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UNCLASSIFIED

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-647

187

PROJECT TITLE  
Luwu Area and Transmigration Development Project

1. PROJECT NUMBER  
497-0244  
Loan 497-T-038

2. MISSION/AID/W OFFICE  
Jakarta

3. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY)  
79-1

REGULAR EVALUATION  SPECIAL EVALUATION

4. KEY PROJECT IMPLEMENTATION DATES  
A. First PRO-LAB or Evaluation FY 76  
B. First Obligations Expected FY 76  
C. Final Input Delivery FY 82

5. ESTIMATED PROJECT FUNDING  
A. Total \$ 43 million  
B. U.S. \$ 15 million

7. PERIOD COVERED BY EVALUATION  
From (month/yr.) September 1977  
To (month/yr.) December 1978  
Date of Evaluation Review 19 December 1978

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)

B. NAME OF OFFICER RESPONSIBLE FOR ACTION

C. DATE ACTION TO BE COMPLETED

A new CPI network should be written.

R. Machmer, USAID project officer

15 January 1979

A letter should be sent from the Mission Director to the Minister of Manpower and Transmigration giving the most significant of the recommendations resulting from the evaluation.

Ric Machmer, USAID project officer

3 January 1979

The GOI and Mission must decide whether there will be a separate health subproject (and, if so, what its specific components will be), or whether the funds programmed for that activity should be allocated elsewhere within the project.

Ric Machmer, USAID project officer

30 June 1979

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- Project Paper
- Financial Plan
- Logical Framework
- Project Agreement
- Implementation Plan e.g., CPI Network
- PIO/T
- PIO/C
- PIO/P
- Other (Specify) \_\_\_\_\_
- Other (Specify) \_\_\_\_\_

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A.  Continue Project Without Change
- B.  Change Project Design and/or
- C.  Change Implementation Plan
- D.  Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS (If Appropriate) (Name and Title)

See separate page attached.

12. Mission/AID/W Office Director Approval

Signature  
*Thomas C. Niblock*

Typed Name  
Thomas C. Niblock, Director

Date  
1-18-79

LUWU AREA AND TRANS MIGRATION DEVELOPMENT PROJECT  
AID LOAN 497-T-038

**13. SUMMARY**

Overall project progress is behind that originally planned when this project was first developed in 1974/75. Much of this lag reflects 1) over-optimistic planning prior to encountering the realities of implementation of an unusually complex project and 2) results from GOI experimentation with the establishment of an institution charged with the coordination of a difficult integrated rural development activity. The delays which are natural in such a situation will cause the project to fall behind its planned timetable established about three years ago. But the lessons learned in these delays are valuable ones for improving on project design in the future, particularly in connection with the planning for Luwu Phase II. Most importantly, it is still anticipated that most of the objectives of the project will be achieved, although not within the original time frame. A second extension in the Terminal Disbursement Date of the A.I.D. loan (the first was for one year - from June 1980 to June 1981) will have to be requested. Final determination of the extent of this extension will be made on the basis of the next evaluation of this project.

**14. EVALUATION METHODOLOGY**

This is the time for a regular evaluation of this project (the last evaluation having been completed in September 1977). Moreover, because of the special implementation features of this project, and also to assist in the 1979 planning for a Luwu Project, Phase II, special attention is being given to the Luwu development activity.

The evaluation itself is based upon recent field trips to the project site, on relevant reports on project progress, and on discussions with GOI national, provincial, local and project officials; Indonesian contractor personnel; expatriate consultants, including the U.S. consultant firm employed for this project; other donor personnel, and AID staff.

**15. EXTERNAL FACTORS**

An integrated rural development activity such as the Luwu project continues to have an important priority within the Indonesian development scheme. This is especially so inasmuch

as an important element of the activity is a transmigration sub-project. The transmigration program for Indonesia is seen as a key method of implementing the "outer island" development philosophy. A new Presidential decree issued in August of 1979 places even more emphasis on the transmigration program. However, the means for implementing both integrated rural development and transmigration programs continues to be a major and as yet unresolved problem. This brings into question a basic assumption of the project ----- that the relevant sectoral agencies charged with detailed implementation activities have sufficient motivation to sincerely and objectively attempt to permit coordination of their activities for an overall project goal. The attempt to establish a viable overall coordinating mechanism - the major institutional development goal of the project - remains the most difficult and least successful of the project objectives.

#### 16. INPUTS

It was necessary to change the leadership of the U.S. contract consultant team (Checchi/D.M.J.M.) during the period under evaluation. However, that team is now working effectively. A bigger problem has been the fact that two of the subprojects (irrigation and land clearing) do not have budgetary authority-holding managers in the project headquarters site (Palopo). Also the various sectoral agencies involved in the project act much too independently of the project coordinator headquarters. It should be pointed out that this is not the fault of the GOI overall project manager, who is a strong leader, but rather is a fault of the national system, which has not yet adjusted to the role of a coordinator's office. Finally, the GOI budgetary process itself needs improvement. The budgetary allocations for the project are divided into and handled on a subproject by subproject basis, rather than as a comprehensive allocation for a single integrated development project. And the budgetary allocations are all too often received months late, often forcing subproject activities to a virtual standstill.

#### 17. OUTPUTS

##### a. Improvement of the 176 km. Palopo - Mailili road

This activity is and promises to remain behind schedule. One road contractor (Pembangunan Jaya) is still setting up its base camp and has not yet received most of its road building equipment. The other contractor (Sekayu) has established its base camp and has begun some road building preparations. It still needs some heavy equipment, however.

Even though there were no national contractors experienced in road building, a decision was made to use national contractors as a means for institutional development. Thus the activity serves a training as well as construction purpose. As a consequence, there was an initial delay in the selection of the contractors, and they are having start-up difficulties which entail further delays. There have also been what seem to be purely bureaucratic delays in signing a contract for the supervisory engineering firm (a U.S. firm, Louis Berger, which has a sub-contract with Indah Karya, a national company). Without a supervisor with the necessary authority, the building contractors have been understandably reluctant to move forward too quickly. There were also changes in design work on the road and bridges which necessitated delays. Devaluation of the Rupiah in November promises to have a further delaying effect on this activity since the contractors have paid for their equipment in dollars but will be paid back in devalued Rupiah. The contractors are asking to have their contracts revised to take into account the devaluation effect.

b. Construction of Bone-Bone and Kalaena Irrigation System

This activity, too, is behind schedule. Coordination and layout work by national contractors has been a problem. Survey and design work was poor and often had to be redone. Heavier than usual rains impeded work. The subproject manager for this activity is not located at the project site headquarters of Palopo, but rather in Ujung Pandang and has other responsibilities as well. The A.I.D. project seems to be in competition with a Dutch-supported nearby (Lamasari) irrigation project which takes away support (personnel and the attention of the subproject leadership) from the A.I.D. effort.

c. Four farm service centers organized, built and functioning

This activity is actually divided into two components: Rural Extension Centers, for agricultural extension purposes, and Farmer Cooperative Centers.

(1) Rural Extension Centers (RECs)

The four RECs have been built and training sessions have been held at each of the facilities. However, the extension activity for the Kabupaten lacks a comprehensive plan. A recently arrived U.S. consultant in this field has the responsibility of assisting the agricultural development and extension officials in developing a long-term program.

(2) Farmer Cooperative Centers (FCCs)

The first FCC (at Bona-Bone) should be built in the first part of 1979. USAID has approved the building plans but the question of the amount of funds to be reimbursed has yet to be resolved. Again, there is no comprehensive, long-term program for cooperatives - a situation which appears to be nationwide in scope. The interrelation with agricultural extension has to be worked out also. A U.S. consultant in this field is due to come on board the first part of 1979 for 14 months, and it is hoped that he will be able to move this activity forward.

d. Increased utilization of more advanced crop production technology

Achievement of this output will depend upon the progress made in the REC and FCC activities, as well as on in-country and third-country training programs funded under the loan.

e. Proven road/irrigation maintenance capability

Achievement of this output will depend upon progress made in the road and irrigation subprojects, as well as on in-country and third-country training programs funded under the loan. In addition, ready availability of adequate GOI budgetary support for maintenance must be provided.

f. Project Office functioning with personnel trained in areas of integrated project planning, management and evaluation

The Project Office is established and functioning in Palopo. However, the Project Manager does not believe he has been provided a full complement of professional staff. And as mentioned above, coordination is proving to be the most difficult role of the project. The sectoral implementing agencies go much their own way, and two of the subprojects do not even have subproject managers stationed at the project headquarters. Although it is supposed to be the focal point for budgetary planning for the project, the sectoral agencies seldom permit the project headquarters office to participate in the preparation and administration of their documents. The fact is that the Project Manager is charged

with enormous responsibility but is given very little real authority. The inability of the GOI Project Office to effectively orchestrate the project brings into serious question whether this is truly an integrated, multi-purpose area development effort.

8. Systematic evaluation of the project's progress and socio-economic impact

An effort continues to establish this evaluation. A unit of the University of Hasanuddin (UNHAS) in Ujung Pandang was sub-contracted by the GOI Luwu Project Office to undertake this evaluation. It has done two years of evaluation, but only the first year's results have been published to date. There is some question about the validity of the UNHAS effort, raised primarily by a Cornell University team which was provided by AID in the second half of 1978 to look at the UNHAS results. However, the reliability of the UNHAS effort requires further study.

18. PURPOSE

The approved project purpose is to increase agricultural productivity in the Luwu project area. It is expected that achievement of this purpose will result in improvement in the well-being of the rural poor by means of increased incomes and employment opportunities, as well as in establishing institutions intended to continue to bring about those benefits. Both the GOI and USAID share a common perception of purpose and this project has a high priority with the GOI. Although the GOI itself is grappling with the difficulties of managing an integrated development activity (as illustrated in its recently revised management system for its massive transmigration program), the Luwu project could eventually be a model for multi-purpose development projects throughout the country. Inasmuch as development of the infrastructure elements of this project is behind schedule, as outlined above, it is still too early to measure progress toward each End of Project Status (EOPS) conditions. These conditions, however, are probably still a valid indicator of achieved project purpose and, as stated above, although the project will not be finished according to its originally projected timetable, it probably will achieve most if not all of its objectives.

19. GOAL/SUBGOAL

The "program or sector goal" is "to improve the well-being of small farmers by raising productivity sufficiently to increase both per capita consumption and the movement of marketable surpluses to food deficit areas."

The extent of progress toward this goal can be attributed directly to project purpose achievement, which is increased agricultural production, income and employment. However, it is not possible as yet to measure progress statistically. As indicated above, certain infrastructure and institutional developments (e.g., initial road betterment and advisory assistance on an agriculture extension plan) have begun which are intended to impact directly upon the goal achievement. It is also necessary to assure that the evaluation subactivity is producing accurate statistics, for that effort, together with other GOI statistics, will allow us to accurately gauge progress.

## 20. BENEFICIARIES

Kabupaten Luwu has a population of approximately 480,000. The project area covers all 17 subdistricts (kecamatan) of the Kabupaten. The entire population of the project area is expected to benefit, directly and indirectly, from this project since its components (e.g., rebuilding of the single major road in the area; provision of agricultural extension and cooperative services to the area) extend throughout the area. Additionally, it is estimated that over 7,000 persons are employed in project implementation, and the project plans call for formal training for about 500 persons. According to the project logical framework, there will be "increased employment opportunities of 34,200 jobs per year in agricultural production" and "26,500 man years in the construction of subprojects".

Approximately 90% of the population of the project area are farmers. Nearly all of them are farmers with two hectares or less. Agricultural productivity will increase due to increased land productivity (opening up irrigation and new dry land cultivation), due to higher levels of production technology being applied, and due to increased labor productivity (decreased un- and under-employment resulting from the generation of agricultural production jobs and the access to new markets' indirect impact on incentives for both agricultural and non-agricultural production).

Population growth will be greater, both because large numbers of transmigrant families are being brought into the area, as well as because there is evidence that people have larger families when they become transmigrants than they would have if they stayed in their original high population density, labor surplus locations. However, this population increase is not expected to have an adverse impact. Quite the contrary, it fits in with the

national goal of opening new agricultural production areas in the outer islands.

The direct impact of the project will increase income equality. Transmigrants and spontaneous transmigrants from nearby areas with little or no land will obtain more land in the Luwu area, thereby increasing their wealth and income. The project will also generate numerous non-farm jobs for local unskilled and semi-skilled workers.

As indicated above, increased employment availability created by the project will reduce un- and under-employment. The irrigation and diversified agriculture aspects of the project will also reduce the seasonal nature of agricultural employment and income floors in the project area. This will have a multiplier effect to reduce employment seasonality in the non-agricultural sectors.

#### 21. UNPLANNED EFFECTS

There are no startling unexpected results or impact. The time frame originally established for completion of the project is turning out to be unrealistic and must be revised to provide for a longer implementation period. The coordination aspect of the project is proving more difficult than might have been anticipated. It is possible that a more active direct USAID role in project implementation is required than was originally deemed necessary. There has been extreme difficulty in deciding what to do in the health subproject and either a decision should be made soon on whether there will be a health subproject or it should be dropped and its funds allocated elsewhere.

#### 22. LESSONS LEARNED

Two basic lessons have been demonstrated. The first is that in planning for a complex integrated development effort relying heavily upon relatively new and inexperienced host government institutions and national contractors, a great deal of implementation time must be afforded the effort. Unrealistic time frames only because confusion and impede project progress.

Secondly, in planning an integrated, multi-sector, rural area development program, where a coordinating agency of some sort is charged with the responsibility for the management of that effort, that agency must also be given some instrument of authority to carry out its responsibility. In the case of this project,

an appropriate mechanism would be to provide the Luwu Project Office with some degree of budgetary request and approval authority. In this way, the various sectoral offices would have to go through the overall coordinating office to both request their budgets and to have their budgets and requests for reimbursement under the loan approved. This would not rob those offices of their scarce manpower, which is an argument against setting up a separate authority, but it would properly compel the sectoral agencies to coordinate their activities with the overall managerial office.

### 23. SPECIAL COMMENTS OR REMARKS

The Luwu Area and Transmigration Development Project is an integrated, multi-purpose development effort in a relatively remote area of the country. In addition to the coordination role which is to be played by the Luwu Project Office, the activity involves eleven Directorates-General (eight directly and three indirectly), two universities, two research institutes, a training institute, five foreign donors and two private voluntary organizations. Further, AID loan and legal regulations require a great deal of overseeing and implementation monitoring and approval attention. A USAID direct hire project officer, Indonesian program assistant, and USAID technical staff provide the necessary backstop support for the activity. The project officer and his assistant are also charged with planning for a Luwu Phase II project and for being knowledgeable about the GOI transmigration programs in general.

As mentioned previously, the GOI has reorganized its administration of the transmigration program in the country. A second integrated, area development activity is about to begin in Southeast Sulawesi with major support from the Asia Development Bank. In both these cases, the Luwu project was taken into consideration by the GOI (and the Asia Development Bank) in the planning for those efforts.

It is also important to note that the December 19 evaluation review in the USAID Mission conference room was attended by the largest number of Indonesian officials to appear at one of the Mission's reviews. Of the attendance of more than 50 persons, about half were Indonesians. Their active participation in the session was a significant contribution to the success of the meeting. Their excellent inputs greatly expanded the Mission's understanding of how this complex project operates, while the review itself served to facilitate the goal of better project coordination.

RD/AD:EMachmer:tsl:1/15/79

*E. Machmer*

List of Participants Attending the December 19, 1978  
USAID Evaluation of the Luwu Area and Transmigration  
Development Project

INDONESIAN GOVERNMENT REPRESENTATIVES

1. Drs. Heru Susanto, Luwu Project Manager
2. Drs. A.S. Napitupulu, Secretary to the Junior Minister  
for Transmigration
3. Ir. J.B. Soemarga, Bina Marga (Highways)
4. Ir. Soebaru, Bina Marga (Highways)
5. Ir. Moelia Aida, Bina Marga (Highways)
6. Ir. B. Simandjuntak, Bina Marga (Highways)
7. Ir. Boediharto, Bina Marga (Highways)
8. Mr. Zulmar, Bina Marga (Highways)
9. Ir. Irawan Hardito, Directorate General of Transmigration,  
Chief of the Foreign Section
10. Drs. M. Nur, DITGASI (Public Works)
11. Mr. J. Setyo, Directorate General of Water Resources  
Development (DGWRD)
12. Mr. H. Pratikto, DGWRD
13. Mr. K. Sjahmardan, Agraria (Agriculture)
14. Mr. Kosasih Bakri, Directorate General of Budget
15. Mr. D. Siregar, Budget
16. Mr. Sjahril, Budget
17. Mr. Mugiadi Suwondo, Directorate General of Cooperatives
18. Mr. Sudarto, Cooperatives
19. Mr. Suyanto, Directorate General Pembangunan Desa
20. Mr. Mardjono, Department of Interior, Division of Village  
Development
21. Mr. Soemitro, Department of Agriculture
22. Mr. H. Meliala, Public Relations Division, Department  
of Manpower and Transmigration
23. Drs. Sukirno, Luwu Project Office, Jakarta
24. Drs. Warsito, Luwu Project Office, Jakarta
25. Mr. Julmar Ma'ruf, Directorate General Persiapan Tanah dan  
Pemukiman Transmigrasi (P.T.P.T.-  
Land Clearing)

USAID/JAKARTA and U.S. EMBASSY

26. Mr. Thomas C. Niblock, Director
27. Mr. Walter Bollinger, Deputy Director
28. Mr. William Larson, Chief, Rural Development Division
29. Mr. Ray Cohen, Program Officer
30. Mr. Walter Tappan, Chief, Agriculture Division
31. Mr. Abe Grayson, Chief, PTE Division

32. Mr. Richard Kriegel, Deputy Chief, Rural Development Division
33. Mr. Karl Baldwin, Chief, Area Development Section, Rural Development Division
34. Mr. Robert Zimmerman, Evaluation Officer, Program Office
35. Mr. William Libby, Rural Development Division
36. Mr. Les Koskie, PTE Division
37. Mr. Ed Bolling, Agriculture Division
38. Mr. Ric Machmer, Luwu Project Officer, Rural Development Division
39. Mr. Carl Dutto, Rural Development Division
40. Mr. Steven Mintz, Rural Development Division
41. Mr. Michael Korin, Agriculture Division
42. Mr. Walter McAleer, Rural Development Division
43. Mr. Arie Supit, Rural Development Division
44. Mr. S.M. Sirait, Rural Development Division
45. Ms. H. Flora, Management Office
46. Mr. Jimmy Jasin, Rural Development Division
47. Mr. Nganlung, OMF
48. Mr. Manulang, OMF
49. Mr. Wouter Sahanaya, Rural Development Division
50. Mr. David Rehfuss, Embassy
51. Mr. Chuck Morris, Embassy

OTHERS

52. Mr. Edwin L. Fox, CLUSA Advisor, Directorate General of Cooperatives
53. Mr. Cliff Nunn, Checchi/D.M.J.M. Resident Manager

PROJECT TITLE: Wuvu Area and Transmigration Development Project  
Loan 497-T-038

I. Impact re Section 102(d) Criteria: (Explain How)

Increase Agricultural Productivity By opening up new irrigation and dry land cultivation, by providing infrastructure to improve market access, and by instituting agriculture development, extension and cooperative programs.

Reduce Infant Mortality A mid-wives training program has been agreed to. A more comprehensive health services program is still planned.

Control Population Growth The mid-wives training program includes instruction on population control.

Promote Greater Income Distribution More employment opportunities are created for small farmers (having two hectares or less), agricultural production is made more efficient and profitable, and non-farm jobs for local skilled and semi-skilled workers are created.

Reduce Un-Under Employment More farm and non-farm job opportunities are created. The seasonal nature of agricultural employment and income will be reduced by the diversified agricultural production aspects of the project. This will also have a multiplier effect in the non-agricultural sectors.

And related criteria:

Strengthen/Create institutions which aid social/economic development A multi-purpose, inter-sectoral coordinating office will have been created. Local skills in irrigation, road building and land clearing infrastructure development will have been improved. The health subactivity and increased agricultural production, employment and income benefits all positively and directly impact upon women in the project area.

**II. Benefit Incidence\*** (Please specify effect on women wherever possible)

**A. Direct Beneficiaries**

	(Number)	(Who)	(Where)
Income	480,000	population of project area	
Labor	7,380	those engaged in project construction, land clearing	
Agricultural Production	432,000	90% of project area involved in agr. production	
Education/Training/Management	1,000	in-country and third-country training	
Medical Treatment (Reduction of Disease, available facilities/services)	4,000	40 mid-wives affecting 100 persons each - all women	
Living Conditions Improved (water, housing, sanitation, nutrition, institutions, decrease cost of living)	480,000	population of project area, including new transmigrants	
Provision of Power/Transportation	280,000	all affected by rebuilt major road and some access roads	
Estimated Overall Total Without Double Counting	<u>480,000</u>		

**B. General Population in an Area that indirectly benefits from:**

increased availability of food	<u>480,000</u>	
increased mobility in area	<u>280,000</u>	Overall <u>480,000</u>
general health improvement	<u>4,000</u> plus	
or overall economic improvement	<u>480,000</u>	

**C. People in Area not affected. Why? None.**

**D. People in Area adversely affected. How?** Undoubtedly there is some adverse impact in a project of this nature. There are, for example, occasional land title disputes between established residents and new transmigrants. However, there is no adverse impact sufficient to cause the project to be altered or dropped.

\* Most of these figures are not mutually exclusive and many will include people who benefit in two or more ways.

LIWU AGRICULTURAL DEVELOPMENT PROJECT  
LOGICAL FRAMEWORK MATRIX

**A.1. Program or Sector Goal**  
Improve the well-being of small farmers by raising productivity sufficiently to increase both per capita consumption and the movement of marketable surpluses to food deficit areas.

- 2. Measures of Goal Achievement**
- a. Levels of production, over time, of specified crops equal to projections.
    - (1) 40,000 MT incremental production of milled rice per year.
    - (2) 14,000 MT incremental production of non-rice food crops per year.
  - b. Marketable surpluses produced in Liwu sold for utilization in deficit areas.
    - (1) 24,000 MT incremental rice outflow.
    - (2) 10,000 MT incremental non-rice food outflow.
  - c. Real income increases for small farmers.
  - d. Increased local per capita consumption.

- 3. Means of Verification**
- a. Export, inter-island, and land transportation records.
  - b. Dept. of Agriculture (DOA) production statistics.
  - c. Benchmark and evaluation surveys.

- 4. Assumptions for Achieving Goal (Targets)**
- a. Conditions of political stability will continue.
  - b. Population growth will not surpass production increases.
  - c. All production increases not absorbed by increased local consumption.
  - d. Markets exist for Liwu's surplus production.
  - e. Transportation/marketing system capable of moving rapidly increasing marketable surpluses from production to deficit areas.

**B.1. Project Purpose**  
a. Increase in agricultural productivity.

- 2. Conditions Indicating Achievement - End of Project Status**
- a. Agricultural productivity.
    - (1) Increase of 19,000 ha of rice and 15,000 ha of non-rice food crops harvested per year.
    - (2) Projections met for utilization of more advanced crop production technology (A.G. irrigation, double cropping, fertilizer, HYV's)

- 3. Means of Verification**
- a. Agricultural Productivity.
    - (1) DOWRD & DOA statistics.
    - (2) Observation of techniques.

- 4. Assumptions for Achieving Purpose**
- a. Agricultural Productivity
    - (1) Input/output price relationships that provide small farmers incentives to use more advanced production technology.
    - (2) Transmigration program provide labor to utilize irrigation works.

- (\*) Favorable land tenure situation.
- (4) Appropriate crop production technology extended to combat plant pests.
- (5) Effective water management in irrigation projects.

a. Well-being of Rural Poor

- (1) Increased income.
- (2) Increased employment opportunities.

b. Well-being of Rural Poor

- (1) A 65% increase (\$134 per year, in farm income of farm families.
- (2) Increased employment opportunities of:
  - a. 34,200 jobs per year in agr'l production.
  - b. 26,500 man years in the construction of sub-projects.

b. Well-being of Rural Poor

- (1) Evaluation program which monitors income and consumption, marketing/transportation costs, employment, etc.

b. Well-being of Rural Poor

- (1) Reduced transportation and marketing costs make Luwa's products more competitive.
- (2) GOI does not pre-empt domestic farmer's increasing production by importing large amounts of rice.
- (3) No inhibiting market forces.
- (4) Average size of farm is maintained.
- (5) Projects carried out in labor intensive way.

c. Institution Building

c. Institution Building

- (1) Increased inter-ministerial coordination in planning, budgeting and implementing rural development project.
- (2) Establishment of Project Office.

c. Institution Building

- (1) Observation of future Luwa development activities, and similar rural development projects in other areas.

c. Institution Building

- (1) Adequate number of technical personnel available to implement Project.
- (2) Various agencies have motivation to coordinate their activities.

(3) Evaluation program functioning as integral part of Project execution and planning future development activities.

**C.1. Output:**

- a. Construction of Bone-Bone and Kalena Irrigation system.
- b. Four farm service centers organized, built and functioning.
- c. Increased utilization of more advanced crop production technology.
- d. Palopo-Malili trunk road improved.
- e. Proven road/irrigation maintenance capability.
- f. Project Office functioning with personnel trained in areas of integrated project planning, management and evaluation.
- g. Systematic evaluation of project's progress and socio-economic impact.

**E.1. Inputs**

- a. Equipment, Indonesian contractors, and manpower for construction works.

**2. Magnitude of Outputs**

- a. 176 km of trunk road upgrade in three years.
- b. 10,760 ha producing irrigated crops.
- c. Work plan budget for road maintenance.
- d. Work plan budget for irrigation maintenance.
- e. Farm service centers operating according to work plans.
- f. Extension workers assigned directly to farm service centers and to Kesamatan Bone-Bone, Motu and Mangkutana.

**2. Implementation Target**

See Annex tables for detailed breakdown of inputs by quantity, cost, implementing agency, AID financing category, source of financing and time phasing.

**3. Means of Verification**

- a. On site inspection.
- b. DOWRD & Hina Marga reports.
- c. Contractor records.
- d. DOWRD & Hina Marga Maintenance work-plans.
- e. DOWRD & Hina Marga budgets.
- f. Number of technology introductions.
- g. Training records.

**3. Means of Verification**

- a. Fixed Amount Reimbursement, GOI contribution, and Farmer contribution. Project Office and evaluation program reports.

**4. Assumptions for Achieving Outputs**

- a. adequate contractor capability available for construction works.
- b. Access to loan is not a serious problem for logistical support and communication.
- c. Adequate financing provided for road and irrigation C and M activities.
- d. Project Office and evaluation program are staffed by trained and dedicated people.

**4. Assumption for Providing Inputs**

- a. Appropriate, realistic organization, implementation and budget plan are developed.
- b. GOI makes budget provisions and provides its inputs on a timely basis.

- b. Indonesian technicians
  - to:
    - (1) form water user associations.
    - (2) carry out extension work.
    - (3) undertake systematic evaluation program.
- c. Training in rural development and program management.
- d. Advisers and consultants.

