 kecamatans of the 1976-1977 Program, data collected and analyzed indicate that the subprojects directly benefited 17,000 workers and 55,000 members of their families. The added income ranged from a low of Rp. 3,000 (\$7) for a worker employed for 20 days at Rp.150 in Central Java, to Rp. 36,000 (\$87) in North Sulawesi, where a few men claimed to have worked 180 days at Rp. 200. With regional variations ignored, the average was about \$30. The additional income was spent on food and clothing and clearly assisted families in periods of unemployment when seen in the context of annual per capita income for these people.

Since the 34 kecamatans evaluated represented only 20% of the planned (non-emergency) 1976-1977 program, it is estimated that a total of 85,000 workers and 350,000 members of their families¹⁾ directly benefitted and received supplementary income. In addition to the direct beneficiaries, 1.6 million persons lived in 526 villages of the 34 kecamatans, which, extrapolated for the entire 1976-1977 program, would mean as many as 8 million persons lived in the 169 kecamatan which had PKGB subprojects. It is estimated that one-third or approximately 2.6 million people lived in villages which were directly affected by the

1) Each worker has an average family size of 4.15. See Appendix 1.

subprojects and therefore indirectly benefitted.

Information from 700 households indicated that the average annual per capita income of the workers, or direct beneficiaries, was lower than those indirectly benefiting, and workers owned and cultivated less land. The PKGB Program is reaching the poorest of the rural poor in terms of short term employment and supplementary income.

III. The Two Faces of PKGB

One of the primary advantages of PKGB type programs is that they can be implemented quickly to meet emergency situations. They can create rural employment in the wake of natural disasters or socio-economic dislocations in a region. In fact, PKGB, as with most of its sister programs in other countries, was originally created to provide relief during a period of food shortages.

For the past year, PKGB has assumed the emergency role again, while maintaining a more structured non-emergency side. It has taken on two faces: emergency relief and rural infrastructure development. One face is primarily to provide short term employment on basic maintenance activities and the other face attempts to select asset creating subprojects, design them according to quality standards, and construct them with skilled supervision. The emergency program will complete 452 emergency relief subprojects and the planned program 358 subprojects during 1977-1978. Last year the total was about 450 with 182 subprojects in the planned program. This massive expansion has been accomplished by reassigning local staff, decentralizing decision making, providing funds directly to the area and a budgetary increase of 400%, but with no increase in Central PKGB staff.

Most reports indicate that the emergency face is effectively achieving its purpose of providing increased short term employment opportunities and cash to needy people, and most of the maintenance work is needed. However, the massive expansion has constrained the implementation of program improvements approved after the 1976 evaluation report and seriously threatens to weaken the long term effectiveness of PKGB. The two faces can live side by side. They can be complementary, but only if greater attention is afforded the basic management improvements necessary to achieve high quality subprojects which maximize benefits. As noted in the following section, the 1976-1977 subprojects could not fully benefit from the 1976 approved changes and, in many cases, fell short of expected long-term benefits. If the subprojects in this year's program follow suit, it will demonstrate that emergency measures have prevailed over more deliberate planning and effective implementation. As stated in the 1976 evaluation and in numerous memoranda by advisors to the Department of Manpower, a hastily planned low quality program is destined to promote negative political reaction and be seen as a sop for the rural poor.

IV. A Look at 1976-1977 Subprojects

Subprojects in 34, or 20%, of the kecamatan affected by the 1976-1977 program were assessed by 24 field workers from the Directorate General of Manpower. Their methodology is briefly described in Appendix 3.

As documented in Appendix 4 and provided in tabular form below, six subprojects were started on schedule (out of 31 for which information was clear). Another five were started only one month late while the remainder took up to five months before work was begun. Because of a deadline imposed on any one subproject by the local agricultural cycle, the varying degrees of availability of local labor during the year, or seasonal changes (wet or dry), a delay constrained its full satisfactory completion. Poor execution of work and a lowering of construction standards often result from hurried work to meet a deadline or through the mobilization of a greater number of daily laborers than originally planned who, therefore, cannot be adequately supervised by existing staff.

A number of subprojects still require complementary structures to bring them into full operation. While it is true that these structures did not usually fall under the responsibility of PKGB, it is also true that delay did hinder, to an unknown extent, the supplementary and dovetailing efforts of other agencies. Delay also meant that employment was not optimized when it was most needed, and was the major cause of loss for 80% of young trees on two reforestation subprojects owing to their being planted in the wrong (dry) season.

The table below shows not only the number of subprojects which did or did not start on schedule but also how many were completed within the length of time estimated at the planning stage. It can be seen that those started on schedule tended to finish within the prescribed time; those delayed in starting still met the deadline for completion, but took less than the prescribed time and this curtailment of executing life evidently led to the results noted above.

No project took more than one month beyond its prescribed work life to complete. On the other hand, a total of 47 work-months less was taken by 17 subprojects, an average curtailment of 2.75 months each. Despite the possibility that the length of time needed to complete a subproject may have been initially over-estimated, the crucial importance of timely administrative support to start a subproject on schedule emerges clearly from the evaluation.

No. of subprojects	No. of subprojects taking less or more time prescribed for completion					
	Less by (mos):			Exact	More by	
	3+	2	1		1 mo.	
a) Started on schedule:	6	-	-	1	4	1
b) Started late by:						
1 mo.	5	1	-	2	1	1
2 mos.	3	3	-	1	1	3
3 mos.	3	4	-	1	2	1
4 mos.	3	1	-	-	1	1
5 mos.	1	-	-	1	-	-
c) Start unclear:	3	2	-	-	-	1
Totals	34	11	-	6	9	3

Note: 17 subprojects took a total of 47 work-months less than prescribed (av. 2.75 work-months).
 9 subprojects finished in the time prescribed.
 3 subprojects each took 1 work-month more.

Essentially, though all of the subprojects provided direct benefits in cash to the workers and a number were good to excellent in terms of spread benefits and construction (and a general improvement over 1975/76 was definitely noted in design and execution), their assessment indicated the same limitations as portrayed in the 1976 evaluation. This was particularly true where planning of, and funding for, maintenance was concerned and in the planning and execution of subprojects oriented toward the achievement of maximum beneficial spread effects. Actually, these limitations were not unexpected. The 1976 evaluation (based on 1975/76 subprojects) was promulgated and acted on after the present subprojects had been chosen and were under construction. The 1977 findings, however, demonstrate that full implementation of the 1976 recommendations are still required.

Six (13%) of the subprojects were considered to be poor. These included the two reforestation subprojects and four canals for irrigation and/or flood control. Though they all had some spread benefits, it was felt that they did not, or would not, realize the minimum expected beneficial spread effects, because of neglect or poor execution (survey, design, scheduling, workmanship) which could have been controlled by PKCB.

Similar faults, to a lesser degree, were found among the 10 sub-projects (30%) considered to be fair. Eighteen (52%) were rated good to excellent.

Economically, the benefits from 13 land improvement canal projects in the 34 kecamatans are estimated at Rp. 300 million in the first year from an investment of Rp.130 million (of which over Rp. 107 million constituted wages paid to direct beneficiaries). The potential benefits from road subprojects are indicated by estimated daily traffic increases of over 1,000 motorcycles, 50 trucks and 210 other motorized vehicles. Though actual benefits will fall short of full potential or projected targets on many subprojects because of the reasons given above, positive effects noted by the evaluation are given in Appendix 1.

V. Accomplishments by PKGB

In September 1975, when the first U.S. advisor arrived to provide technical assistance to PKCB, the outlook was dismal. Conditions precedent to the USAID loan had not been met, contractual arrangements for the advisors were incomplete, PKGB had no director and hadn't had one for many months, the program was viewed as irrelevant by many senior government officials except as an instrument to secure foreign exchange through the U.S. loan, the impact of the program was meager in size and accomplishment and the U.S. Mission had yet to determine the process by which it would monitor and approve subprojects for reimbursement.

By January 1976, the situation looked brighter as contractual agreements were made, if not implemented, PKGB had a new Director and there was improvement in the program's image among senior GOI and USAID officials.

An evaluation was contemplated, approved, implemented and completed by September 1976, which mobilized PKGB field and Central Office staff. An evaluation report was distributed in November, and, after numerous and lengthy meetings, on Christmas Eve, 1976, the Department of Manpower and National Planning Board (Bappenas) approved by policy every recommendation of the evaluation report. By late January 1977, an implementation schedule and budget for the recommendations were approved. Simultaneously, however, from late September onward, extraordinary pressures to respond to the effects of a drought in wide areas of the country turned attention to PKCB as a viable agency for emergency assistance. With what can only be described as the highest commitment to be responsive to the drought as well as institutionalizing the approved changes, the Director General, Director and staff of PKCB moved on both fronts. Hundreds of emergency subprojects were funded for relief, a survey to determine the poorest kecamatans was completed, instructions were issued to improve subproject selection, the cash incentive wage for PKGB workers was increased by 60%, advance funding for

subproject technical surveys and designs was sent to kecamatans in the 1977-1978 program, the most unique and probably most effective para-technician training program in any country was planned and implemented by the Department of Public Works for PKGB and 24 village development officers (TAPs) were trained to provide an evaluation core for PKGB management and completed the evaluation of 20% of the subprojects in the 1976-1977 program.

Finally, of the first 79 subprojects inspected in the 1977-1978 program, 73 are acceptable for USAID loan reimbursement. Generally, the subprojects are of higher quality and will provide greater long-term benefit to their areas than previous subprojects. Perhaps this is the most important achievement to date.

These accomplishments demonstrate a momentum, which if not deterred by emergency relief activities, will carry PKGB through this year and next as among the most promising and effective developmental programs for Repelita III, the Third Five Year Plan, 1979-1983.

VI. Recommendations

1. New Advisor

It is recommended that contractual arrangements and visa formalities be expedited for the new engineer and management advisor to PKGB.

2. Training

It is recommended that arrangements be made with the Department of Public Works to upgrade the para-technical skills of new and old TAPs by 1 May 1978.

3. Subproject Selection

It is recommended that a manual be prepared and courses for local officials conducted to improve the selection of asset creating subprojects. The manual should be complete and courses conducted by 1 November 1978.

4. Ahli Padat Karya

It is recommended that an evaluation team of 24 TAPs be established. Most can be drawn from the TAPs who evaluated the 1976-1977 program. They should be stationed at Central PKGB, receive further training, and begin evaluating the 1978-1979 program by 1 July 1978, and be titled Labor Intensive Rural Works Specialists.

5. Cash Incentive

It is recommended that new guidelines be issued for the cash incentive, permitting local officials to raise it officially for an adequate adjustment with the minimum average local daily wage.

6. PKGB Engineer

It is recommended that Central PKGB secure a full time staff engineer to review and monitor the technical designs/cost estimates now being submitted by the field.

7. Dimensions and Directions in Repelita III

It is recommended that field research be conducted to make recommendations for new PKGB directions in Repelita III as suggested by BAPPENAS.

8. Contract Team Services

It is recommended that the Department of Manpower consider the use of loan funds to contract outside assistance to accomplish Recommendation 2,3,4 and 7.

Appendix 1: Beneficiaries and Benefits

Definition of Beneficiaries

Beneficiaries were categorized into two broad groups for the sake of simplicity:

- (a) Direct beneficiaries, or the workers who were paid for their labor on the subproject and their families.
- (b) Indirect beneficiaries, or the population of the kecamatan in which the subproject was located.

It is recognized that several levels of beneficiaries exist and there are other direct beneficiaries besides the paid laborers. A case can be made for differentiating between actual workers on the subprojects on the one hand and, on the other, their dependent families. Similarly, a distinction can be made between a man who lives on the subproject road and one who lives 500 meters away, or between a village whose rice fields are irrigated by a canal and another, three or four kilometers away, whose rice fields are protected from flooding by the same canal. Further, there is the occasional man who takes advantage of drainage water to start a fishpond or the odd buffalo wallow.

Cash benefits from a road accrue to both the driver of a Colt (minibus) in Bali, who now runs a daily schedule servicing villages, and to his passenger who rides to market, by-passing the middleman, in order to get better prices for his produce. The road also benefits the woman in Central Java who has opened a small permanent general shop by the roadside; the woman in North Sumatra who operates a temporary stand only when her rambutan ripen; the woman in East Java who sells her water storage jars at Rp. 40 each instead of the former Rp.15 because buyers now come to her and the man in West Java who has decided to expand his sugarcane acreage because of better transport facilities to his outlet in Bogor.

A road affects all the villages, and their people, lying along its route and beyond on either side, and many roads, though lying principally in one kecamatan, skirt or even go through sections of another. Thus, short of an extended study in both time and space of each subproject on a case-by-case basis, the population of the subproject kecamatan were arbitrarily designated as indirect beneficiaries.

Estimated Number of Beneficiaries.

Direct Beneficiaries.

Since official reports are made on a man-day basis, it is difficult to

estimate the actual number of direct beneficiaries. A man (or, for that matter, sometimes a woman) might have worked sporadically for a total of ten, 20 or 30 days out of, say, 90 for a given subproject. Or he might have worked every day for the entire period. Moreover, a variable number of workers have shown up each day: 175 the first day, 450 the next, 225 the third, and so on. Each worker signs (or thumb prints) a daily work record and he is paid at fortnightly intervals for the number of days he put in during the preceding two weeks. To go through these daily records to determine the actual number of workers on a subproject is a well-nigh impossible task.

Based on statements by concerned officials, it appears that a minimum total of 17,530 workers was employed on the 34 subprojects, an average of 515 and a median of 400. The range per subproject is from 150 to 1,400. The mode is 300 (seven subprojects). The average daily attendance per subproject was estimated to be 294.

Since the average family size of the direct beneficiaries is 4.15 persons, it is estimated that they number 72,750, of whom 55,220 are dependents of the workers.

Indirect Beneficiaries

The 34 kecamatan under consideration had a total population of 1,681,000, making for an average of 49,500. The 25 kecamatan on Java ranged in population size from 23,700 to 36,900 with an average of 45,600. The range in the Outer Islands' kecamatan was greater, 21,100 to 101,600, and the average was 60,200.

Of the total 1,681,000 people approximately 33% lived in villages which were directly affected by the subprojects.

Economic level of the Beneficiary Villages

Official rating of the economic status of a village was available for 506 of the 526 villages which fell into the 34 kecamatan. Thirty-two percent (163 villages) were rated as being among the poorest with an official per capita income of less than Rp.12,000 (\$29) per annum.

This proportion of the poorest villages in the sample is believed to be higher than the national figure (which was not available). A spot check of three districts (kabupaten) in Central Java showed the poorest villages to be 4%, 12% and 15% of the respective totals.

Some Characteristics of the Beneficiaries

Annual Per Capita Income

It soon became evident that the official figures for per capita income were probably obsolescent and could not be taken as absolute for 1977. For one subproject in Java, where the official per capita income figure was Rp. 12,513 (\$30), 29 respondent households, by their own accounting, came up with a per capita figure of Rp. 24,413 (\$59). This was lower than the estimate for all households surveyed but even if it were doubled, on the assumption that respondents were less than forthcoming concerning income, it would still fall below the poverty line set at \$150 by the World Bank in 1974. USAID/Indonesia Program Office calculates the poverty line for 1976, taking into consideration inflationary and other factors, to be \$273 and the average rural Indonesian per capita income to be \$171.

Clear replies regarding income were given by 700 households (2973 individuals). Where possible, the replies were separated for direct and indirect beneficiaries. The results are provided in Table 1.

Table 1: Annual Per Capita Income of the Beneficiaries

Beneficiaries	n hh	n individ.	Per Capita	
			Rp.	\$
Direct	367	1514	36,264	87
Indirect	306	1356	43,921	106
Both types	700	2973	39,540	95

Extent of Land Cultivated By the Beneficiaries

Among 450 direct beneficiaries, those respondents who claimed to have no land to cultivate or did not answer the question amounted to 79 households or 17.5%. Among 349 indirect beneficiaries, they amounted to 43 or 12.2%.

In North Sulawesi, the cultivators especially among the indirect beneficiaries were cash crop farmers growing cloves (cengkeh) and their answers were given in number of trees rather than in amount of land owned. Leaving out such replies and converting rantai (chain),

a measure used in North Sumatra, into hectares, it can be seen in Table 2 that direct beneficiaries not only have lower per capita incomes but cultivate less land.

Table 2: Extent of Land Cultivated By the Beneficiaries

<u>Beneficiaries</u>	<u>% of hh claiming to cultivate land</u>	<u>Ha per head of land cultivators</u>	<u>Ha per head of all respondents</u>
Direct	32.5%	0.213 ha	0.135 ha
Indirect	37.3%	0.291 ha	0.250 ha

Family (household) Size

A significant difference arose between direct and indirect beneficiaries in the incidence of a single man living alone as a household unit. These amounted to 44 or 9.73% of direct beneficiary households and 13 or 3.72% of indirect. The vast majority of them were young, in their early 'twenties, and were either landless or with a small patch to cultivate. Their main source of income was labor in rice fields, cutting timber (North Sumatra), crewing fishing boats (South Sulawesi), picking cloves (North Sulawesi), and picking up odd jobs. Their presence reduces the average family size of direct beneficiaries to 4.15 persons and of the indirect beneficiaries to 4.37.

Elimination of these single households makes family size virtually even; 4.43 (direct) and 4.50 (indirect).

The predominant family composition was that of a young couple with two children and possibly a third or an elderly parent. In almost every instance both the man and wife worked as did most children over 13 or 14 years of age. Unless the extent of land cultivated was large (in which case the whole family would work on it), the woman worked on the land while the man sought laboring jobs. There were some reversals where the man worked the land and the woman ran a small stall or business.

Summary of Beneficiaries

The beneficiaries can definitely be defined as the rural poor and the direct beneficiaries (workers on the subprojects) are among the poorest in terms of per capita income and extent of land cultivated. The presence of single men living alone (almost 10% among direct beneficiaries) limits the spread of direct benefits to some extent.

BenefitsCash Incentive

Because of the difficulty in estimating the exact number of workers on the subprojects and the length of time worked, it was also difficult to estimate their cash earnings in specific terms. For 22 subprojects the daily wage was Rp. 150 (36 cents) and for the remaining twelve the rate was Rp. 200 (48 cents). But whichever the sum, it constituted, depending on area, from 40% to 100% of the minimum prevailing daily wage in that area for unskilled labor. This is shown in the following table.

Table 3: PKGB Daily Wage as a Percent of Minimum
Prevailing Wages By Geographical Area

Area	No. of kec.	Prev. daily wage (Rp.) Seasonal range*		PKGB rate (RP)	PKGB as % of Min.
		Min.	Max.		
Java exc. W. Java	13	150	750	150	100
Bali and NTB	2	150	300	150	100
W. Java	7	300	750	200	66
Sumatra	4	300	1,000	200	66
S. Sulawesi	2	300	750	150	50
N. Sulawesi	1	500	2,000	200	40

*Wage information based on interviews with local officials.

Assuming a labor force of 17,530 on the 34 subprojects and a reported expenditure of Rp. 260.02 million in wages (94% of the authorized expenditure for cash incentive), each worker would have received Rp. 14,800 (\$36).

Taking into account, however, the variation in daily rate of pay and the great variation in length of time worked on a subproject (sometimes only for four or five days), it is clear that the range in total wages earned is wide. Since the vast majority of 450 workers interviewed put

in at least 20 days, it may run from a maximum low of Rp. 3,000 (\$7) on a subproject in Central Java at Rp. 150/day, to a high of Rp.36,000 (\$87) in Sumatra and North Sulawesi where a number of men claimed to have worked 180 days at Rp. 200/day. In East Java, where similar claims were made, the maximum at Rp.150/day would be Rp. 27,000 (\$65).

Despite some vague replies, it is estimated that these same respondents averaged 30 days on the job. Thus, at Rp.150/day, the average sum earned is Rp. 12,000 (\$29) and at Rp.200/day, Rp.16,000 (\$38.50).

Whatever the sum, it was spent on only two items: food and clothing, with greater emphasis on the former. And whatever the sum it helped rural households through periods of seasonal unemployment and under-employment and gave the marginal farmer an edge on survival. Even the relatively small sum of Rp.3,000 would buy a month's rice (20 kg) for a man in rural Central Java.

Benefits from Canals

There were 13 canal subprojects for irrigation and/or flood control, totalling 93.5 km, directly and positively affecting an estimated 1,300 ha of cultivated or cultivable land. At least 75 ha of fishponds were created or improved. Flooding was controlled on another 1,600 ha in surrounding areas. If all canal subprojects were brought into full operation, extended slightly or improved, another 3,000 ha would probably benefit. Thus, despite undeniable benefits, this evaluation is critical of the fact that the full long-term potential of several subprojects was not realized.

Because of the variety of benefits, a few illustrative examples are given below. A canal, when it functions well and depending on the area, can permit two crops of rice a year or even five crops in two years. A hectare of land can produce from one to three tons of rice per harvest. With an adequate and controlled supply of water, yield per hectare can increase as much as a ton, though the general rule is in the neighborhood of 500 kg. The rise in agricultural production resulting from canals is provided in Table 4 by kecamatan and in terms of gross cash income. It would appear that despite results which fell short of expectation, or even failures, the Rp.130 millions invested in canals (of which 83% was paid as wages to direct beneficiaries) are easily recoverable in twelve months through increased agricultural production. Moreover, judging by the small size of average landholding per household in the affected areas, at least one household per hectare (and possibly two or more) directly benefitted from increased production where it occurred.

Table 4: Gross Agricultural Income By Kecamatan of Areas Directly Affected By Canals Before and After the Subprojects*

Sub-project	Crop	Before (Rp.million)	After (Rp.million)	Remarks
A2	Padi	60.2	66.6**	Flooding hindered full benefits in 250 out of 300 ha.
	Kedele	nil	2.6**	
B3	Padi	13.4	17.6	Landslide blocking canal permitted partial benefit to only 30 ha.
G4	Padi	15.1	25.9	Double crop on 150 ha.
D6	Padi	3.7	17.3	Padi acreage increased from 70 to 130 ha.
D10	Padi	33.7	93.4	Cropping pattern changed from double ubi jalar and single padi to single ubi jalar and double padi on 120 ha (with increase of 1 ton/ha for padi).
	Ubi Jalar	3.3	2.7	
D11	Kol	13.3	23.0	Cultivated acreage (at least 235 ha) remains unchanged but production per ha increased.
	Kentang	35.7	44.1	
	Jagung	31.5	54.0	
E12		n/a	n/a	System not functioning.
E18	Padi	96.0	280.0**	Yield increased by 0.5 ton/ha and acreage from 300 to 400 ha.
G25	Padi	2.1	3.2	No real benefits to padi but 50 ha of fishponds created.
	Ikan	nil	13.3**	
G26	Padi	23.2	41.4	Padi yield increased (single crop) and Kedele acreage doubled on 163 ha
	Kedele	9.7	21.1	
G27	Padi	6.4	6.9	Kedele added as new crop on 20 ha.
	Kedele	nil	2.4	
G29	Padi	13.9	37.7**	Double crop of padi expected but system not tested yet for flood control.
	Kacang ijo	1.5	1.5**	
J32	Padi	73.9	n/a	Canal recently completed and not functioning yet.

* No weighting has been given for inflation

** Probable projection rather than actual figure.

Indirect Benefits of Canals

Some indirect benefits are listed below, the ultimate spread effects of which are hard to estimate or quantify.

- a) A canal which directly irrigates 65 ha of land prevents the flooding, through water dispersal and diversion, of some 900 ha of land downstream (the land of five villages, including one in another kecamatan).
- b) A canal is used as a highway by small boats in the rainy season when roads are mired. Goods are carried to and from the market town.
- c) Because water is now channelled under a road it remains useable in the rainy season and links villages in one quarter of the kecamatan to the market town and administrative center. The channel also serves to protect a railway line which is laid on slightly higher ground.
- d) Water from canals is used for domestic purposes (bathing and laundry).
- e) There is evidence that agricultural employment rose because of changes in the cropping pattern and the addition of new acreage, from 1.4 million man-days to 2.3 million, an increase of 60%.

Two Examples of Potential Benefits of Canals

- a) A canal (B3) in W. Sumatra partially irrigates only 30 ha because a landslide has blocked the channel. With realignment of the canal (an expensive proposition), and the building of a flume (another expensive proposition) as planned by kabupaten officials, a further 450 ha of rice land would come under double crop production, which was the given objective of the subproject.
- b) Apparently because of poor planning and desultory work, a canal (D6) in W. Java only affects 130 ha of the 540 ha target.

Benefits from Reservoir (1 subproject)

The water of this reservoir (50 m x 50 m x 3 m) was used principally for drinking, cooking and other domestic usage rather than for irrigation. There was not enough for both purposes. An unknown number of households (totalling about 9,000 people) now get some 40 liters a day each, a rise from the 3,000 people formerly serviced. The benefit to health resulting from the use of relatively clean drinking water is unknown, though the

people claim it has occurred.

Benefits from Reforestation (2 Subprojects)

Both reforestation projects had little to recommend them except for the direct cash benefit to laborers (some 1,100 at Rp.150/day) and the physical terracing which for the present conserves 350 ha of land. Because of bad timing in regard to the onset of the rains, over 80% of the young plants and seedlings have died at each subproject. This figure includes an unknown number of defective plants delivered to the sites and those uprooted by impatient land owners in favor of a quicker growing crop (e.g., cassava).

Benefits from Roads

The 13 roads subprojects, because of the forking of some roads or because some subprojects consisted of two separate units, have been evaluated as 23 separate entities. They total 127 km.

An indicator of benefits is the increase in traffic. All roads were open to foot traffic before the subprojects (even new roads tended to follow the general course of narrow foot trails) and most to bicycles; thus the number of roads now open to motorized vehicles has been used as an indicator.

Table 5: Number of Roads Open to Motorized Vehicles Before and After the Subprojects

Vehicle Type	Number of roads open	
	Before	After
Motorcycle	3	23*
Truck	1	11**
Other (van, jeep, minibus, etc.)	2	12

* It should be noted that one road is not fully utilized because of a narrow bridge near one end which precludes all heavy or motorized vehicles, except motorcycles, from using a large portion of it.

** Trucks are prohibited on one road in order to save the road surface.

A rise has also occurred in the daily incidence of motorized traffic on all useable roads, namely:

Motorcycles from 210 to 1,340 (i.e. from 26 per road to 58 on the average)
Trucks from 4 to 60 (i.e. from 4 per road to 5.5 on the average).
Others from 20 to 230 (i.e. from 10 per road to 19 on the average).

In addition, on one road there is a weekly truck service to transport livestock, primarily cattle, from the villages to the market town (and on to Surabaya). On at least four others, a minibus (Colt) makes regularly scheduled daily round-trips two or three times a week. These Colts, both scheduled and non-scheduled, transport not only passengers but materials and produce. The effect of these services on remote villages is difficult to quantify, especially with the added factor of regularity of service which induces and aids planning among the villages.

Some Benefits Accruing from the Road Subprojects

Some benefits are listed below as illustrative of the spread effect of roads in the rural areas.

- a) Closer administrative contact with Government. Many of the motorcycles and jeeps are used by officials who can now increase the number of their official rounds and maintain regularity of visits.
- b) The opening of new business along the roads, mostly small shops, coffee houses and stalls.
- c) The easier movement of goods and people from village to village and to the market town (and vice versa).
- d) The carrying of their produce (fruit, cloves, kapok, etc.) by outlying villagers to a collecting point on the road rather than their trudging all the way to the market. In some villages production of vegetables and fruits have risen to some degree because of the impetus given sales by easier transport.
- e) Similarly, because of accessibility to market and a rising demand, the price farmers received for pineapples increased from Rp.50 to Rp. 200 in at least two villages in W. Java. In two villages in E. Java, women's income has risen from Rp.75/day to Rp.200/day because of the rising demand for their water storage jars. Each jar used to sell for Rp.15 and the present price is Rp. 40. A woman can make five a day, which is being done because buyers now come to the villages. (Her husband, in addition to his work, fires the jars).

- f) Access to secondary schools (not found in most villages) by children because improved roads permit the easier use of bicycles which shorten the time they have to travel.
- g. In at least two kecamatan, nurses now visit their very sick patients by using motorized vehicles. In the past these patients were carried on litters to the health center.

Miscellaneous Benefits

All subprojects have had a variety of spread effects and there are probably more which are not immediately apparent. Some of the qualitative results are:

- a) Local initiative and local cooperation have been strengthened. Of the 34 subprojects, initiative was taken on the following levels; (in the last analysis, of course, the villagers become involved as do higher level officials and personnel of Government technical departments).

Village level (headman, people, village social development organization such as LSD)	23
Village and subdistrict (the headman and the Camat)	4
Subdistrict (the Camat)	4
Subdistrict and district (the Camat and the bupati)	1
Province (BAPPEDA)	1
Other (The Army)	1

- b) Concomitant with local involvement is the desire expressed by many officials at the village and subdistrict levels for more active participation in future subproject planning, including selection of location.
- c) Each subproject has induced cooperation among the inhabitants and officials of several villages.
- d) Each subproject has led to either actual subsidiary or complementary projects or to plans for such. Its role as a catalyst for further planning on the local level is clear and positive.
- e) Several comments were made, especially in regard to canal projects, that the villagers were no longer at the mercy of the weather, i.e., a feeling that the environment can be controlled.
- f) Several comments were made, especially in regard to roads, that the villagers were no longer at the mercy of the middleman.

- g) Several officials and supervisors commented that experience gained on these subprojects has made them feel more confident in technical matters and that they realize now what responsibility means.
- h) Experience gained on these subprojects has made some laborers more employable. A number of them have found private employment on secondary or tertiary canal projects particularly in dealing with simple technical aspects, such as construction of a watergate or a culvert, strengthening of embankments, drainage, buttressing, and so on.

Conclusions

1. The PKCB Project directly benefits the rural poor and is playing an increasingly significant role in rural development. As such, it deserves strong and serious support.
2. The spread effects of subprojects are wide and positive. They are difficult to determine in the short run, particularly in their qualitative aspects. Because of these spread effects, however, future subprojects should be selected in type and location with more consideration given than heretofore to possible long-term socio-economic benefits.
3. Similarly, in order to ensure every possible benefit, long-term or short-term, subprojects require better planning, administrative support, scheduling, execution and maintenance.
4. Subprojects induce local cooperation; they serve as catalysts for further activities in their respective areas; and they also directly involve people with Government. These trends need active encouragement through means devised to strengthen public participation in and identification with the subprojects, whether in their planning, execution and maintenance, or in the activation of further supplementary schemes based on local or individual initiative.
5. Rehabilitation subprojects cause the least disruption to the people because the social and cultural problems they initially posed have been dissipated, accepted or forgotten.

INTRODUCTION

The following report was prepared by R.J. Bergquist on November 4, 1977 and is a review of the Construction Training Workshops held on three consecutive weeks from July 25 to August 12, 1977. This report presents the results of the training development and teaching effort and includes the average exam scores for each training center and a list of participants' suggestions. A brief section on cost breakdown is used for the benefit/cost ratio discussion and is followed by conclusions and recommendations. The recommendations are based on the partial results of the training session.

In order to assess the resulting benefits of the training (cost and time spent) and make valid recommendations for a continuing training scheme, the result of the trainees fieldwork is required. Therefore, the major recommendation is to evaluate the fieldwork. The review of the 350 IFY 1977/78 subprojects for reimbursement purposes will be the opportune time to carry out this evaluation and efforts must be made now to ensure that this evaluation is done.

CONSTRUCTION TRAINING WORKSHOPS

The evaluation report on the 1975-1976 program recommended a series of training programs, including construction training workshops, where the construction supervisors, the TAPs, could become acquainted with rural works' construction methods.

The development of this concept started in January, 1977, in time for the proposed training period in March. Through a series of postponements and other restrictions the training was delayed until July 25, 1977. This allowed for refinements to be made to the training proposal resulting in a final proposal containing a plan for a joint effort between the PUTL and PKGB. This union had two positive results: (1) it allowed the department primarily responsible for designs to instruct the design users, and (2) it permitted flexibility for holding the training in five centers at the same time.

The final proposal called for regular PUTL engineers to become acquainted with the PKGB program in a seminar at Yogyakarta. Afterwards, they would instruct the 350 or more selected participants in five separate locations. (See Buku Petunjuk Lokakarya Kursus Perencanaan/Pengawasan Konstruksi Fisik Proyek Padat Karya Gaya Baru Tgl. 4/7 May 1977 for more details about the seminar).

The plan was implemented on May 4 with the Yogyakarta seminar. Following this seminar but before the workshops started, a period was spent developing demonstration kits for the instructors by PKGB Pusat. The training workshops were then begun in five locations on July 25. Each location had an average of 3 PUTL engineer instructors, plus others from PKGB and PUTL staff as assistant instructors, teaching 30-34 participants. Each session lasted five days with an examination administered on the last day. The three centers on Java had three consecutive groups each, while those at other locations had only two.

Since the training workshops were held as planned without any major difficulty, the program can qualify as a successful administrative effort. The costs for the seminar, construction manual development and demonstration kits are included in the total cost to determine a maximum for each participant trained. The final evaluation on the success of transferring useful knowledge can only be done after the TAPs' fieldwork has been reviewed.

Goal:

The training was designed to develop construction supervisors who would have an understanding of what a design was and how to use it during the construction stage. The goal was partially fulfilled based on the evidence of test results obtained during the workshops.

Constraints:

The PKGB program has a relatively low budget per subproject. The training program had a small working budget and few qualified instructors. As a result, the training program was scheduled so that each participant could spend one week under intensive practical training. The concept was refined towards acquainting the participant with what constitutes a design, how to use a design during construction and what construction standards are.

The majority of the participants and instructors suggested the training time be lengthened to one month or longer. This decision should await the pending evaluation of the trainees' fieldwork. If the results are favorable for a one or two-week brief training period, then money and time will be saved.

Cost:

The cost of the entire training cycle is provided in Attachment A1. The calculations show that the total cost per participant is Rp. 53,210. This cost is high, but if training is continued with PUTL instructors, manual and seminar methods, initial costs can be depreciated over the years, while future costs will decrease.

Results:

The results of the workshop training are summarized as test score averages for each center and group (Attachment A2).

The total average for 433 participants was 64 points out of 100. The highest was 91, with the lowest being 35. As expected, the third (and last) group had higher averages. This was attributed to the instructors' gaining a clearer concept of the teaching material through repetitive use.

A more detailed review of individual test sheets and individual field work is listed as the major recommendation.

Observations from classroom sessions

- The performance of participants varied according to their experience. Those with two or more years of experience had scores higher than those with none. Those with no experience had difficulty grasping the concepts. Thus a short training period should be of benefit to both groups. For the experienced, it will serve as a review session. For the others, it will be an initial introduction to the concepts preparatory to additional training. This recommendation is based entirely on test results, not field observations.
- The demonstration kits were not as successful as expected because of the lack of time for instructors to understand their use. A two-week period between receiving the kits and actual use could be spent in demonstrating their function to the instructors.

The instructors basically were good and for the most part knew the material being taught. The major fault was their tendency to lecture too long, thus falling behind schedule and leaving part of the one-week training course uncompleted. This led to the feeling that two weeks would serve the training purpose better.

The NUTE involvement was beneficial. A yearly RIF and commitment to use the NUTE engineers as instructors is recommended.

Participants' Suggestions:Construction manual

- Vocabulary should be as non-technical as possible.
- A list of building materials should accompany drawings.
- The manual must be used along with the lessons.

- English terms should be translated into Indonesian terms.
- Village level technical explanations would be useful.
- Simple practice sessions with exercises and pictures would be beneficial.

Workshops:

- Demonstration kits should be prepared for participants
- More practice sessions are required
- Only basic technology should be taught in the workshops
- Slides should be presented with prepared comments to match the lessons
- More details on earthwork methods and calculations would be beneficial

Instructors:

- The instructors must prepare each lesson more completely
- Instructors should give priority to the more important items if time is short
- Instructors must use a time schedule to maintain unity in material presented
- More simple explanations are helpful
- More review of old lessons before starting new material
- Manual should be explained

Recommendations and Conclusions:

The conclusion derived from a partial assessment based on workshop training is that it was a success. The pending full evaluation should back this view.

Recommendations include:

- The field work should be evaluated and correlated with individual test results. This should take place during the 1977/78 program construction period.
- Additional training should be scheduled for the 1978/79 program construction supervisors using the same material and centers, but each lasting two weeks.
- The PUTL must be included in all training endeavors as long as PKGB is without a training center.
- Evaluation results should be applied in refining the training materials, construction manual and demonstration kits.
- A new seminar should be held to acquaint the instructors with new material and methods.

Cost of Training One Participant

<u>Items</u>	<u>Expense</u>
Seminar at Yogyakarta	Rp. 5.952.506,-
Manual and other items as instructor kits	Rp. 1.595.445,--
Cost of training center, instructors and other items at the five centers	Rp. 15.757.930,--
	<hr/>
Subtotal	Rp. 23.305.931,--
divided by 438 participants or	Rp. 53.209,88 \$128.00/participant

Test Score Averages

Possible 100 points

	Group I		Group II		Group III	
<u>Medan</u>						
Participants	36		32		N.A.	
Median		57		60		-
Average		57		61		-
<u>Surabaya</u>						
Participants	35		32		34	
Median		64		64		71
Average		64		64		70
<u>Semarang</u>						
Participants	32		37		38	
Median		64		66		66
Average		65		65		66
<u>Bandung</u>						
Participants	31		32		36	
Median		50		55		73
Average		50		54		74
<u>U.P.</u>						
Participants	31		32		N.A.	
Median		57		62		-
Average		53		61		-
<u>Subtotals</u>						
Participants	165		165		108	
Median		61		62		70
Average		59		61		70

Total - 438 participants

Average for total - 64

1976-77 Evaluation Methodology

Under the Padat Karya Gaya Baru Project (PKGB) of the Department of Manpower, a total of 182 small rural works subprojects was carried out in the year 1976-77. These subprojects were located in 169 kecamatan (subdistricts) dispersed over eleven provinces.

For the purpose of evaluating these subprojects, not only in technical and engineering terms but also to delineate broadly the characteristics of the beneficiaries, estimate their numbers, and identify types of benefits, 34 subprojects (a 20% representation of the relevant kecamatan) were selected under a stratified sampling plan. They were surveyed by twelve teams of two TAPs each (Tenaga Ahli Pedesaan) who were brought to Jakarta from the field and given five days' orientation/training in the use of evaluation instruments. They completed the field surveys by 24 Oct 77 and preliminary tabulations of the data by 1 Nov.

Under the stratified sampling plan, the 34 subprojects represented in terms of percentages those found in the total number of kecamatan both in geographical distribution and in type of subprojects (See Table 1 below).

Each field team evaluated at least two subprojects each and most did three. They not only prepared technical drawings of the subprojects, but prepared sketch maps of the relevant kecamatan which located the subprojects in relation to villages and administrative centers and attendant markets, schools, banks, mosques, health centers, main roads and railway lines (where present), and main physical features including padi-fields and cash crop plantations.

For technical, administrative and financial matters, interviews, using personal interview questionnaires, were scheduled with some six to eight officials at the provincial, kabupaten (district) and kecamatan levels. Additionally a target was set, per subproject, of one supervisor (also a TAP), a maximum of three heads (lurah) of villages directly affected by the subproject, 14 workers on the subproject (pekerja proyek) and 14 members of the general public (masyarakat umum). These last groups, in the main, provided socio-economic data. The workers were defined as direct beneficiaries and the members of the general public, since they lived in the same villages as the workers, were considered to be indirect beneficiaries. In the event, respondents representing 327 beneficiary households were interviewed and, of them, 450 were classified as direct, 349 as indirect. The remaining 20 could not be classified but data from them have been used in instances where distinction was not relevant.

Table 1: Distribution of PKGB Subprojects By Province (1976-77)

Province	Total No. of sub-projects and %	No. in sample and %	No. in sample by type		
			Road	Canal	Reforest.
N. Sumatra	11 (6.5)	2 (5.9)	1	1	-
W. Sumatra	4 (2.4)	1 (2.9)	-	1	-
Lampung	5 (3.0)	1 (2.9)	-	1	-
W. Java	39 (23.0)	7 (20.6)	4	3	-
C. Java	39 (23.0)	3 (23.5)	3	3	2
D.I. Yogya	5 (3.0)	1 (2.9)	1	-	-
E. Java	46 (27.0)	9 (26.5)	5	4	-
Bali	4 (2.4)	1 (2.9)	1	-	-
NTB	4 (2.4)	1 (2.9)	1	-	-
S. Sulawesi	9 (5.3)	2 (5.9)	1	1	-
N. Sulawesi	3 (2.0)	1 (2.9)	1	-	-
	169 (100.0)	34 (99.8)	18	14*	2
% by type in:			%		
Sample kecamatan	n = 34		53.0	41.0	6.0
Total kecamatan	n = 169		56.0	38.5	5.5

*One is primarily a reservoir subproject

Padat Karya Gaya Baru

Evaluation 1977

Appendix 4

Technical Descriptions

of the

Subprojects

Jakarta, Indonesia
December, 1977

Item	DUIP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.1	Rp. 9.4
Mandays	Labor - 38132 Skilled 934	35463 872
C.I.	Rp. 8.0	Rp. 7.5
Materials	Rp.1.326	Rp. 1.826
Description	Road widened and rehab. Length - 3.1 km Width - 5.0 m Height - 0.5 m Earth surface, dry season road.	Widening and building up road with soil. Length - 3.0 km Width - \pm 5-6 m Height - \pm 1.3 m
Schedule	8 months	4 months: Aug - Nov.
Optimum time for PKGB	-	April thru Oct.

Number of officials interviewed	8
Number of workers interviewed	15
Number from general public interviewed	15
Length of time subproject needed	More than 5 years
Person(s) who took initiative for subproject	Village head and other local leaders
Person(s) who made designs	DPU
Maintenance plan and budget	None; or self help
Number of other directly related subprojects needed	1
Number of other subprojects needed in kecamatan	2
Distance workers travelled to subproject	2-5 km
Possible percentage of workers from same family	10%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP stated the area of production would increase and 5000 people would be directly benefited by the road.

The evaluation showed beneficial traffic increases. Previously, the pathway could only be used by bicycles and pedestrians. Now light trucks can use the road to haul produce.

The main part of the rehabilitated road connects two major roads giving access to a previously locked-in area.

Comments: The road is finished with a dry weather surface. Additional efforts should be made to rock or asphalt the surface. The road has shown initial benefits and an all-weather road would magnify those benefits. Construction was satisfactory.

Again, as with all PKGB subprojects, there is no maintenance plan. The Bupati should budget funds for this work.

Local residents have already made use of the road by improving the access to their land with log culverts between the road and their driveways. The project is popular except among those few who lost land to road construction without compensation.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.1	Rp. 9.8
Mandays	40238	39300
C.I.	Rp. 8.05	Rp. 7.86
Materials	Rp. 1.95	Rp. 1.9
Description	11.5 km rehab. drainage canal. Average width 8 m. depth 2 m.	14.25 km rehab. drainage canal. Average width 6 m, depth 2 m.
Schedule	± 7 months	3 months: Aug - Oct
Optimum time for PKGB	-	April thru Sept.

Number of officials interviewed	7
Number of workers interviewed	15
Number from general public interviewed	15
Length of time subproject needed	5 yrs
Person(s) who took initiative for subproject	Village head
Person(s) who made designs	DFU
Maintenance plan and budget	Self-help
Number of other directly related subprojects needed	1 maintenance
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 km
Possible percentage of workers from same family	7.5%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP predicted that excess water would be removed from 300 ha of rice fields. Production would increase and other cropping patterns would develop..

However, the canal does not function properly; there is still flooding and no additional benefits accruing except partially on 50 ha. The canal is without control gates so the water level in the channel dictates the water level on the fields.

Comments: The idea of flood protection and drainage ditch near the coast is commendatory. The design should have provided control gates in order to have an effective system. The rehabilitation was done effectively; even this year, self-help efforts are repairing the damage with solidly constructed dikes. But to avoid damage in the future, as caused by this year's very heavy rain, control gates to the fields must be provided or the rain waters will wash out the dikes after flooding again.

The project needs maintenance and further funding of necessary structures. People in the area feel the government should provide maintenance as was done during the colonial period. At the moment there is no budget or plan for maintenance.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total Cost	Rp. 10.1	Rp. 9.4
Mandays	Labour 40906 Skill 2130	38451 200
C.I.	Rp. 9.033	Rp. 8.7
Materials	Rp. .693	Rp. .69
Description	2.5 km rehab. canal connected to a 2.5 km newly constructed canal width and depth \pm 1 m.	3.2 km of rehab. canal added to an attempted 3.3 km of new canal construction with 9 flumes (\pm 130 m)
Schedule	5 months	6 months (July - Nov.)
Optimum time for PKGB	-	April - Sept.

Number of officials interviewed	8
Number of workers interviewed	15
Number from general public interviewed	15
Length of time subproject needed	20 years
Person(s) who took initiative for subproject	Village head/village people
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	1 - To finish existing project with new flume work.
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	0 - 1.5 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP expectations were based on a completed project providing water to 450 ha of newly opened rice field and to 30 ha existing near the rehabilitated part of the canal.

The canal is not functioning and the benefits are almost zero. Except for the short term employment, and the partial irrigation of 30 ha, this project has done little for the area.

Comments: The local officials blame part of the damage on an earthquake. Yet other parts of the damaged canal would still hamper the use of this canal even if the earthquake had never occurred. The construction was badly executed and the design was based on a poor survey. No soil information was used so the sandy areas were not protected, and the first rain caused landslides to wash away the new canal.

It would be best to redo the project with adequate funds for flume or pipe work construction. The area should be resurveyed and a workable design produced for the construction of a worthy project.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.3
Mandays	38374	34000
C.I.	Rp. 7.7	Rp. 6.8
Materials	Rp. 2.2	Rp. 2.2
Description	Dam length 24 m, 10 m wide, 4 m high. Canals - (1) 1400 m by 4.5 m by 2.0 m (2) 3000 m by 2 m by 1.75 m	New dam and canal works with dimensions of dam - 24 m by 10 m by 4 m. Canals - (1) 1400 m by 4.5 m by 2.0 m (2) 3000 m by 2 m by 1.75 m
Schedule	June 1976 - Feb. 1977	July 1976 - Feb. 1977
Optimum time for PKGB	-	April - Sept.
Number of officials interviewed		9
Number of workers interviewed		14
Number from general public interviewed		14
Length of time subproject needed		10 yrs
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		None
Number of other subprojects needed in kecamatan		None
Distance workers travelled to subproject		2 km
Possible percentage of workers from same family		%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP shows approximately 5500 people receiving benefits from this project.

The evaluation showed this estimate for beneficiaries to be accurate and found 150 ha being irrigated with enough water to grow two rice crops. An increase in production from Rp. 15 million before the project to Rp. 26 million after the project was noted.

Comments: The construction of the weir and resulting canals was adequate for an operational project. Minor faults such as slopes and crown work have not ruined the project even after one year. The project returns should continue for five or more years.

Maintenance is a problem, large portions are already overgrown with water plants. The active system could be improved with control gates and concrete control drops. At the moment there is no direct budget or proposed plans for maintenance.

The evaluation shows this project to be effective both during construction and afterwards. The construction was sound and local interest strong.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	37360	38000
C.I.	Rp. 7.512	Rp. 7.6
Materials	Rp. 1.11	Rp. .9
Description	3.3 km x 4 m wide rocked surface rehab. road through 3 villages with 15 culverts	3.3 km x 4 m wide rocked surface rehab. road through 3 village with 13 culverts.
Schedule	June 1976 - March 1977	Sept. 1976 - Feb. 1977
Optimum time for PKGB	-	May - Oct.

Number of officials interviewed	8
Number of workers interviewed	12
Number from general public interviewed	12
Length of time subproject needed	20 yrs
Person(s) who took initiative for subproject	Local leaders/Village Soc. Dev. Org. (LSD)
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	Continuation of this one to more villages.
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 - 2 km
Possible percentage of workers from same family	20%
Tools provided	None

Benefits expected and comments:

Benefits: The DURP shows \pm 12,000 people benefiting from a rock-surface rehabilitated road passing through three villages. The estimated increase of traffic would deserve a fully surfaced road.

The evaluation showed the traffic did increase but not to the extent expected because of an uncompleted bridge. The road was only used for foot traffic before construction; now 3 or 4 vehicles a day can use certain sections. If the road is improved with a binding smooth surface and a bridge, the volume would increase tenfold within days.

Comments: The area is still isolated and other areas beyond the three villages are in need of roads. The benefits would be observable within months if the project were completed.

The construction was adequate as far as it went. The rocks were spread uniformly to the prescribed 4 m width but left without a binding surface coat of sand or gravel. Surfaces of the culverts were excellent.

The future depends on the Inpres program to finish the bridge and surface the road. Suggestions to this effect have been accepted by the Bupati; now the villagers must wait and see. The finished project would be worth the investment.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 9.3*	Rp. 9.0
Mandays	33753	32000
C.I.	Rp. 6.75	Rp. 6.4
Materials	Rp. 1.69	Rp. 1.69
Description	New irrigation canal of 8000 m, a drainage canal of 11800 m with average depths of 0.5 m, width of 1 m. Also had 2910 m of old canal and structure rehabilitated.	The situation was difficult to recap. Structures as described existed, 8000 m of irrigation canal existed in parts but little of the 11800 m canal was around.
Schedule	April - October	June 1976 - Feb. 1977
Optimum time for PKGB	- *Design cost Rp.1.0	April - October
Number of officials interviewed	11	
Number of workers interviewed	14	
Number from general public interviewed	14	
Length of time subproject needed	10 years	
Person(s) who took initiative for subproject	Village head	
Person(s) who made designs	DPU	
Maintenance plan and budget	None	
Number of other directly related subprojects needed	Many	
Number of other subprojects needed in kecamatan	None listed	
Distance workers travelled to subproject	2 km	
Possible percentage of workers from same family	0%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP listed flood protection and irrigation benefits for 544 ha plus a total length of (+) 20 km of a canal system.

The evaluation failed to find over 130 ha affected or 8000 m of canal works or anything working well. The high benefits programmed for this subproject will not be realized until the total system is built to function. Even at that, acreage under paddy has risen from the 70 ha before the project.

Comments: The general feeling is one of waste. But if efforts were made to improve the first attempt with better construction methods and timing the initial plan would work. Much effort was lost to bad timing and little desire to build a useable project.

If the project was useable the benefits expected including support of tax collection and support of government BIMAS program would occur. The construction of a quality project would benefit every phase of government involvement at the local levels.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.5
Mandays	Labor 35350 Skill 1000	34000
C.I.	Rp. 7.47	Rp. 6.8
Materials	Rp. 1.29	Rp. 1.29
Description	7 km, 7 m wide village road rehabilitated with 0.5 m of rock bound surface	7 km, 7 m x 0.5 m road rehabilitated to serve 8 villages including culvert & drainage improvements.
Schedule	April 76 - work completed	July - October
Optimum time for PKGB	+ 7 months	May - Sept.

Number of officials interviewed	9
Number of workers interviewed	10
Number from general public interviewed	10
Length of time subproject needed	
Person(s) who took initiative for subproject	Village Head
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	1
Number of other subprojects needed in kecamatan	2
Distance workers travelled to subproject	1 - 2 km
Possible percentage of workers from same family	None
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP has a road affecting 8 villages or 28,000 people in a fairly developed area. The present length of 3 km will be finished in time for 77/78 project of the remaining 5 km. It will be possible to affect 3 villages.

The evaluation showed the project effective even though the increase in traffic volume is small. The villages do have an all-weather surfaced road which helps movement and communication. The returns will increase as additional areas are opened with the extension of this portion of road.

Comments: The construction of the road surface is the best in the evaluated samples. The surface is bound with proper sand and soil mix placed over a rock layer of 0.5 m. The few mistakes deal with drainage control structures, such as culverts, which were done before or by other construction funds. The bridge which is being built now will give access to 7 new km of surfaced road.

There is no maintenance plan.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10	Rp. 10
Mandays	35800	36000
C.I.	Rp. 7.16	Rp. 7.2
Materials	Rp. 2.7	Rp. 2.7
Description	7 km road rehabilitated with a 3 m x 0.02 m rock surface, 3 bridges and 34 culverts.	7 km road redone with a rock surface of 3 m x 0.2 m and 3 bridges but 12 culverts
Schedule	May 76 - Oct. 76	Oct. 76 - Feb. 77
Optimum time for PKGB	-	June thru Oct.

Number of officials interviewed	6
Number of workers interviewed	12
Number from general public interviewed	12
Length of time subproject needed	20 y
Person(s) who took initiative for subproject	Village leaders
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	2 bridges that were damaged by a recent flood
Number of other subprojects needed in kecamatan	2
Distance workers travelled to subproject	1 km
Possible percentage of workers from same family	20%
Tools provided	None

Benefits expected and comments:

Benefits: The DURP had the benefits going to 3 villages with a total of 21,000 people opening new areas with improved bridges and surfaced road way.

The evaluation backed the DURP for the first 5 km. The last 2 km were not useable due to washed out bridges. The villages still had access to an improved road however, so the traffic counts were estimated to have increased 3 or 3.5 times.

Comments: The construction of bridges and rock surface were satisfactory. The bridges demonstrate the PKGB program can do quality work in local areas.

The last 2 km, even though closed due to village bridges being washed out, would still need some work, emphasizing that projects still need better survey and design work.

The benefits from the road are valid and with time the road will be extended, increasing the potential for more returns from this investment.

Maintenance is still a problem because of no budget or plan for a maintenance program.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.46
Mandays	38000	36000
C.I.	Rp. 7.76	Rp. 7.36
Materials	Rp. 1.04	Rp. 1.1
Description	9 km of village road with a width of 8 m and some structures.	9 km of 8 m wide road base developed without a surface. One bridge built at entrance.
Schedule	May thru Dec.	Aug - Dec.
Optimum time for PKGB	-	May thru September
Number of officials interviewed		9
Number of workers interviewed		10
Number from general public interviewed		10
Length of time subproject needed		2 yrs or more
Person(s) who took initiative for subproject		Village people and head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		Finish with surface the initial start
Number of other subprojects needed in kecamatan		2
Distance workers travelled to subproject		2 - 5 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP stated that 12,000 people would benefit from the new road between the villages. The evaluation proved this was possible for perhaps a year or two. The road base allows traffic to flow where none did before. A zero to \pm 103 per day traffic count is a significant improvement.

Comments: The construction consisted of earthwork on 9 km of new road base. If the effort is not made soon for maintenance or improvement the road base will be washed to ruts and gullies. The surface should be covered with rock, or more earth compacted, to build up those sections now not above flood flows. Culverts added to the project, as was the bridge at the beginning, would improve its life expectancy.

If this effort is not made or maintenance work budgeted, the initial effort might be lost within 2 years.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10	Rp. 10
Mandays	30800	26000
C.I.	Rp. 7.0	Rp. 6.0
Materials	Rp. 2.9	Rp. 3.2
Description	11 km rehabilitated with various lined canal work, 2 dams and culverts. Average depth was 1 m Average width was 1 m	11 km of improved canal, lining existing for 1200 m, two 9 m x 4.5 m x 3.3 m dams. Culverts (2) improved.
Schedule	July 76 - Jan. 77	Sept. 76 - Dec. 76
Optimum time for PKGB	-	May thru Oct
Number of officials interviewed		8
Number of workers interviewed		14
Number from general public interviewed		12
Length of time subproject needed		20 yrs
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		The remaining canal systems
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		17%
Tools provided		None

Benefits expected and comments:

Benefits: The DURP stated the potential of affecting 21,000 people with 11 km of improved canals and structures. There was the possibility of irrigating the area near the improved canals more effectively in seven locations with the stored water behind the 2 new dams.

The evaluation showed the structures built and working, the canal lined for ± 1200 m and the system working, but not as effectively as it would if the canal system had been improved uniformly. The cropping pattern changed from 2 crops of ubi jalar and 1 of rice on 120 ha to 2 crops of rice and 1 of ubi jalar. The yields did improve and were estimated to increase the cash income from Rp. 37 million to Rp. 76 million for local residents.

Comments: The construction of structures and canal linings were excellent but the work on the canal systems either has been sedimented again, or the total effort was not finished. For the most part water flows and farmers can count on water from the dam storage for a few months but parts of the system were not useable.

The design should have concentrated on fewer areas and attempted to affect one area in a more potential manner.

Maintenance is lacking.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.0
Mandays	36000	31000
C.I.	Rp. 7.8	Rp. 6.2
Materials	Rp. 2.0	Rp. 2.0
Description	One rehabilitated canal of 4.5 km x 1 m x 0.6 m deep and one new canal of 3.0 km x 7.5 m x 1.0 m deep 3 diversion boxes.	One canal of 4.5 km x 1 m width x 0.6 m depth rehab. One canal of new work 2 km x 2.5 m x 1.2 m. 3 di-version boxes.
Schedule	May - Dec.	Aug - Nov.
Optimum time for PKCB	-	May - Aug.

Number of officials interviewed	9
Number of workers interviewed	10
Number from general public interviewed	10
Length of time subproject needed	3 yrs
Person(s) who took initiative for subproject	Camat
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	Control of plan through structured drops
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	3 - 5 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP mentioned 20,000 people would benefit.

The evaluation showed \pm 200 ha and \pm 20,000 people would benefit if the project was designed to provide a more useable service.

The canal flows only when water is available so the same basic dry weather crops are grown on the same acreage as before the project was finished. Yield, however, of cabbages, potatoes and maize has risen even though the new section of the canal failed to open any new land.

Comments: The design and construction was weak. The totals of mandays in the design were matched in the field. The grades were designed and constructed too steeply, forcing the water to erode the bottom. Without improvements or maintenance the canal stands a good change of being washed out.

There is no budget or plan for maintenance.

There is little commendatory about this effort.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 9.99	Rp. 10.0
Mandays	63000	62000
C.I,	Rp. 9.53	Rp. 9.3
Materials	Rp.	Rp.
Description	Irrigation, flood control canal rehab 4.5 km x 15 m x 1 m deep. Volume of work 73780 m ³	The excavation was done on 4.5 km of 15 m wide channel but damage has closed the project again.
Schedule	April 76 - Oct. 1976	Aug. 1976 - March 1977
Optimum time for PKGB		April - Oct.
Number of officials interviewed		7
Number of workers interviewed		15
Number from general public interviewed		16
Length of time subproject needed		8 yrs
Person(s) who took initiative for subproject		Army Section (KODAM VII)
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		Redo the original one
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		2 - 5 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP had 43,000 people being protected by the 4.5 km flood control canal, but no clear area calculated.

The evaluation found the estimate to be high and indicated the area to be around 300 ha. But since flooding had broken the dikes along the canal virtually no benefits have occurred. The potential is great but the work must be repaired.

Comments: When the AID engineers inspected the site the warning was stressed that dikes must be protected from back water erosion. Since the dikes have been washed out in parts it must be noted the work was not done as designed and the warning was not taken seriously. The work was adequate as parts remain, but if the beginning is not working, the remaining section is not used.

This canal is potentially a worthwhile project. The acreage protected for two croppings would be worth the investment. But its location next to the sea is a demanding one that requires better design and construction efforts.

There was no maintenance plan.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10	Rp. 10
Mandays	63521	56000
C.I.	Rp. 9.5	Rp. 8.4
Materials	-	Rp. 1.6
Description	10 km village path upgraded to a 4 m wide rock surfaced road. Structures provided by others.	9 km rehabilitated road with 4 m width of rock surface.
Schedule	May 76 - Dec. 76	July 76 - Nov. 76
Optimum time for GB	-	April - Sept.

Number of officials interviewed	11
Number of workers interviewed	14
Number from general public interviewed	14
Length of time subproject needed	15 yrs
Person(s) who took initiative for subproject	Village head
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	1 - (Bridge)
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 - 2 km
Possible percentage of workers from same family	3%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP had 4 villages and 12,000 people affected by the improved road way. The 4 m wide, 10 km long rock surface was to facilitate travel and communication.

The evaluation found 9 km upgraded to allow vehicle traffic where before it handled only foot traffic. The road improvement was a benefit to the 4 villages neighboring the road.

Comments: The construction quality was fairly good for a rehabilitated track. The drainage ditches were defined, the rock surface spread evenly, and for such a long undertaking the work looked good. The few minor mistakes are related to quality control of height of crowns, surface binding material lost in places and some drainage problems.

The work was estimated to take an eight-month period but because of the late start due to delayed DIP procedures, more people worked for a shorter time and finished in five months.

The road now is without a maintenance plan and budget except for an occasional supportive move by the Bupati. The problems of late DIP, no maintenance, and lack of technical guidance has and still is hindering this project as others.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	64600	62000
C.I.	Rp. 9.7	Rp. 9.3
Materials	-	Rp. .7
Description	Rehabilitation of foot trail to 10 km road with 3 m rock surface added to a 7 km improved road with 3 m rock surface.	17 km of rehabilitated roa with 3 m of rock surface.
Schedule	July 76 - March 77	July - March
Optimum time for PKGB	-	July - Oct.
Number of officials interviewed		6
Number of workers interviewed		23
Number from general public interviewed		7
Length of time subproject needed		20 yrs
Person(s) who took initiative for subproject		Village people
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		-
Number of other subprojects needed in kecamatan		-
Distance workers travelled to subproject		1 - 2 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP presented a 17 km road with 10 km of road developed from a foot-trail and the other 7 km resurfaced with rock along with the 10 km to a width of 3 m. The road was to open the area to \pm 15,000 people in 4 villages.

The evaluation pointed out this project as a successful, locally promoted, adequately designed and beneficial endeavor. The volume of traffic went from zero to \pm 30 vehicles a day.

Comments: The quality of rock surface and structural work is good. The structural work was a village effort backed by the Bupati so the project received the basic planning needed as in all PKGB projects, but so seldom found.

The total length of 17 km with 10 km developed from foottrails presents an impressive accomplishment. This project is able to provide benefits the first year and can be noted as a worthwhile joint effort.

The project is in need of a maintenance plan and budget.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	34584	36000
C.I.	Rp. 5.8	Rp. 5.4
Materials	Rp. 4.2	Rp. 4.6
Description	Rehabilitated water reservoir with present dimensions of 50 m ² x 3 m dry.	Excellent construction of 50 m ² x 3 m reservoir which catches rain water for ± 9000 people.
Schedule	Sept - Oct.	Sept. - Nov.
Optimum time for PKGB	-	April - Oct.

Number of officials interviewed	9
Number of workers interviewed	14
Number from general public interviewed	14
Length of time subproject needed	3 yrs
Person(s) who took initiative for subproject	Village head/Camat
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	None
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP had 4 villages with 12,000 people benefiting from the increased water supply in a rehabilitated reservoir 50 m².

The evaluators figured that the water users increased from 3,000 people to 9,000 people when the reservoir was finished, but with no increase in the previous allotment of 40 liters each. The volume of water is still not enough to meet the users' demands.

Comments: The reservoir is of excellent construction work. The mandays totaled for the work and material estimated in the DURP matched the evaluation figures.

The only problem is there is not enough water for both irrigation purposes and household allotments.

Maintenance will be required.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.6
Mandays	50000	46000
C.I.	Rp. 7.5	Rp. 6.9
Materials	Rp. 2.5	Rp. 2.7
Description	4 km road rehab with a 4 m width of rock and drainage ditches improved along with culverts.	± 4 km village road improved with 4 m wide rock surface and 5 bridges plus drainage ditches. Small bridges replace culverts according to tech.advice.
Schedule	May 76 - Sept. 76	Aug. 76 - Dec. 76.
Optimum time for PKGB	-	April - Oct.
Number of officials interviewed	6	
Number of workers interviewed	16	
Number from general public interviewed	12	
Length of time subproject needed	10 yrs	
Person(s) who took initiative for subproject	Village head	
Person(s) who made designs	DPU	
Maintenance plan and budget	None	
Number of other directly related subprojects needed	1	
Number of other subprojects needed in kecamatan	2	
Distance workers travelled to subproject	2 - 5 km	
Possible percentage of workers from same family	3.0%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP states that perhaps 12,000 people might make their lives better if the road was surfaced with rock for 4 km.

The evaluation found the area had this potential, but because of a foot bridge allowing only motorcycles to pass, the returns from the rock road will not be realized until the Rp. 35 million bridge is built.

They also discovered the road could have been easily extended 4 km more to include 2 more villages. If the bridge was improved this might be the incentive to finish the road.

For the moment the benefits are nil.

Comments: The construction work and design drawing could be improved in quality. The planning could have been better and the project not started until the bridge was finished or promised. But perhaps the rock surfaced road might draw the money for the bridge.

The structure was adequately constructed and the work that was done before the foot bridge was of higher standards.

Maintenance will be needed if the bridge is ever improved.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.0
Mandays	50000	44000
G.I.	Rp. 7.5	Rp. 6.6
Materials	Rp. 1.67	Rp. 2.4
Description	Reforestation 250 ha with 80000 trees of various varieties.	Terraced hill sides but 80% of the 80000 trees were dead.
Schedule	April 76 - March 77	Aug. 76 - Jan. 77
Optimum time for PKGB		Oct. thru Feb.
Number of officials interviewed		9
Number of workers interviewed		15
Number from general public interviewed		14
Length of time subproject needed		2 yrs
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU Kabupaten Section
Maintenance plan and budget		None
Number of other directly related subprojects needed		-
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		3%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP expressed hope that over 30,000 trees would help 2 villages and protect 250 ha of terraced land. The estimated population was 4,500 people who would receive returns from coffee and coconut trees.

The evaluators found 80% - 85% of the trees dead or gone. The hills are barren thus, when the rains do return, heavy erosion will occur. The place lost where it should have benefited.

Comments: The earthwork in hole digging and improved terrace work was acceptable. The protective cover is gone which is the problem. The future holds heavy erosion problems unless protective measures are taken now.

People say the dry weather killed the trees. Yet there are three parties to blame for the dead trees. One, the forestry service delivered dead trees. Approximately 10 - 15% of the original batch was dead. The people are not careful with young trees up rooting 30 - 40%. If the trees are not producing in a few years more will uprooted for faster growing crops. Then the weather is the third killer. The situation needs some changes made and a lot of social engineering. The maintenance problem still exists.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.6
Mandays	48790	46000
C.I.	Rp. 7.5	Rp. 6.9
Materials	Rp. 2.2	Rp. 2.7
Description	10.2 km of tertiary and smaller canals with 14 diversion structures, 4 end structures and 3 culverts.	10.2 km of a functioning canal system with broken or damaged control structures.
Schedule	April - Oct.	April - Oct.
Optimum time for PKGB	-	April - Oct.
Number of officials interviewed		10
Number of workers interviewed		21
Number from general public interviewed		21
Length of time subproject needed		2 yrs
Person(s) who took initiative for subproject		Bupati/Camat/Village head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		-
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		3 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP recorded the rehabilitation of these canals would benefit 6,000 people by improving the irrigation on 450 ha.

The evaluator found 100 ha opened for the first time to a reliable water supply, permitting a double rice crop, and the returns from production increasing from a gross of Rp. 96 million to Rp. 280 million.

Even a third crop is possible if the system is reliable enough so that the farmers could plan on getting water when it is required. The land is and can be made more productive with water supply.

Comments: The construction of structures was not good. The diversion and gate structures built were damaged at the time of evaluation. That damage was the result of either poor cement or vandals. The feeling is the quality was poor. However, the people have an interest in the project as shown by their maintenance of sections.

This points out the need for better construction supervision.

Maintenance assistance in cash would be beneficial.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.6
Mandays	50050	44000
C.I.	Rp. 7.5	Rp. 6.6
Materials	Rp. 2.5	Rp. 3.0
Description	100 ha reforested with 17500 trees and 130000 row trees plus 190000 m of terrace work including 12000 m of stone work.	100 ha with 80000 m of terrace work remaining; 88% of the trees lost.
Schedule	May 76 - Nov. 76	July - Oct.
Optimum time for PKGB	-	Aug. - Nov.
Number of officials interviewed		9
Number of workers interviewed		15
Number from general public interviewed		14
Length of time subproject needed		2 yrs
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU (Forestry Section)
Maintenance plan and budget		None
Number of other directly related subprojects needed		None
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		1 - 2 km
Possible percentage of workers from same family		5%
Tools provided		Adequate

Benefits expected and comments:

Benefit: The DURP had hope for 57,000 people benefiting from the work of terracing and planting 15,500 trees and 130,000 row trees on 100 ha.

The evaluator found the area with little but wind blown soil and barren hills. The trees had suffered an 83% loss. Few benefits were available for the 3,000 people found in the area.

Comments: Dreams blown up to excite the money givers were lost to a dry wind. The tree loss has ruined the area by creating a dust bowl. The situation needs a rapid replanting of fast growing grass and trees to protect the hillsides.

The work and the attempt was commendatory. The lack of concern for slow producing trees and the pressure to grow food crops joined with the drought to kill the project by killing the trees.

Maintenance if the trees were alive would still be needed.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	52046	50000
C.I.	Rp. 7.98	Rp. 7.5
Materials	Rp. 1.6	Rp. 1.6
Description	Improved road way with stone surface, 5.5 km of road 6 m wide will be effected. Culverts will be placed as needed.	Road surfaced with rock for 5.5 km at 6 m width. The culverts installed as needed and road is operational. 5300 m of road were constructed with a retaining wall.
Schedule	June 76 - Jan. 77	June 76 - Dec. 76
Optimum time for PKGB	-	April - Nov.
Number of officials interviewed	11	
Number of workers interviewed	15	
Number from general public interviewed	15	
Length of time subproject needed	7 yrs	
Person(s) who took initiative for subproject	Camat/Village head	
Person(s) who made designs	DPU	
Maintenance plan and budget	None	
Number of other directly related subprojects needed	None	
Number of other subprojects needed in kecamatan	1	
Distance workers travelled to subproject	2 km	
Possible percentage of workers from same family	0%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP claimed 22,000 people in 3 villages would benefit from the road covered with a 6 m wide layer of rock. This would increase traffic flow and communication in the area.

The evaluators found the work done on 5.5 km of road which was an extension of a 1975/76 project, thus doubling the length and increasing possible benefits to more people. The benefits were listed as an increase of vehicle traffic of 30 or more vehicles a day including trucks to haul out produce.

Comments: The construction was adequate for the length of the road with good culvert work. One questions the need for 6 m of rock surface when less might have allowed the length to be increased. But it did allow for truck movement and that is a definite benefit to the area which relied on animals to haul produce before.

The surface quality is not the best but sand and time will improve the situation. Maintenance would keep the road useable for a longer time.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.6
Mandays	62000	60000
C.I.	Rp. 9.4	Rp. 9.0
Materials	Rp. 0.6	Rp. .6
Description	Rehabilitated village road, 6 km x 3 m x 0.2 m. Total volume of work 18000 m2 and 18000 m3.	Rehabilitated 6 km village road with 3 m of rock surface applied.
Schedule	July - Oct.	July - Oct.
Optimum time for PKGB		Aug. - Dec.

Number of officials interviewed	9
Number of workers interviewed	14
Number from general public interviewed	14
Length of time subproject needed	14 yrs
Person(s) who took initiative for subproject	Camat
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	Bridge rehabilitated
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP had four villages affected by an improved surface to 6 km of road and approximately 200 men were to work each day.

The evaluation found the above true, plus an estimated increase in traffic, especially in minibuses (Colts). The project connected the remote villages to an asphalt road. The increase in traffic was due to their movement when going to larger markets. The average increase was 8 vehicles a day including government transportation.

Comments: The road has a good standard of rock surfacing for several sections. The other parts received too much sand and earth so have a soft surface. The road was passable and had signs of daily use. The structures were all old, except those recently rehabilitated, leading to the question of what was the condition of the road before PKCB decided to improve the quality.

This rehabilitation seems to be the result of five years of maintenance neglect. Thus a plan and budget assigned to maintenance works would serve these areas better than new programs.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.9
Mandays	49078	48000
C.I.	Rp. 7.4	Rp. 7.2
Materials	Rp. 2.5	Rp. 2.5
Description	4.8 km of village road re-habilitated and widened. A rock surface of 3 m wide was purchased and placed.	4.8 km of road surface with rock and sand, 5 culverts as described and semi-quality work. Rock surface was an average of 3 m wide.
Schedule	June 76 - Dec. 76	Aug. 76 - Feb. 77
Optimum time for PKGB	-	April - Oct.
Number of officials interviewed		10
Number of workers interviewed		13
Number from general public interviewed		12
Length of time subproject needed		2 yrs
Person(s) who took initiative for subproject		Village head/people
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		None
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP disclosed that only 5,000 people would benefit from this 4.8 km road covered with a 3 m rock surface.

The evaluation showed that the work opened a narrow trail between two major roads thus improving the contact of a few villages to a larger market area. The benefits are there with the daily traffic count estimated at 15 vehicles including trucks.

Comments: Construction is not the best because of the mistake of using too much sand and not enough compaction. Ruts are already forming. In the all-weather road, the situation could easily be improved with maintenance work.

The project is effective even though short and not really opening up new areas. The connecting of major roads are a benefit to more than the local residents.

The maintenance problem is greater on this road since the rock must be bought, so the self help idea will not work and a regular plan and budget is needed from the Bupati.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.5
Mandays	55400	52000
C.I.	Rp. 8.3	Rp. 7.8
Materials	Rp. 1.7	Rp. 1.7
Description	3 km of new road of 7 m width and cover with 0.3 m road surface for 4 km.	6.5 km of road opened with 1.3 km covered with rocks; the rest new construction with little compaction.
Schedule	April - July 76	June - Aug.
Optimum time for PKGB	-	Aug. - Jan.

Number of officials interviewed	9
Number of workers interviewed	10
Number from general public interviewed	8
Length of time subproject needed	14 yrs
Person(s) who took initiative for subproject	Camat
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	One bridge
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	2 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP showed the estimated total of affected people to be 8,200 in two villages of a new area opened up by a partially new road.

Evaluators calculated the road at 6.5 km, a bit less than the 8 km planned, but affecting 4 villages and a larger population. The traffic count had been estimated to increase which was confirmed by the evaluation, placing the estimated daily traffic count to be 14 vehicles including motorbikes. The improved traffic count could have been higher if the road was built better, thus the benefits are not as high as they should be with a new project opening new areas for the first time.

Comments: The construction was bad in many parts of the road due to the lack of proper binding of coarse material and no attempt at placing a surface.

The rehabilitated section of road only received 1.6 km of rock surface. The new and rehabilitated section totaled 6.5 km. This shortcoming was due to bad planning or over-zealous local officials. The area had to be opened so the money was stretched to cover the entire section, not consolidated to cover a short distance more effectively.

Maintenance is still a big concern with this project, for being new, the problems of erosion are greater.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.0
Mandays	65270	58000
C.I.	Rp. 9.8	Rp. 8.7
Materials	-	-
Description	Village road upgraded over a length of 5 km with rock surface of 3 m width.	5 km x 3 m rock surface placed on village road. Bridge repaired.
Schedule	July - Nov.	July - Nov.
Optimum time for PKGB	-	Nov, Dec, Jan.

Number of officials interviewed	11
Number of workers interviewed	14
Number from general public interviewed	-
Length of time subproject needed	12 yrs
Person(s) who took initiative for subproject	Village head/village leaders
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	None
Number of other subprojects needed in kecamatan	None
Distance workers travelled to subproject	1 - 3 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP measured the effect as increased traffic and communication to 14,000 people when the 5 km road was covered with 3 m of rock.

The evaluation shows the road has increased previous communication and traffic flow slightly. The road had a good base before construction started therefore the new rock helped with the all-weather effect. The concept of placing rock is good, for increasing production does increase trucks' use of the road. The benefits are relatively low because the work was more of needed maintenance than of developing an improved road.

Comments: The construction quality, as with most rehabilitation road surfaces, was good. The bridge work was good enough to carry heavier loads. The effectiveness of the road was already established and the project just increased the possibility of more useage.

The future of the road would benefit from a regular maintenance program instead of allowing it to wait three or five years again for a new project to rebuild what is good now.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	65625	67000
C.I.	Rp. 9.3	Rp. 10.0
Materials	-	-
Description	Rehabilitated dike work on 9.4 km stretch of canal. Dike measured 2-5 m wide 2 m high	Dike improved 2.5 m wide, 2 m high on 9.4 km of canal.
Schedule	May 76 - July 76	July 76 - Oct. 76
Optimum time for PKGB	-	July - Sept.
Number of officials interviewed		12
Number of workers interviewed		7
Number from general public interviewed		7
Length of time subproject needed		yearly
Person(s) who took initiative for subproject		Village head/Village Soc. Dev. Org. (LSD)
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		None
Number of other subprojects needed in kecamatan		4
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		0%
Tools provided		None



Benefits expected and comments:

Benefits: The DURP showed 35,000 people being affected by the rehabilitation of 9.4 km of dikes.

This evaluation pointed out not so many would benefit due to the fact that the work was on individual plots of land next to the canal, which has been in existence for sometime. The total number benefiting would be more like 1,000 - 3,000 people. But taking into account that these plots are adjacent to the canal, and that there are many other similar plots further off, the number of people could be larger.

The benefit calculated from the evaluation showed that 2 crops could be planted now on only 50 ha. This again is only the evaluated plot holders. Others might also produce two rice crops.

Comments: The construction was acceptable, the mandays were estimated accurately for the work which was basic earth excavation, and the officials used 1 m³ to calculate how many farmers would be included along the dikes.

For this type of program to be functional every year, the farmers must rebuild the dikes annually to improve and protect their plots.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10	Rp. 10
Mandays	52000	55000
C.I.	Rp. 7.9	Rp. 8.2
Materials	Rp. 1.7	Rp. 1.7
Description	Rehabilitating a flood canal section of 3 km to a new width of 20 m.	3 km of flood canal to a 20 m width with a dike of 3 m depth and 3 m top crown
Schedule	June 76 - Nov. 76	July 76 thru Dec. 76
Optimum time for PKCB	-	June - Sept.
Number of officials interviewed		9
Number of workers interviewed		14
Number from general public interviewed		14
Length of time subproject needed		2 yrs
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		2 bridges
Number of other subprojects needed in kecamatan		None
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		7%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP had 17,000 people benefitting and 168 ha protected after the project was finished, with the planned 3 km improvement in a section of the flood control canal.

The evaluators rated that this estimate of acreage and people was possible and most likely would be protected, based on this year's flood. They also questioned what was happening to this water downstream.

Perhaps the benefits of protecting the 168 ha will be lost if there is damage farther downstream on a larger scale.

The actual countable benefits from the improved section may be obtained but the resulting disaster if the dikes fail would be large.

Comments: The construction was solid enough to handle one flood this year, but now the canal is in need of repair work. There are areas badly eroded and others filled with earth.

The fact that the dikes held the flood indicates that the construction was solid, but the damage raises the question of adequate design work.

Maintenance is required; a plan and budget would help.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	65042	65000
C.I,	Rp. 9.8	Rp. 9.8
Materials	Rp. 0.1	Rp. 0.1
Description	Rehabilitated flood protection canal in two sections. One section to be 1350 km long with 10 m bottom width dikes constructed. The other 500 km newly dug canal.	1350 m x $\frac{3.5}{10}$ x 3.5 m dikes built on each side of canal. One 500 m canal improved with new dikes work as well.
Schedule	May 76 - Dec. 76	Aug. 76 thru Feb. 77
Optimum time for PKGB	-	April - Oct.

Number of officials interviewed	10
Number of workers interviewed	14
Number from general public interviewed	15
Length of time subproject needed	10 yrs
Person(s) who took initiative for subproject	Camat/Village head
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed.	Three structures and a continuation of the present section.
Number of other subprojects needed in kecamatan	-
Distance workers travelled to subproject	1 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP stated the benefits for 7,000 people from 20 ha protected by improved dikes.

The evaluators found the work done and functioning as designed, but few benefits gained since the entire 100 ha area should be protected before any true gain is felt. If protection is provided in the 1977/78 PKGB program, gains in crop production will come within a short time.

Comments: The project was done to improve an existing system. This in fact was the maintenance that was required by the project for the last 5 yrs. The new project improved the situation because the old dikes were almost washed out. The project is worthwhile. The question, though, is PKGB a maintenance program or should additional funds be found for these projects.

The construction is adequate and the dikes solid enough, but a few problems do exist with erosion and damaged structures. Both could be improved if maintenance funds existed.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.7
Mandays	62000	60000
C.I.	Rp. 9.3	Rp. 9.0
Materials	Rp. .7	Rp. .7
Description	Three sections as a village road plus bridge work I. 3000 m x 6 m x 0.3 m II. 2000 m x 4 m x 0.25 m III. 7000 m x 6 m x 0.2 m	One road 15 km long with last 3 km not useable by heavy vehicles due to foot/cycle bridge. Stone surface 4 m wide, other width 6 m.
Schedule	July 76 - March 77	Aug. 76 - Jan. 77
Optimum time for PKCB	-	Jan. - Aug.

Number of officials interviewed	9
Number of workers interviewed	11
Number from general public interviewed	8
Length of time subproject needed	5 yrs
Person(s) who took initiative for subproject	Camat/Village head
Person(s) who made designs	PUD Situbondo
Maintenance plan and budget	None
Number of other directly related subprojects needed	Bridge Reinforcement
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 - 2 km
Possible percentage of workers from same family	0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP had 25,000 people benefiting from an upgraded 15 km road, with stone surfacing work for all-weather useage.

Evaluators found 12 km useable by motor traffic and 3 km not useable due to a foot bridge only big enough for cycles as the only access to the last section. The traffic increased over the useable area to an estimated 10 or more vehicles a day, including a minibus service 3 times a week, where before there was only foot traffic along most sections. The estimated total of 25,000 people directly affected is high. The evaluators placed the total nearer 8,000.

Comments: The undertaking to open this area with the improvement of a 15 km road and succeed with 12 km of the road is commendable. The area needed the improved accessibility. The construction quality was of acceptable standards on the road resurfacing sections. The only problem was the undertaking was a bit large. Yet to be useable on 80% as planned is good and perhaps if the bridge is replaced the entire length will be built.

This project points out the problem with many PKGB projects besides the lack of maintenance. More funds are needed often from other sources to finish the project.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 9.0
Mandays	65625	58000
C.I.	Rp. 9.8	Rp. 8.7
Materials	-	-
Description	Rehabilitated an irrigation flood control canal for 6 km with dikes of 1 m higher than before.	Canal of 6 km with a width $\frac{(1.9 \text{ m} + 5.9 \text{ m})}{2} = 3.9 \text{ m}$ eroded in parts used for flood project.
Schedule	May 75 - Sept. 76	Aug. 76 - Jan. 77
Optimum time for PKGB	-	June thru Oct.
Number of officials interviewed		10
Number of workers interviewed		7
Number from general public interviewed		7
Length of time subproject needed		Long time
Person(s) who took initiative for subproject		Village head
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		None
Number of other subprojects needed in kecamatan		1
Distance workers travelled to subproject		1 - 5 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP had only 3,000 people benefitting due to the improvement of the flood protection canal.

The evaluation found a canal dry, but not used and figured approximately 200 ha were directly protected by the improved dikes.

The people felt the returns would increase since they could grow two crops of rice a year if water were available.

Comments: The 6 kms of canal were improved with newer and higher dikes, increasing the ability of the canal to carry larger floods. This would allow for two crops to be grown if water were available.

The construction was finished without proper compaction. Parts of the dikes have been broken by passing animals.

The manday calculation was off. Most likely the estimated total in the DURP and evaluation are both wrong and the actual total falls between.

Maintenance will be required.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 9.4	Rp. 8.0
Mandays	43152	42000
C.I.	Rp. 6.5	Rp. 6.4
Materials	Rp. 2.6	Rp. 1.6
Description	5.5 km of road improved to all weather road with 4 m of rock surfacing	5.5 km of improved road. 2 km were excellent, 1.5 km with few stones and 2 km semi finished with acceptable standards.
Schedule	April - Aug	Aug - Dec
Optimum time for PKGB	-	May through July
Number of officials interviewed		10
Number of workers interviewed		14
Number from general public interviewed		-
Length of time subproject needed		15 yrs
Person(s) who took initiative for subproject		Camat
Person(s) who made designs		DPU
Maintenance plan and budget		None
Number of other directly related subprojects needed		None, except finish the one started.
Number of other subprojects needed in kecamatan		Not known
Distance workers travelled to subproject		1 km
Possible percentage of workers from same family		0%
Tools provided		Adequate

Benefits expected and comments:

Benefits: The DURP estimated that the 5.5 km of road that was to be resurfaced with rock would effect 5,500 people in two villages, plus provide work for 200 laborers.

The evaluation viewed this estimate as accurate. The people would be able to market and communicate more easily with an improved road. But since the improvement only affected approximately 3 km of the 5.5 km planned the benefits are slow in developing. There is, however, a regular minibus (Colt) service making three for four round-trips a day.

Comments: The construction quality was excellent for two km but was weaker for the next two km. The last 1.5 km was only touched. This points to bad planning on the construction site and the known lack of funds to do quality work.

Again the maintenance question arises and now the question of how to raise enough funds to finish the project also arises. Next year the 77/78 program should have one answer in the form of maintenance funds to finish the project.

The quality of the first 2 km was excellent.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.1	Rp. 9.3
Mandays	62843	58000
C.I.	Rp. 9.5	Rp. 8.7
Materials	Rp. .5	Rp. .5
Description	6.5 km village road covered with a 4 m wide stone surface	6.5 km road covered with a 4 m wide rock surface and improved with 10 culverts and drainage ditches.
Schedule	April - Sept 76	July - Dec. 76
Optimum time for PKGB	-	May - Aug.
Number of officials interviewed	6	
Number of workers interviewed	14	
Number from general public interviewed	14	
Length of time subproject needed	15 yrs	
Person(s) who took initiative for subproject	BAPPEDA	
Person(s) who made designs	TAP	
Maintenance plan and budget	None	
Number of other directly related subprojects needed	None	
Number of other subprojects needed in kecamatan	1	
Distance workers travelled to subproject	2 km	
Possible percentage of workers from same family	0%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP lists 60,800 people or the entire kecamatan benefiting from this 6.5 km of improved 4 m rock surfaced road.

The evaluation would agree with this estimate for the whole kecamatan stands to gain from the increased production reaching the markets. The only common means of transportation are rubber wheel carts drawn by horses but this improved road allows the cars to pass where before they could not manage. Traffic counts show \pm 15 cars a day.

Comments: The construction is adequate for this area which has few motor vehicles. The carts and people make use of the road. The surface could have been smoother when finished but for the general public it is acceptable.

Maintenance plan and budget required.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.1	Rp. 9.8
Mandays	46811	45000
C.I.	Rp. 7.1	Rp. 6.8
Materials	Rp. 2.5	Rp. 2.5
Description	1100 ha of paddy field to receive water from a 3 km of rehabilitated canal.	An attempt at 3 km of 1 m deep canal improvement work. Some parts already damaged.
Schedule	July - Dec. 76	Sept. 76 - March 77
Optimum time for PKCB	-	June - Oct.

Number of officials interviewed	8
Number of workers interviewed	11
Number from general public interviewed	8
Length of time subproject needed	9 yrs
Person(s) who took initiative for subproject	Proposed by Village Soc. Dev. Org. (LSD)
Person(s) who made designs	DPU
Maintenance plan and budget	None
Number of other directly related subprojects needed	1 animal bridge
Number of other subprojects needed in kecamatan	1
Distance workers travelled to subproject	1 - 2 km
Possible percentage of workers from same family	1.0%
Tools provided	Adequate

Benefits expected and comments:

Benefits: The DURP gave an estimate of 17,000 people on 110 ha gaining a better water supply system when the 8 km of canal works were improved.

The evaluators figured on no benefits having occurred to date because of no water flowing in the improved 8 km of canals. The possibility does exist, but hard to estimate at the present moment. A linkage with the main kabupaten canal, providing a permanent flow, is planned within 6 months.

Comments: The construction was hard to judge for many sections have already been worn away by animals crossing the canal. The people want animal bridges built now to protect the canal. Weather has affected the other sections to create the scene of an area in need of a new maintenance project again.

Regular maintenance instead of PKGB rehabilitated projects is required to keep the project effectively producing benefits when water does flow.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	47000	47000
C.I.	Rp. 7.4	Rp. 7.4
Materials	Rp. 2.2	Rp. 2.2
Description	7 km of village road improved to an all weather rocked surface road with 4 m width of stone surface placed.	7 km of road surfaced with 4 m of stone.
Schedule	June 76 - Dec. 76	July - Nov.
Optimum time for PKGB	-	Aug - Nov.
Number of officials interviewed	8	
Number of workers interviewed	9	
Number from general public interviewed	8	
Length of time subproject needed	Not known	
Person(s) who took initiative for subproject	Village head/people	
Person(s) who made designs	DPU	
Maintenance plan and budget	None	
Number of other directly related subprojects needed	1	
Number of other subprojects needed in kecamatan	1	
Distance workers travelled to subproject	1 km	
Possible percentage of workers from same family	2%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP listed 8,500 people of 2 villages to benefit from the completion of 7 km of improved surface work on the connecting road.

The evaluation would agree with the DURP's estimate and place the increase in traffic count at 10 motor cycles and 5 rubber wheel carts per day. The returns are slow in coming, but with time the road will prove its worth. Improvement to the road would accelerate this rate of improvement.

Comments: The construction of the road surface was good except for some spots and a few areas were in need of more earthwork to straighten/widen the roadway to the design width and line. Culvert and bridges were of poorer standards, which points out the need for set structural standards. The attempt was good for area improvement was needed, with a maintenance program.

Item	DURP (Rp in million)	Probable from Evaluation (Rp in million)
Total cost	Rp. 10.0	Rp. 10.0
Mandays	35000	35000
C.I.	Rp. 7.0	Rp. 7.0
Materials	Rp. 2.2	Rp. 2.2
Description	6 km rehabilitated road in two different sections of 3 km each. The surface was covered with a 4 m width stone surface.	6 km rock covered road with a 4 m width of stone.
Schedule	May 76 - Aug 76	June thru Oct.
Optimum time for PKGB	-	June thru Oct.
Number of officials interviewed	8	
Number of workers interviewed	11	
Number from general public interviewed	11	
Length of time subproject needed	7 yrs	
Person(s) who took initiative for subproject	Village head	
Person(s) who made designs	DPU	
Maintenance plan and budget	None	
Number of other directly related sub-projects needed	1 bridge	
Number of other subprojects needed in kecamatan	1	
Distance workers travelled to subproject	2 km	
Possible percentage of workers from same family	0%	
Tools provided	Adequate	

Benefits expected and comments:

Benefits: The DURP shows 6 villages being affected by two 3 km road sections which works out to 15,000 people using the 6 km of stone surfaced road.

Evaluation estimated the same and places the traffic count to have increased \pm 10 vehicles a day.

Comments: The roads looked of acceptable standards for this area. The work had been done but not compacted enough in spots.

The plans were of poor standard, but not without some common sense, for the project was limited to 6 km in an area which some might have attempted 30 km or more. This points out the improvement in designs when DPU engineers actually prepare the Design/DURP.

Maintenance is required to ensure the life of this road project.