

PDAAS-337

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**APPLIED AGRICULTURE RESEARCH
PROJECT**

4970302



ANNUAL REPORT

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AGENCY FOR AGRICULTURE RESEARCH AND DEVELOPMENT

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EXECUTIVE SUMMARY

This report documents the first year of implementation of the Applied Agricultural Research Project (497-0302), from the time the Loan Agreement was signed on 29 September, 1980 until the end of September 1981. Much of this year has been spent in laying the foundation for a successful and well planned and organized project. In spite of the usual constraints due to insufficient manpower and experience, the project has performed remarkably well. Among the important achievements are the following:

1. All conditions precedent for initial disbursement under both loan and grant have been met.
2. A "Detailed Implementation Plan" has been developed as an action guide.
3. A "Project Implementation Unit" has been organized and staffed to coordinate the project. This unit prepared a "network" plan for all the activities in each region.
4. Counterpart funds from the Government of Indonesia have been provided through the 1981/1982 project DIP.
5. Design consultants have been hired and are at work on plans for all facilities to be constructed.
6. After careful consideration and evaluation, Resources Management International, Inc has been chosen to assist in the management of the technical assistance and training components of the project.
7. Land for most of the stations to be developed has been secured and certified.
8. A contract for the purchase of 26 CJ7 jeeps and 19 J20 pick up trucks has been negotiated.
9. Two participants have been sent to the U.S. and the Philippines for fisheries training.

II

10. An in country "Agricultural Economics Research Methodology Workshop" has been organized and supported by the project in cooperation with the AARD Center for Agroeconomic Research and the Bogor Agricultural University (IPB).

In the period ahead project personnel must concentrate their attention on certain activities crucial to the continued progress of the project: land acquisition and certification for all project sites must be completed; plans for the Bogor and Region III (S. and N. Sulawesi, Maluku and NTT) facilities must be finished and approved by USAID; the Research Station Development Specialist must be fielded as soon as possible to assist the design consultants; and procurement and training aspects of the project must be speeded up.

I. PROJECT PREPARATION

As the culmination of cooperation between AARD and USAID, in September 1980 the basic Project Document for the Indonesia Applied Agricultural Research Project (497-0302) was approved (Attachment 1). The planned cost of the project was agreed upon with the signing of Loan Agreement (497-T-064) on the 29th of September 1980 (Attachment 2) and the Grant Agreement on the 15th of December 1980 (Attachment 3). As a guide for the implementation of this project, the Agency for Agriculture Research and Development (AARD) in cooperation with USAID prepared a Detailed Implementation Plan Document on December 24, 1980 (Attachment 4). In order to improve the coordination, integration, and monitoring activities in this project there has been created an AARP Project Implementation Unit (P.I.U.) as proposed in the Project Paper.

In paragraph 5 of the Loan Agreement it is stated that the new project can be initiated if three requirements are fulfilled, which are:

- (a) An opinion of the Minister of Justice that this Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Borrower, and that it constitutes a valid and legally binding obligation of the Borrower in accordance with all of its terms;
- (b) A statement of the name of the person holding or acting in the office of the Borrower and of any additional representatives, together with a specimen signature of each person specified in such statement;

- (c) A detailed implementation plan for the Project, which will include coordination with other donor assistance related to agricultural research. The plan will define disbursement schedules and priority sites for development, taking into consideration the scheduled return of participants trained under the National Agricultural Research Project which is partly funded through an IBRD (International Bank for Reconstruction and Development) loan.

These requirements for the project have already been satisfied with the Legal Opinion dated October 20, 1980 (Attachment 5), the approval by Bappenas dated December 23, 1980 concerning the Project Loan Representative (Attachment 6), and the completed Detailed Implementation Plan of December 24 (Attachment 4).

Having fulfilled these three requirements, USAID then approved the use of the loan and grant fund in their letter (Attachment 7) dated January 15, 1981. Thus, the project could be initiated by using the Grant and Loan funds and using the requested rupiah funds included in the 1981/1982 DIP of the (Applied Agricultural Research Project).

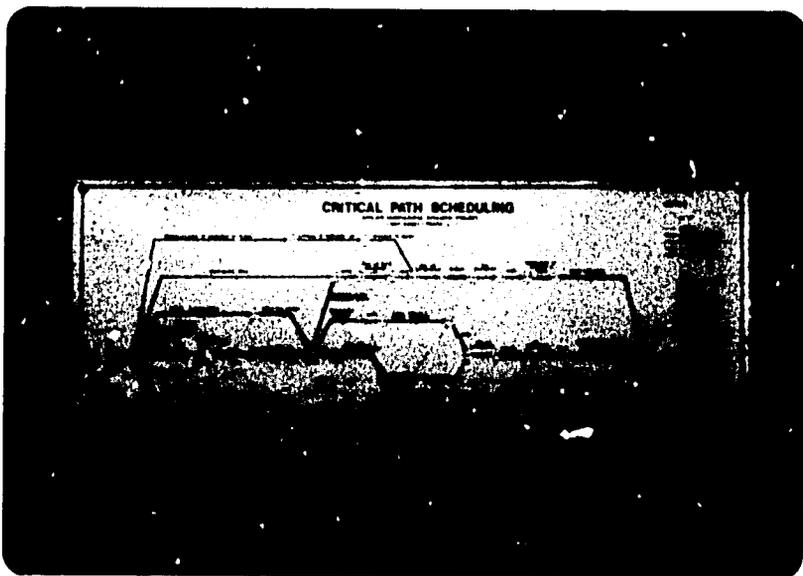


Fig 1. Critical Path Scheduling of the project

II. PLANNING

A. Project Goals

The Applied Agricultural Research Project of the GOI-USAID (AARP) has the goals of building facilities and improving the research capability of 1 Central Research Institute, 3 Research Institutes which are the Research Institute for Food Crops Bogor, the Research Institute for Food Crops Banjarbaru and the Research Institute for Food Crops Maros; of 13 Research Stations which are Kalasey (North Sulawesi), Makariki Food Crops (Maluku), Makariki Industrial Crops (Maluku), Lanrang (South Sulawesi), Jeneponto (South Sulawesi), Mariri (South Sulawesi), Balikpapan (East Kalimantan), Maros (South Sulawesi), Simpang Montrado and Selakau (West Kalimantan), Banjarbaru (South Kalimantan), Handil Manarap (South Kalimantan), Kupang (NTT) and Gondol (Bali); and 3 Experimental Farms which are Bontobili (South Sulawesi), Kuala Kapuas (Central Kalimantan), and Lempake (East Kalimantan). Building of the facilities and improving the research capability will be accomplished by technical assistance, construction, farm development, laboratory improvement, field and miscellaneous information equipment, vehicles, and training. A breakdown of the goals in quantitative terms in each category is included in the Detailed Implementation Plan (Attachment 4).

B. Project Organization

To carry out the project, the organization has been established with the following categories Project Leader assisted by a Secretary, Monitoring and Evaluation, Finance Manpower Planning, Technical Assistance, Construction, Farm Development, and Procurement. The project locations have been grouped into three regions which are :

Region I which covers Java, West Kalimantan and Bali;
Region II which covers South, Central and East Kalimantan;
Region III which covers South and North Sulawesi, Maluku and
Nusa Tenggara Timur (NTT).
Each regional unit is headed by a regional coordinator.

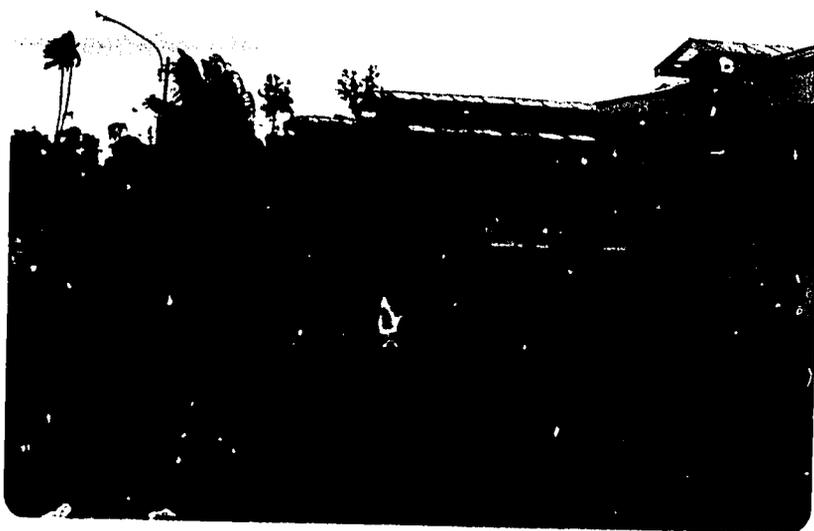


Fig 2. The Maros existing screenhouses

C. Budget

In order to use the Grant and Loan funds a "Projected AARP Disbursement Schedule" was prepared and included in the Detailed Implementation Plan. Besides this, to use the counterpart funds from the Government of Indonesia (GOI) it was necessary to prepare a 1981/1982 DIP for the AARP which covered the activities of the counterpart rupiah funds for acquiring land, construction, training, vehicles, technical assistance, and project administration.

D. Procedure

The procedure for utilizing the Grant and Loan funds must follow the regulations of the GOI and the USAID handbook. To handle the funds from the GOI, Operational Guidelines were developed which will be used as working instructions in the project.

E. Network Planning

In order that the implementation of the project will be synchronized and coordinated smoothly among the categories, a network plan was prepared for all the activities in each region. This network plan especially emphasizes the coordination between the construction of the buildings and the arrival of the equipment and staff. (Attachment 8A, 8B, 8C, 8D).



Fig 3. Location for the Maros Food Crops Research
Institute laboratories.

III. IMPLEMENTATION

A. Project Input

1. AID's Loan and Grant

In both the Loan and Grant agreements it is stated that the total amount of project funds during the five year period would be \$(US) 42,745,000 with the AID grant funds of \$(US) 6,500,000 and AID loan funds of \$(US) 18,900,000.

2. GOI's Funds

During the time period of this project, counterpart rupiah funds from the GOI will be as much as \$(US) 17,345,000 as specified in the Loan Agreement. For the 1981/1982 fiscal year the total amount in the DIP was Rp 1,200,000,000.

3. Personnel

To fill the positions (categories) in the organizational structure of the project (AARP), the Project Leader in his letter (number 02/P4U/4/81) stated who the officials were that would join this project, both from AARD and from outside AARD; these are the following:

- | | |
|-----------------------|---|
| (1) Project Leader | : Ir. Budhoyo Sukotjo |
| (2) Project Secretary | : Ir. H. Noorsyamsi |
| (3) Treasurer | : Achmad Hanafiah |
| (4) Experts | : Dr. Ibrahim Manwan
Ir. Panansih Isbagio
Dr. Joko Budianto
Ir. Sayoso M.Sc
Dr. Prabowo
Tjitropranoto
Ir. Atyanto Muchtar |

- (5) Monitoring and Evaluation : Sofyan M.Sc. &
Ir. Hafni Zahara
- (6) Technical Assistance : Baga Kalie B.Sc
- (7) Manpower planning and
training : Drs. Widadi
- (8) Construction and farm
development : Sirdan M.Sc.
- (9) Procurement : Ir. Syafril Lamsayun
- (10) Coordinator wilayah I : Dr. M. Iman
- (11) Coordinator wilayah II : Dr. Hans Anwarhan
- (12) Coordinator wilayah III : Ir. Hasanuddin

The above officials in carrying out their responsibilities will be assisted by project staff assigned to each of the 12 categories.



Fig 4. The varietal improvement in Banjarmasin
Research Institute for Food Crops

4. Land

The land for the development of the research institutes, research stations, and experimental farms that has been provided at each project location are the following:

- | | |
|-----------------------|--|
| (1) Bogor | 5 ha for food crops |
| (2) Banjarbaru | 50 ha for food crops |
| (3) Maros | 150 ha for food crops |
| (4) Handilmanarap | 20 ha for food crops |
| (5) Kalasey | 50 ha for food crops |
| (6) Makariki | 50 ha for food crops |
| (7) Lanrang | 43 ha for food crops |
| (8) Jeneponto | 30 ha for food crops |
| (9) Mariri | 50 ha for food crops |
| (10) Kuala Kapuas | 25 ha for food crops |
| (11) Lempake | 10 ha for food crops |
| (12) Bontobili | 23 ha for food crops |
| (13) Kupang | 50 ha for food crops |
| (14) Simpang Montrado | 175 ha for industrial crops and Selakau 50 ha. |
| (15) Makariki | 200 ha for industrial crops |
| (16) Balikpapan | 20 ha for forestry |
| (17) Sudiang Mandai | 5 ha for forestry |
| (18) Banjarbaru | 5 ha for animal disease |

5. Construction Design

To plan the physical construction at all of the project locations, the following design consultants were appointed :

- a. P.T. Encona for Region I in Bogor and West Kalimantan.
- b. P.T. Ciria Jasa for Region II in South, Central, and East Kalimantan.
- c. Team-4 for Region III in Sulawesi, Maluku, and N.T.T.

The main agreement with each design consultant was that they be finished by September 17, 1981. Each of these design consultants have already submitted their work plan for completing the designs which are their responsibility.



Fig 5. Location for the new Banjarbaru Research Institute for Food Crops.

6. Categories

a. Technical Assistance

To implement the selection of the consulting firm which would manage the technical assistance on December 11, 1980 an advertisement for this purpose was placed in Commerce Business Daily in New York with a time limit to submit the proposals by January 26, 1981 which is shown in Attachment 9.

Responding to this advertisement, sixteen American consulting firms submitted proposals for participation in the project as shown in Attachment 10.

The head of Agency for Agricultural Research and Development (AARD) formed a team for "selection of the consulting firms" in his letter of April 20, 1981, number 10-AL-7/1981.

This team has already completed the evaluation of these consulting firms as shown in Attachment 11.

This "Prequalification Team" carried out its assignment for the first stage of the evaluation. Of the 16 consulting firms, five firms were chosen (short-listed) for the next stage of the evaluation. These five selected firms were

- (1) Resources Management International (RMI),
- (2) IRI Research Institute, Inc.
- (3) South East Consortium for International Development (SECID)
- (4) Black and Veatch International, and
- (5) Multi National Agribusiness Systems, Inc. (MASI).

The criteria used in the evaluation and the results of this evaluation are in Attachment 12.

The five selected firms were requested to submit their Technical Proposals as shown in Attachment 13.

on April 6, 1981, which were then submitted to the Agency for Agricultural Research and Development on June 15, 1981 for further evaluation.

b. Training/Man-power development

To accomplish manpower development there will be training and scientific visits which will be funded by both the GOI through the DIP, and Loan assistance from USAID. The amount of money provided by the GOI in the 1981/1982 fiscal year was Rp.28,000,000 for 40 person months while for training/visits supported by the USAID loan in the fiscal year 1981/1982 there was a planned 90 person months at a cost of \$(US) 216,000.

a. Scientific visits/trips	: 10 people = 10 person months
b. Training for 2 months	: 10 people = 20 person months
c. Training for 3 months	: 12 people = 36 person months
d. Training for 6 months	: 4 people = 24 person months

T o t a l = 90 person months



Fig 6. The existing Handilmanarap Research Station for Food Crops.

c. Construction

In the 1981/1982 fiscal year the building construction for Phase I was for the Bogor Research Institute for Food crops in Bogor. The buildings to be constructed in this year are the auditorium, greenhouse, service building, mushola (mosque), fencing, and site works at a cost of Rp.600,261,000 from the GOI and Rp.334,366,000 prefinancing from the Bank of Indonesia.

d. Procurement

The purchase of equipment in the fiscal year 1981/1982 was all paid from the GOI funds and amounted to Rp. 18,765,000 for the purchase of office equipment as shown in Attachment 14.

In this fiscal year there has not yet been any purchase of equipment paid for by loan funds.

e. Vehicles

To improve the project communications both at the central office and in the regions, 26 CJ-7 Jeeps and 19 J-20 pick-up trucks will be purchased with the loan funds is an amount of \$(US) 575,575. A contract with Jakarta Motors was signed on September 5, 1981 and it is hoped that the vehicles will be transferred to the project in October 1981. Besides this, through the DIP 1981/1982 there will be funds to purchase automobiles.

B. Project Output

1. Land

Land which has already been acquired and the ownership certificates held by the AARD are :

- a. Lempake in East Kalimantan, an area of 10 ha for food crops.
- b. Kuala Kapuas in Central Kalimantan, an area of 25 ha for food crops.
- c. Hardilmanarap in South Kalimantan, an area of 20 ha for food crops.
- d. Banjarbaru in South Kalimantan, an area of 6.99 ha for animal disease.

Land which has been approved for purchase and compensation, and the surveying completed are :

- a. Simpang Montrado, an area of 175 ha and Selakau, an area of 50 ha in West Kalimantan for industrial crops.
- b. Balikpapan in East Kalimantan, an area of 20 ha for forestry.
- c. Banjarbaru in South Kalimantan, an area of 50 ha for food crops.
- d. Sudiang Mandai in South Sulawesi, an area of 5 ha for forestry.
- e. Kalasey in North Sulawesi, an area of 50 ha for food crops.



Fig.7. The existing office for Handilmanarap Research Station for Food Crops.

Land which is owned by the project and the certificates are being completed are :

- a. Bogor in West Java, an area of 7 ha.
- b. Maros in South Sulawesi, an area of 150 ha.
- c. Makariki in Maluku, an area of 50 ha.
- d. Lanrang in South Sulawesi, an area of 43 ha.
- e. Jeneponto in South Sulawesi, an area of 30 ha.
- f. Mariri in South Sulawesi, an area of 50 ha.
- g. Bontobili in South Sulawesi, an area of 23 ha.

2. Construction Design

The completed construction designs are only the preliminary design phase of the building designs for Phase I of the Research Institute for Food Crops in Bogor.

3. Technical Assistance

In the final evaluation of the consulting firms, one firm was selected as the main candidate and one other firm as the alternate. These selected consulting firms were :

- a. R.M.I. as the main candidate
- b. I.R.I. as the alternate

The meeting notes on the first phase of the evaluation as well as the evaluation criteria in Attachment 15.

To inform the USAID on the five selected firms in the first phase and the results of the final phase of the evaluation, letters were given to USAID dated February 24, 1981 and June 15, 1981 as shown in Attachment 16 and Attachment 17. In reply to these two letters the USAID has responded by approving this selection process in their letters of March 6, 1981 and June 18, 1981 as shown in Attachment 18 and Attachment 19.

To carryout the negotiations with the selected consulting firm, R.M.I. (Resources Management International Incorporated), the Director General of the Agency for Agricultural Research and Development formed a negotiating team as stated in his decree of July 15, 1981 (no.24-TL10/1981) which is in Attachment 20.

The negotiations between the Agency for Agricultural Research and Development and RMI are at present underway.

Manpower Planning/training

The Agricultural Economics Research Methodology workshop was one of the in-country training programs and it had 20 researcher participants from various research institutions in AARD. This training program was carried out with cooperation between the Center for Agro Economic Research in AARD and the Research Institute of the Bogor Agricultural University. The list of participants and course outline which began on September 28, 1981 is in Attachment 21 and Attachment 22.

For training and visits abroad two staff member of the Center Research Institute for Fisheries, Mr. Achmad Sarnita and Mrs. Haniah were sent the Philippines and the United States to study milk fish cultivation methods.

5. Procurement

For the 1981/1982 year the purchase of goods in May 1981 was for office equipment as shown in Attachment 14, which was used for the project's office in Pasar Minggu.

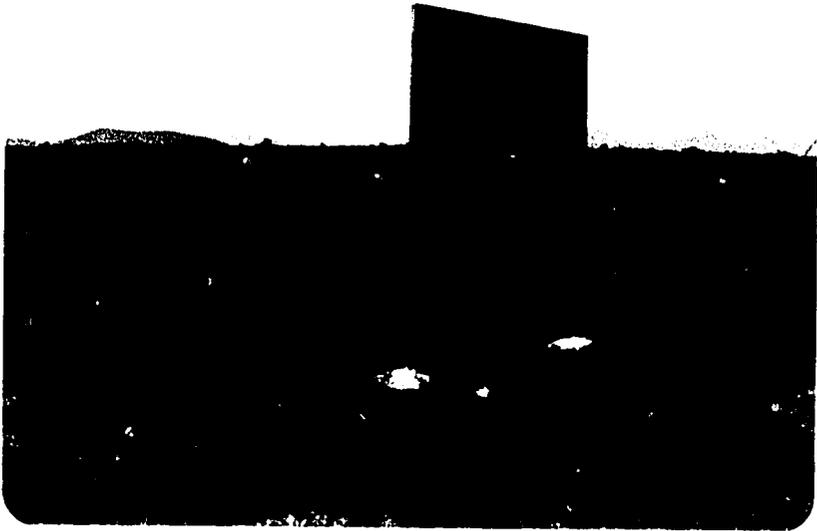


Fig 8. The location for Banjarbaru Animal Diseases Research Station.

IV. FINANCE

A. Budget

In the 1981/1982 fiscal year the appropriations for this project were USAID grant funds of \$(US) 180,000 Loan funds of \$ (US) 1,297,000 and Government of Indonesia as counterpart budget of Rp 1,200,000,000. The grant funds provided by USAID were for costs of Technical Assistance, whereas the Loan funds were used to pay 40% of the costs of construction, procurement (Lab and field equipment, information equipment), vehicles, and training. GOI provided funds for the local costs of Technical Assistance, Construction (60%), Land Development (100%),

vehicles, training, and administration of the project.
A breakdown of these budget items is in Attachment 23.

B. Expenditures

1. In relation to the Grant Funds, the money for technical assistance has not yet been used in this fiscal year.
2. The loan funds which have been used were for the purchase of vehicles for \$(US) 575,575 and \$(US) 20,000 for training.
3. All of the GOI counterpart funds spent from April 1981 to and including September 1981 which amounted to Rp 123,068,927 including the costs of the Agro Economic Research Methodology Training workshop of Rp 5,600,000 (20%), land acquisition at Lempake (10) for Rp 56,574,500.75 and at Banjarbaru for animal disease (6.977 ha) for Rp 9.950.000,- and purchase of office equipment for Rp 2,392,250 (49.84%). The funds for local costs of technical assistance, construction, and vehicles has not yet been used.



Fig 9. Acceptance of Makariki Research Station from the Moluccan Governor to the Head of AARD.

V. EVALUATION

A. Monitoring and reports

In this first year of the project, visits to the project locations were primarily for monitoring the acquisition of land. To do this monitoring, the project leader, the project assistants, project staff, and a USAID representative with the design consultant undertook inspection trips to the project locations, which were 5 times to West Kalimantan, 6 times to Banjarmasin, 2 times to Palangkaraya, 11 times to Ujung Pandang, one time to Manado, 3 times to Ambon, and 2 times to Kupang.

In order to prepare the master list for purchase of equipment and the master list for short-term training there were visits by the project assistants to the Central Research Institute for Food Crops, Central Research Institute for Fisheries, Central Research Institute for Animal Sciences, Central Research Institute for Forestry, and Central Research Institute for Industrial Crops.

Meeting with the design consultants which were P.T. Encona, Ciria Jasa, and Team-4 were held regularly to review the preparation of designs for the planned buildings.

To monitor the development of the project both from a technical aspect as well as from an administrative aspect in order to know the difficulties and problems confronting the project, monthly internal meetings were held for the project staff.

Meeting between the Project Leader and the USAID Project Manager were held every one or two weeks for consultations on solving the various problems which emerged.

Internal inspections were conducted every month by the Project Monitoring Unit, whereas inspection of the Inspector General was held on September 7 to 11, 1981.

Reports which were prepared for the funding from the DIP were:

- a. Monthly financial report from April to and including September 1981.
- b. Monthly fisical reports from April to and including September 1981.
- c. Quarterly report I for April to and including June 1981, and Quarterly report II from July to and including September 1981.

Reports related to the grant and loan funds which should be prepared each quarter, have only been prepared one time for the entire year because in the first year there has not yet been many activities.



Fig 10. The new building of Makariki Research Station for Food Crops.

B. Appropriateness and Timelines

As a basis for evaluating if the project is on schedule, one can use the Detailed Implementation Plan and DIP for 1981/1982:

1. The Land which according to the plan was for 20 locations still has 10 locations which still need the transfer completed were Kalasey, Banjarbaru food crops, Kuala Kapuas, Lempake, Balikpapan, Maros forestry, Anjungan, Makariki industrial crops, Banjarbaru animal disease, and Kupang; until this period the land not yet finished were Makariki industrial crops and Kupang.

The planned location of Anjungan in Pontianak Kabupaten, after the survey, was moved to Simpang Montrado and Selakau in Sambas Kabupaten in West Kalimantan. The planned location of the Maros Forestry Station was moved to Sudiang Mandai in Ujung Pandang.

2. The detailed final design for the construction of buildings for Bogor in the first phase according to the schedule, were hoped to be finished by the latest in January 1982 and the USAID approval for the preliminary design were hoped begin in September 1981. Yet, by the end of September 1981 the preliminary design were not yet finished and USAID had not yet given this approval.

The design construction for Region III should have had the preliminary designs begun and completed in the June to November 1981 period, but until September 1981 this had not yet been fully completed. The preliminary design for the Banjarbaru food crops station which should have been submitted in the second phase will begin in January 1982 because of waiting for the land acquisition to be finished, through it can now begin in September 1981 because the land acquisition was completed ahead of schedule.

3. Concerning the technical assistance, according to the schedule in the Detailed Implementation Plan, the host country contract negotiations should begin in September 1981 and be finished in November 1981 for the signing of this host country contract. Actually, the negotiations began in August 1981 which means one month ahead of schedule. The recruitment of a Research Station Development Specialist whose assignment was schedule to begin in May 1981, until this time has not yet happened because of difficulties in recruiting a suitable expert.
4. The required detailed commodity list for the procurement of the laboratory and field equipment which according to the schedule would be from January 1981 to December 31, 1981, until the end of September 1981 the list had not yet been completely finished. This was caused by the difficulty of getting handbooks/lists which were up-to-date and suitable for the required equipment.
5. The purchase of vehicles which according to the schedule should be carried out between April and November 1981 in the form of 12 jeeps and 19 pick up trucks has been increased to 26 jeeps and 19 pick ups. The additional jeeps were purchased for the reason that the price was lower if compared with buying them in the following year. In October 1981, it is hoped that all of these vehicles will be transferred to the project. The purchase of two vehicles with GOI funds through the National Secretariate has not yet been completed.



Fig 11. The location for Research Station for Industrial Crops at Simpang Montrado.

6. The planned short-term training abroad was for 36 people in the first year, until this period only 2 people have gone abroad. The reason for this was because the consultant who will manage the Technical Assistance and training has not yet been appointed and also the master list for the training is not yet prepared.

The Agro Economic Research Methodology workshop according to the plan was scheduled to begin in June 1981, yet only was initiated in September 1981 because the instructors could not begin until September 1981.

7. The budgeted funds in the projected AARP disbursement schedule for vehicles was \$(US) 398,000 though the actual expenditure was \$(US) 575,575. For construction only \$(US) 160,000 was budgeted yet the estimated requirement was \$(US) 500,000. However, the budget for lab equipment,

field equipment, and information equipment was \$(US) 240,000, \$(US) 160,000, and \$(US) 123,000 respectively. These funds in the first year have not yet been used.

8. At the beginning of the project it was felt that personnel would be difficult to find. Yet, in the first year all of the positions have been filled though it is still felt that there is a shortage of staff who understand the procedures and bookkeeping for the loan and grant.
9. The project offices which are now on Jalan Ragunan 29 in Pasar Minggu are felt to be very cramped and to be limiting effective working habits.



Fig 12. The road to Simbang Montrado Research Station on the east of Singkawang West Kalimantan.

VI. RECOMMENDATIONS FOR ACTION

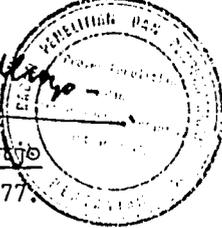
1. The land acquisition for the project location at the Makariki Industrial Crops Station and the Kupang/NTT station needs to be quickly completed in cooperation with the coordinator of Region III and staff of the Center Research Institute for Industrial Crops and the Center Research Institute for Food Crops. For the land that AARD does not yet possess the certificates, it is necessary to quickly obtain the certificates from the local agraria offices.
2. The preliminary designs for the buildings in Region III which were included in the first phase need to be quickly finished by Team-4 to catch up to the schedule which has already been approved. Inputs from the Head of the Maros Research Institute for Food Crops together with his staff are necessary.
3. The recruitment of a Research Station Development Specialist must be quickly carried out so that he can work with the Indonesian design consultant in evaluating their building designs. The recruitment of this expert will be the first task of the consultant who will manage the technical assistance and training.
4. To speed up the preparation of the detailed commodity list, it will be necessary to acquire handbooks/lists which are up-to-date for the information of those staff who will use the lab equipment. Materials on the lists that have been submitted by the Research Institutes need to be processed by the project assistant for Manpower Development and Training.

5. The vehicles already acquired for the project locations need to be sent to the regions in accordance with each locations needs. The purchase of two vehicles paid for by the GOI through the National Secretariate must be continuously monitored at this National Secretariate.
6. Ineffectively conducting the short-term training it will be necessary to process the materials for short-term training that have already been submitted by the Research Institutes to be able to prepare a master list for short-term training containing the purpose, who, where, when, how long, and usefulness of the training.
7. The projected AARP disbursement schedule which is in the Detailed Implementation Plan will need to be adjusted to the budget's development needs according to a more effective implementation plan.
8. The project staff will need short-term training both in-country and abroad in accordance with each staff members special field of interest.
9. The project office space which is at Pasar Minggu needs to be expanded to hold the staff who do not yet have a place
10. The project reports required by the loan and grant must be prepared each quarter.

SIGNATURE and DISTRIBUTION LIST

Jakarta, December 1, 1981

Project Leader

Budhoyo Sukotjo

NIP. 080013777.

DISTRIBUTION LIST

1. National Development Planning Agency (1 copy).
2. Directorate General for Budgeting (1 copy).
3. Directorate General for International Monetary Affairs (1 copy).
4. Bank of Indonesia (1 copy).
5. USAID (5 copies).
6. Secretariat General of Agriculture (2 copies).
7. Inspectorate General of Agriculture (1 copy).
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21. Research Institute for Forest Products (1 copy).

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3. Project Grant Agreement between The Republic of Indonesia and the United States of America for AARP.
4. Detailed Implementation Plan for AARP (497-0302).
5. Memorandum of the Minister of Justice of the Republic of Indonesia on the Validity and Legally Binding Character of the AID Loan Agreement No.497-T-064 Concluded between the Republic of Indonesia and the United States of America.
6. AID Loan No.497-T-064. Designation of Other Representatives of the Borrower.
- 7A. AID's Approval to First Disbursement of Loan Agreement
- 7B. AID's Approval to First Disbursement of Grant Agreement.
8. Network and Schedule Perencanaan Proyek Penelitian dan Pengembangan Pertanian RI - USAID.
9. Advertisement in Commerce Business Dayly New York 26 January 1981.
10. Daftar Perusahaan yang menyerahkan Prakwalifikasi Technical Assistance untuk AARP.
11. Surat Keputusan Kepala Badan Litbang Pertanian No.10-AI-7/1981 tentang pembentukan Team Prakwalifikasi Perusahaan Konsultan.
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19. Persetujuan USAID mengenai pemilihan RMI sebagai konsultan bantuan teknik.
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22. Jadwal Lokakarya Metodologi Penelitian Agro Ekonomi.
23. Laporan proyek AARP DIP 1981/1982, bulan September 1981.

UNCLASSIFIED

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

INDONESIA
APPLIED AGRICULTURE RESEARCH
497 - 0302
PROJECT PAPER

SEPTEMBER 1980

UNCLASSIFIED

APPLIED AGRICULTURAL RESEARCH PROJECT
Indonesia

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APPLIED AGRICULTURAL RESEARCH PROJECT

Indonesia

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ABBREVIATIONS

- AARD - Agency for (Agricultural) Research and Development
- BAPPEDA - Provincial Planning Agency
- BIMAS - Mass Guidance Program for Self-Sufficiency in Rice and Secondary Crops
- BULOG - National Logistics Agency
- BRI - Bank Rakyat Indonesia (People's Bank of Indonesia)
- CRIA - Central Research Institute for Agriculture
- DOA - Department of Agriculture
- GOI - Government of Indonesia
- IIRD - International Bank for Reconstruction and Development (World Bank)
- IRMAS - Mass Intensification Program for Self-Sufficiency in Rice and Secondary Crops (without credit facility)
- IRRI - International Rice Research Institute
- NARP - National Agriculture Research Program
- REPELITA - Five Year Development Program

PROJECT AUTHORIZATION

INDONESIA

APPLIED AGRICULTURAL RESEARCH
Project No. 497-0302

Pursuant to Section 103 of the Foreign Assistance Act of 1961, as amended (the "FAA"), I hereby authorize the Applied Agricultural Research Project (the "Project") for Indonesia (the "Cooperating Country") involving planned obligations not to exceed Eighteen Million Nine Hundred Thousand Dollars (\$18,900,000) in Loan funds and Six Million Five Hundred Thousand Dollars (\$6,500,000) in Grant funds over a five year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process to help in financing foreign exchange and local costs for the Project.

The Project consists of the provision of training, technical assistance, and other services, commodities and related inputs to expand and improve agricultural research capability on the islands of Kalimantan, Sulawesi, Maluku, Bali, and West Timor, and in the province of West Java.

The Project Agreement which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Interest Rate and Terms of Repayment

The Cooperating Country shall repay the Loan to A.I.D. in U.S. dollars within forty (40) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in U.S. dollars interest from the date of first disbursement of the Loan at the rate of (i) two percent (2%) per annum during the first ten (10) years, and (ii) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods and Services

Goods and services, except for ocean shipping, financed by A.I.D. under the project shall have their source and origin in the Cooperating Country or (in the case of Grant funds) the United States or (in the case of Loan funds) countries included in A.I.D. Geographic Code 941, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of (in the case of Grant funds) the United States or (in the case of Loan funds) the United States or the Cooperating Country.

c. Waivers:

The following waivers of A.I.D. procurement procedures are hereby approved:

(i) A waiver of Section 605(i) of the FAA is more fully described in the Action Memorandum for this authorization to permit the local purchase of fifty-two (52) utility vehicles and thirty-two (32) pick-up trucks assembled locally by Jakarta Motors, the Indonesian subsidiary of the U.S. American Motors Corporation (AMC). The waiver authority will be executed only when the purchase of Indonesian source vehicles is economically sound. The total estimated cost of these vehicles is \$1.02 million.

(ii) A sole source procurement waiver to permit the purchase of these vehicles directly from Jakarta Motors, the Indonesian subsidiary of AMC, on the basis that this is the only available local supplier of vehicles meeting the requisite specifications.

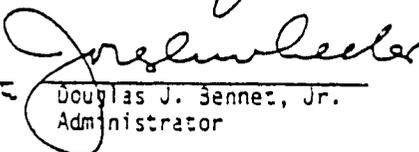
d. Other

The Project Agreement shall have a condition precedent to the effect that prior to disbursement of Loan funds, the Cooperating Country will furnish a detailed implementation plan with a schedule for construction, procurement, and the assignment of U.S. and Indonesian personnel. The implementation plan will also include coordination with other donor assistance related to agricultural research, and take into consideration the scheduled return of participants funded by the IBRD.

The Project Agreement shall reflect the agreement of the Cooperating Country that it will make funding for technical assistance for the project available from its own resources, or upon agreement with A.I.D. from the Loan funds authorized hereunder, if more technical assistance is required than can be financed with Grant funds.

Clearances

Clearances	Date	Initial
GC, Norman Holmes	9/12/80	NH
AA/PPC, Alexander Shakow	9/12/80	AS
AA/ASIA, John H. Sullivan	9/10/80	JHS

deputy = 
 Douglas J. Bennet, Jr.
 Administrator

September 17, 1980
Date

GC/ASIA:CStephenson:jk:ab:9/8/80:29092

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET	1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete Amendment Number N/A	DOCUMENT CODE 3
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2. COUNTRY/ENTITY Indonesia/USAID Mission	3. PROJECT NUMBER 497-0302
--	-------------------------------

4. BUREAU/OFFICE ASIA	5. PROJECT TITLE (maximum 40 characters) Applied Agricultural Research
--------------------------	---

6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 09 30 86	7. ESTIMATED DATE OF OBLIGATION (Under "B" below, enter 1, 2, 3, or 4) A. Initial FY 810 B. Quarter 4 C. Final FY 812
--	---

8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY 80			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	3,500	1,500	5,000	18,632	6,768	25,400
(Grant)	()	()	()	(6,500)	()	(6,500)
(Loan)	(3,500)	(1,500)	(5,000)	(12,132)	(6,768)	(18,900)
Other U.S.						
1.						
2.						
Host Country			4,000			17,465
Other Donors)						
TOTALS	3,500	5,500	9,000	18,632	24,233	42,865

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	B 121	080	080	-0-	-0-	6,500	18,900	6,500	18,900
(2)									
(3)									
(4)									
TOTALS				-0-	-0-	6,500	18,900	6,500	18,900

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each) 012 021 070 093 312	11. SECONDARY PURPOSE CODES 141
--	------------------------------------

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)					
A. Code	BR	BS	R/AG	TECH	
B. Amount					

13. PROJECT PURPOSE (maximum 480 characters) <div style="border: 1px solid black; padding: 10px; margin: 5px 0;"> To expand and improve agricultural research to address agro-climatic factors peculiar to Kalimantan, Sulawesi, Maluku and West Java. </div>
--

14. SCHEDULED EVALUATIONS Interim MM YY MM YY Final MM YY 09 83 09 86 09 89	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input checked="" type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input type="checkbox"/> Other (Specify)
---	---

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

17. APPROVED BY	Signature /s/ W. G. Bollinger Title Acting Director, USAID/Indonesia	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY 05 22 80
-----------------	---	---

INSTRUCTIONS

The approved Project Data Sheet summarizes basic data on the project and must provide reliable data for entry into the Country Program Data Bank (CPDB). As a general rule blocks 1 thru 16 are to be completed by the originating office or bureau. It is the responsibility of the reviewing bureau to assume that whenever the original Project Data Sheet is revised, the Project Data Sheet conforms to the revision.

Block 1 - Enter the appropriate letter code in the box, if a change, indicate the Amendment Number.

Block 2 - Enter the name of the Country, Regional or other Entity.

Block 3 - Enter the Project Number assigned by the field mission or an AID/W bureau.

Block 4 - Enter the sponsoring Bureau/Office Symbol and Code. (See Handbook 3, Appendix 5A, Table 1, Page 1 for guidance.)

Block 5 - Enter the Project Title (stay within brackets; limit to 40 characters).

Block 6 - Enter the Estimated Project Assistance Completion Date. (See AIDTO Circular A-24 dated 1/26/78, paragraph C, Page 2.)

Block 7A. - Enter the FY for the first obligation of AID funds for the project.

Block 7B. - Enter the quarter of FY for the first AID funds obligation.

Block 7C. - Enter the FY for the last AID funds obligations.

Block 8 - Enter the amounts from the 'Summary Cost Estimates' and 'Financial Table' of the Project Data Sheet.

NOTE: The L/C column must show the estimated U.S. dollars to be used for the financing of local costs by AID on the lines corresponding to AID.

Block 9 - Enter the amounts and details from the Project Data Sheet section reflecting the estimated rate of use of AID funds.

Block 9A. - Use the Alpha Code. (See Handbook 3, Appendix 5A, Table 2, Page 2 for guidance.)

Blocks 9B., C1. & C2. - See Handbook 3, Appendix 5B for guidance. The total of columns 1 and 2 of F must equal the AID appropriated funds total of 8G.

Blocks 10 and 11 - See Handbook 3, Appendix 5B for guidance.

Block 12 - Enter the codes and amounts attributable to each concern for Life of Project. (See Handbook 3, Appendix 5B, Attachment C for coding.)

Block 13 - Enter the Project Purpose as it appears in the approved PID Facesheet, or as modified during the project development and reflected in the Project Data Sheet.

Block 14 - Enter the evaluation(s) scheduled in this section.

Block 15 - Enter the information related to the procurement taken from the appropriate section of the Project Data Sheet.

Block 16 - This block is to be used with requests for the amendment of a project.

Block 17 - This block is to be signed and dated by the Authorizing Official of the originating office. The Project Data Sheet will not be reviewed if this Data Sheet is not signed and dated. Do not initial.

Block 18 - This date is to be provided by the office or bureau responsible for the processing of the document covered by this Data Sheet.

APPLIED AGRICULTURAL RESEARCH PROJECT

PART I. SUMMARY AND RECOMMENDATIONS

B. Recommendations

Loan: \$18,900,000
(Terms 40 years, 10 year grace period; interest
of 2% during grace period, 3% thereafter)

Grant: \$6,500,000
(Life of project. To be funded incrementally)

C. Brief Description of Project

Indonesia is a vast archipelagic country with a land area of 1,904,569 km² which lies between 6°08'N and 11°15'S of the Equator and between 94°15'E, and 141°E the greater part being in the Southern Hemisphere. There are 13,667 islands within its territory with 992 inhabited. The population in July 1979 was 139.4 million, 63.2 of which are located on the islands of Java and Madura. While the country has a population density of 69/km², the islands of Java, Madura and Bali have 670/km² and some of the outer islands have lower than the national population density. These outer islands have great potential for development especially in the agricultural sector.

The economy of Indonesia is agriculturally based and in 1976, 62 percent of its population were dependent on and involved in agriculture and agriculturally related activities. Based on 1977 figures, the agricultural sector contributed 31 percent of the gross domestic product at current market prices and 40 percent of the total foreign exchange earnings.

Despite being an agricultural country, rich in land and manpower resources plus favorable climate, Indonesia still finds itself importing food products, particularly rice. In 1977, the country imported 1.5 million metric tons of rice worth US\$ 333 million. In 1978, 2.3 million tons of rice were imported. The fact that the rate of food production cannot keep up with increased per capita consumption reflects the basic challenge to the agricultural community (research, education, production, marketing and distribution).

Food, being an essential commodity in the development of a country, the Indonesian Government therefore focused

great attention during Repelita I and II periods mainly on rice production. In the current Repelita III period increased emphasis will be put on production of palawija (secondary) crops. The objective is to increase total food production in order to attain self sufficiency in food stuffs.

As a result of this effort, significant achievements have been attained. Over the period 1969 to 1976, wetland rice production increased at a yearly average of 4.6 percent. This increase was achieved through improvement of crop yields at the rate of 2.9 percent annually and expansion of area grown to wetland rice which increased at a yearly rate of 1.6 percent. Development of new irrigation facilities has also contributed to the increase in wetland rice production. Yield increases were also obtained for the other food crops but because of declining land area from which these crops were harvested, the production over the same period remained fairly constant or decreased particularly with crops such as dryland rice, corn, cassava and sweet potato. The decline may also be attributed in part to changes in Indonesian eating habits i.e. an increased preference for rice which would also help to account for the increase in the per capita consumption of rice in the country. The lack of new technology, price supports and marketing facilities for the other food crops including dryland rice may also have contributed to the decline in the production of these crops.

To overcome the continuing shortage of food, the Government's current plans include not only intensification of agricultural production but also expansion into new agricultural areas especially on the islands outside Java, Madura and Bali. Two such regions with enormous agricultural potential are Kalimantan and the eastern part of Indonesia. The intensification and extensification program will also be accompanied by development of more irrigation systems, improved maintenance of existing irrigation facilities in various regions and provision of support infrastructure to stimulate and encourage farmers to increase their production.

To formulate and successfully implement priority agricultural development plans it is imperative to have a continuous flow of pertinent and factual technical information. This can best be attained by strengthening the existing research facilities and establishing additional research stations in the different agro-ecological conditions prevailing in the country. Since agricultural problems are location specific the establishment of a network of research stations is necessary. While these stations may concentrate on

the solutions to local problems, their overall programs should be coordinated in order to minimize duplication. Under this arrangement, limited adequately trained manpower, research facilities and funds are effectively utilized; this approach will also insure the development of an integrated package of technology that small farmers could readily adopt.

The government of Indonesia (GOI) has requested USAID assistance in strengthening the agricultural research institutions on Kalimantan, Sulawesi, Maluku, Bali, West Timor and Java. The proposed project will complement similar activities to be undertaken by the World Bank's second agricultural research loan, and other donor projects, and will form an integral part of the National Agricultural Research Program (NARP) proposed by the Agency for Agricultural Research and Development in its master plan of activities for Repelita III.

A major emphasis of the USAID/Indonesia agricultural strategy is support to agricultural research. Since 1972 AID has maintained a contract with the International Rice Research Institute (IRRI), Los Banos, Philippines, which has provided a multidiscipline team of scientists for Agricultural Research Project 497-0198, with the Central Research Institute for Agriculture (CRIA).

The association developed between AID and CRIA over the years led, in 1977, to the design and implementation of the Sumatra Agricultural Research Project 497-0263, which will establish a network of nine research stations throughout Sumatra. The Sumatra Agricultural Research Project built on the theme of location specific agricultural research, as defined in a series of masterplans developed by CRIA, to better address the wide range of agro-climatic conditions which exist throughout the archipelago. Following on the project came an IBRD proposal for a second loan for agricultural research. A staff appraisal report was completed in October 1979, and the project was successfully negotiated between IBRD and the Agency for Agricultural Research and Development (AARD) in April 1980.

IBRD Project

The project aims to complete assistance for food crops research started under the first IBRD research project (1179-IND) and to provide support for research programs for other principal commodities. Selection of components took into account bilateral aid for agricultural research, and USAID/Indonesia participated in discussions and planning. Major emphasis is

institution building through support to and strengthening of AARD research capacity, and the project design reflects the proposed AARD reorganization. The IBRD project includes:

- (a) construction and upgrading research centers and institutes, stations, farms and staff housing;
- (b) experimental farm and site development;
- (c) vehicles and trucks;
- (d) scientific, workshop and office equipment;
- (e) incremental salaries, fertilizers, pesticides, spraying equipment and small tools;
- (f) long term local and overseas training for Indonesian research staff; and
- (g) technical assistance, principally for research activities, and consultants' and architects' fees.

Annex A.1 summarizes project components, locations and cost, excluding contingencies. Training and technical assistance would be implemented during the 8 year period 1981/82-1988/89. The other components would be implemented over 5 years, 1981/82-1985/86. Technical assistance under the IBRD project will vary according to program needs and will include: participation in planning and organization, specific research activities, continuity for key programs while AARD staff undergo training, and on-the-job training of local scientists. A total of 48 man-years of long-term specialists, and 136 man-months of short-term technical assistance will be provided over 8 years.

Total project cost, including contingencies, is estimated at US\$102 million of which 50% would be foreign exchange. Detailed cost estimates are in Annex A.2. Capital inputs comprise 54% of total base cost; training 18%; technical assistance and services 13%; and incremental salaries and inputs 15%. The proposed IDA credit of US\$27 million and loan of US\$39 million would finance 65% of total costs and cover the full foreign exchange costs (US\$50.5 million) and US\$15.5 million of local costs. GOI would provide the remaining US\$35.6 million from annual budget appropriations.

AARD has submitted reorganization proposals which have been agreed by the Minister of Agriculture and await the approval of the Minister of State for Administrative Reform, and the President.

2. Agency for Agricultural Research and Development

AARD, formed in 1974, is responsible for implementing the National Agricultural Research Program (NARP). Prior to the formation of AARD 24 existing research institutes were responsible to the Directorate General for Food Crops, Estate Crops, Forestry, Fisheries and Livestock Services. These institutes were absorbed by AARD which is responsible for all agricultural research. Each of the 24 institutes is headed by a director who reports to the Head of AARD.

AARD is undergoing a reorganization which will group the 24 institutes into 6 main commodity groups. The reorganization will reduce the volume of reporting to the Head, AARD; avoid risk of duplication or overlapping of research programs and support services; and improve coordination between research institutes. In view of its importance, formal GOI approval of the proposed reorganization plan was a condition of the second IBRD loan.

AARD executes a 5 year National Agricultural Research Program, which is reviewed and revised annually. The program is reviewed with representatives of each of the 5 line DGs and submitted to the Minister. An Agricultural Research Board, chaired by the Minister comprising the 5 DGs, the Heads of AARD and the Agency for Agricultural Education Training and Extension (AETE), is responsible for research policy, funding proposals and coordination of research programs. These 5 year programs are incorporated in each Repelita.

The ongoing AARD National Agricultural Research Program includes the following priorities and activities (briefly):

Food Crops. Increasing attention is being given to location specific production problems. Principal research activities are: varietal improvement; soil management and fertilizer usage; cultural practices; pest management; water management; cropping systems; harvesting, processing and storage; machinery development and evaluation; socio-economic constraints; training and communication.

Estate and Industrial Crops. Principal estate crops are rubber, coffee, oil palm, tea, cocoa and sugarcane. Industrial crops include coconut, tobacco, spices, fibers and essential oils. Research activities are aimed at increasing productivity and quality through varietal improvement, better fertilizer usage, crop production practices, socio-economic study, and processing technology.

Livestock. Two research institutes have primary responsibility for animal health and production research. Both lack experienced researchers and facilities. Research activities would emphasize production systems and concentrate on the introduction of livestock into tree crop-based agriculture, and include production improvements, management and health, and pasture and forage trials.

Fisheries. The Marine Fisheries Research Institute conducts research on resource survey, fishing methods, craft and gear use, mariculture and socio-economics. The Fish Technology Research Institute is only equipped to conduct small-scale studies. Proposed studies include development of suitable methods of fish processing, preservation, by-products, packaging, and feed for fish culture. The Inland Fisheries Research Institute conducts trials on breeding for upland and lowland areas, brackish water and shell fishing farming, etc.

Forestry. Two research institutes have responsibility to cover the forestry field. The Forest Research Institute conducts research in taxonomy, silviculture, forest influences and mensuration. The Forest Products Research Institute covers harvesting of forest products and the whole post harvest field, e.g. characteristics of forest products, exploitation of resources, product utilization and forest economics.

Emphasis is given to problem-oriented research related to ecology, regeneration and afforestation or reforestation of critical lands, as well as to development of lesser known species, waste control in logging and industry, waste utilization, the development of non-wood products and the trends in domestic supply and demand of forest products.

Programs envisaged under the project would include botanical exploration; logging planning, harvesting and resource management; the effect of exploitation on soil, water and environment; development of industrial patterns and its socio-economic aspects, protection, sericulture and apiculture.

Support Centers. Include Soil Research, Agro-economic Research, Statistics and Data Processing, Agricultural Quarantine, Central Library, Programming and Monitoring.

GOI has provided AARD with significant yearly budget increases since 1974/5. The 1979/80 allocation (excluding bilateral assistance) was US\$27 million -- about 5% of the Department of Agriculture (DOA) budget.

Nearly 50% of the annual budget is for food and tree crop research. Presently 9 foreign donors are assisting 16 research programs. Total bilateral contributions over the last decade were US\$25 million (Annex A.3 and 4). AARD expenditure for NARP over 1979/80-1984/85 is estimated at US\$290 million, excluding bilateral assistance.

3. Project History and Components

At the same time that the IBRD project was being developed the Head, AARD, addressed an official request to USAID/Indonesia, dated 20 November 1978, for assistance in agricultural research on the island of Kalimantan, and USAID indicated its interest in providing such assistance. This request was amended in July 1979 to include Sulawesi, Maluku and W. Java and USAID again expressed its interest.

The activities of IBRD and USAID, in assisting in agricultural research, together with those of the Netherlands (palawija crops, fruits and vegetables in East Java), France (animal health and rubber in Sembawa, S. Sumatra), FAO (TA to the Soils Research Institute), and Japan (TA in cropping systems with the emphasis on legumes) complete the requirements of AARD for the next several years and finally establish a research program in which donor activity is coordinated.

The proposed USAID project is to expand and improve agricultural research capability on the islands of Kalimantan, Sulawesi and Maluku and Bali, West Timor and the province of W. Java, which focuses on food crops, livestock, fisheries, industrial crops and forestry to address agro-climatic conditions peculiar to these islands, and the socio-economic condition of the farmers. To do so will require a network of one Central Research Institute site (W. Java), two Research Institute sites (Kalimantan and Sulawesi), eleven Sub-Station sites, and three Experimental Farm sites (the site classification is based on the level of sophistication in terms of staff and facilities). The linkage of research to the end-users, the farmers and fishermen, is through the agricultural extension service which is being steadily improved by several IBRD loans. The linkages to the provincial universities, already well established, will be increased as many of the proposed station sites will be near universities and permit ready exchange of information, service and staff. AARD's awareness of and capability to direct its research to meet the needs of the farmers and fishermen will be increased through the short-term training and technical assistance components of the project.

The project budget, in summary form, is presented below. Grant financing of the foreign exchange costs of technical assistance is proposed to alleviate the difficulties and frictions resulting from loan financing of American salaries and related costs which are high in relation to Indonesian and third country salaries.

SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(US\$ 000)

USE	AID LOAN		GOI	TOTAL
	Foreign Exchange	Local Currency		
Construction	360	4,840	9,228 7,734	13,434
Farm Development	-	-	3,166	3,166
Lab. Equipment	1,376	-	224	1,600
Field Equipment	3,060	-	-	3,060
Misc. Info Equipment	957	-	373	1,330
Vehicles	1,085	-	308	1,085
Training	1,339	-	492	1,831
Sub-Total	8,677	4,840	11,989	25,506
Contingency +/- (10%)	852	475	1,199	2,527
Inflation (30%)	2,603	1,452	3,597	7,652
	<u>12,132</u>	<u>6,768</u>	<u>16,785</u>	<u>35,685</u>

Total Loan-Financed Portion: \$18,900

	AID GRANT	GOI	
Technical Assistance	\$ 4626 4517	500 900	5,126
Contingency +/- (10%)	486 482	50 90	536
Inflation (30%)	1388 1201	130 120	1,518
Total Grant Financed Portion:	\$ 6500	\$ 680 000	
Grand Total for Project:	\$ 25,400	\$ 17,465	\$ 42,865

AID Loan of \$ 18.9 million is 44% of all costs.

AID Grant of \$6.5million is 15% of all costs.

TOTAL AID Assistance is 59% of all costs.

TOTAL GOI Assistance is 41% of all costs.

The project forms an important part of the National Agricultural Research Program proposed by AARD in its Master Plan of activities for Repelita III. The project will be administered by AARD on behalf of the GOI.

Technical assistance will be provided by an American institution on a host country contract (grant-funded).

Long term academic training will be addressed by the World Bank which will provide funding for training 100 Ph.D. candidates and 525 M.Sc. candidates (Annex A.5.) Approximately one half of these candidates will be trained abroad, the remainder being trained in-country at universities with graduate programs in agriculture. In addition, as of April 1980, AARD has 59 staff members studying for Ph.D. degrees and 166 studying for M.Sc. degrees, as follows:

	<u>Overseas</u>		<u>In-country</u>		<u>Total</u>	
	<u>Ph.D</u>	<u>M.Sc</u>	<u>Ph.D</u>	<u>M.Sc</u>	<u>Ph.D</u>	<u>M.Sc</u>
Food Crops	13	14	11	45	24	59
Estate Crops	4	7	7	14	11	21
Industrial Crops	1	-	1	15	2	15
Fisheries	3	2	3	13	6	15
Forestry	3	-	-	15	3	15
Animal Husbandry	1	1	1	9	2	10
Animal Diseases	-	-	-	5	-	5
Other (Statistics, Economics, Soils)	2	2	9	24	11	26
Total	<u>27</u>	<u>26</u>	<u>32</u>	<u>140</u>	<u>59</u>	<u>166</u>

AARD will assign these staff and the World Bank-trained staff as needed to their central and regional research institutes and experimental stations. A portion of these staff will be assigned to the regional research institutes and experimental stations proposed for Kalimantan, Sulawesi, Maluku, Bali and West Timor.

Short-term training abroad and in-country for specialization and general upgrading of present and recruited staff, attendance at international conferences and seminars and training in English language will be provided through USAID assistance under the presently proposed project. Requests have been made by the various research institutes for 559 man-months of short-term training for staff at the existing and proposed facilities on Kalimantan, Sulawesi, Maluku, Bali, West Timor and W. Java (Annex A.6). The consultant will assist with arrangements on behalf of AARD for the short term training, with AID concurrence.

The consultant will make recommendations and AID will approve the equipment orders for the stations and will

either procure directly on behalf of AARD or assist AARD in procurement of imported commodities for the stations.

The contracting for architectural design work and construction will be with the assistance of the provincial public works offices. The amount of civil works in each location is too small to invite international bidding from firms outside the province. This is the GOI standard procedure for relatively small-scale construction on behalf of a GOI ministry or agency. The consultant will make suggestions for the designs, which must adhere to standards set by BAPPENAS, and USAID will approve all designs prior to bidding.

D. Summary Findings

This project is technically, economically, financially, and socially feasible. A determination has been made that an environmental assessment is not required. All statutory criteria have been met. Section 611 (a) has been satisfied; the Section 611 (e) determination is in Annex A.7. These conclusions are based on the intensive review made of this project jointly by USAID and AARD staff. The project includes the recommendations of the USAID consultants under a contract with Multinational Agribusiness Systems Incorporated (MASI), the analysis made in the appraisal report for the IBRD loan, the CRIA master plan for agricultural research on Sulawesi and the eastern islands, and discussions with provincial agriculture extension officials, the provincial planning boards, and university officials. The project is in accord with the GOI five year plan, AARD's strategy for development of agricultural research, and the AID agricultural development strategy. It complements and will be supported by other AID and IBRD projects to improve agricultural production in Indonesia.

The project can be carried out according to the implementation plan. AARD has had considerable experience in working with AID and other donors, and in contracting for construction.

E. Project Issues

All issues identified in AID/W's approval of the PID (STATE 165034, 29 June 1978) have been discussed and resolved at various places in the PP (Annex A.8). There are no outstanding issues.

PART II. PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

Indonesia has a complex of farming systems dominated by small-holder production. Java, Madura and Bali are characterized by small farm units which average 0.4 ha with the major emphasis on rice production with other food crops playing a lesser but increasing role. While on the outer islands holdings may be as large as 5 ha, any holding larger than 1 ha must either utilize some degree of mechanization, or, more logically, involve a mixed farming system of food crops, perennial cash crops and, perhaps, livestock. It follows that these larger holdings are on less fertile soils and are usually rainfed, with little or no access to irrigation. Knowledgeably addressed, a mixed farming system has a great deal of potential and provides a buffer against misfortune befalling one or another of the crops.

GOI development plans include not only intensification of agricultural production (Java) but also expansion into new agricultural areas on the outer islands. To successfully implement these plans requires a continuous flow of pertinent and factual technical information. This can best be accomplished by strengthening the existing research facilities and establishing additional research stations in the different agro-ecological conditions. Since agricultural problems are location specific, the establishment of a network of research stations is necessary. While these stations will concentrate on the solution to local problems (pests and disease, adverse soil conditions, intercropping perennial with annual crops, etc.), their overall programs will be coordinated to minimize duplication. This approach should ensure the development of an integrated package of technology that smallholders can readily adopt.

Research strategies and priorities will be set through consultation and coordination with provincial planning boards, extension services, universities, concerned GOI offices, and agro-economic surveys of the farmers and people living in the rural areas. Agricultural activities in the provinces are coordinated by the inspector for agriculture, who is appointed by the Governor, and is usually the head of the most important subsector.

The agricultural extension services are responsible for maintaining a close relationship with the smallholder. This is accomplished through the field extension worker (PPL).

working with contact farmers from 16-20 villages who in turn pass on the new technology to other farmers in the village unit. In the extension service organization, the PPL reports to a mid-level extension worker (PPM), who in turn reports to the extension subject matter specialist (PPS). The PPS maintains a constant liaison with the research subject matter specialist, and conducts fortnightly training classes for PPM and PPL.

Training is designed to provide practical information to be imparted to the farmer, and consist of lectures on new information and field practices in which the participants go through all steps of the recommended technology. Aside from the PPS's responsibility for training, they are obliged to identify farmers' problems and their solution. This organizational structure assures a two-way flow of information to and from the small holder.

Research station sites seldom exceed 10-20 hectares in size, which is sufficient only for conducting variety trials and closely controlled experiments. The majority of the research is conducted on farmers' fields, with the farmer's and field extension worker's participation. This has proved a most valuable and rewarding innovation; the farmer and his neighbors can readily compare his usual practices with those of the new technology, and he is quick to note any added gains.

With the reorganization of AARD came the realization of the necessity for location specific agricultural research in order to address the wide range of agro-climatic conditions. This was given impetus by the establishment of a research branch station of the Central Research Institute for Agriculture (CRLA) at Maros, S. Sulawesi in 1971. In 1977, USAID was requested to further support research in the outer islands, and the island of Sumatra was selected as the target area. This led to the design and implementation of Sumatra Agricultural Research Project 497-0263, which will establish a network of nine research stations throughout the island. Following on this project came an IBRD proposal which puts major emphasis on institution building through support to and strengthening of AARD research capacity. The AID proposed project complements the activities of all donor efforts in agricultural research throughout the archipelago.

This PP has been developed jointly by USAID and AARD in collaboration with responsible authorities and agencies at both the national and the provincial level. A four-man consulting team, under contract to MASI, was brought to Indonesia from 23 January to 9 March 1980 to assess and verify, or make recommendations, concerning the feasibility of the project. After visiting the proposed station sites the consultants established a priority ranking of sites for development and endorsed the proposed project.

B. Detailed Description

1. Introduction

The project will further strengthen national agricultural research capability by expanding and improving the network of regional research stations, designed to address particular agro-climatic factors peculiar to the conditions extant on the islands of Kalimantan, Sulawesi, Maluku, Bali, West Timor and the Province of West Java, focusing on food crops, livestock, fisheries, industrial crops, and forestry. AARD's research findings will be transferred to the farmer through Research Subject Matter Specialists (RSMS) who will compile, package and translate research results and technology for use by Extension Subject Matter Specialists (PPS). RSMS maintains close liaison with PPS and ensures a two way flow of information.

2. Sector Goal

The broad sector goal is increased agricultural production of five commodity groups through the development of area specific crops tailored to fit precise farming conditions and in this manner attain the increases in agricultural production called for in the National Development Plan (Repelita). To achieve this goal will require the active participation of the extension and information services, continued investments in agricultural technology and rural development, farmer (fisherman) acceptance and employment of new technology, and the necessary supporting agencies (BRI, BEMAS, BULOG, etc.) providing credit and market facilities to handle increased production.

3. Project Purpose

The purpose is to expand and improve agricultural research to address agro-climatic factors peculiar to Kalimantan, Sulawesi, Maluku, Bali, West Timor and West Java.

The end-of-project status will consist of: a) research being performed at the research institute, sub-station and experimental farm sites (16) on the designated geographic areas; b) research findings being published and disseminated by the extension services to the farmers; c) the staff having linkages to Indonesian higher education institutions, d) AARD maintaining close communications with international research centers; e) research strategies and priorities being set through consultation and coordination with provincial planning boards, extension services, universities, concerned GOI offices and agro-economic surveys of the farmers and people living in the rural areas.

When the end-of-project status is reached in six years, there will be a definite linkage between the purpose and goal as future research findings are adopted by the farmers and their increased food production, income and employment contribute toward the project (and GOI) goal.

4. Outputs

The expected outputs include:

- a) All physical facilities, equipment, vehicles, etc. completed or delivered for one Central Research Institute site, 2 Research Institute sites,

10 Research Sub-station sites and 3 Experimental Farm sites.

- b) Number of BS degree level graduates increased by about 50 percent; number of agricultural high school graduates increased by about 30 percent; on-the-job training and short-term training provided. (Advanced degree holders (25 PhD and 80 MSc) trained under the IBRD loan and posted to duty stations.)
- c) General staff upgrading by short-term observation training trips to such places as the Philippines, Malaysia, Thailand and Taiwan to learn how research is conducted in other Asian countries; attendance at regional conferences, and short-term training at international research centers. Research continues at the existing stations (Bogor, Maros, Handil Manarap, Bontobili, Lanrang, and Mariri) and begins at new station sites as their construction is completed and nucleus staff becomes available.

There is a definite linkage between the outputs and the project purpose since analysis has shown that the additional physical facilities and additional trained personnel listed above will be sufficient to conduct the type, quality and quantity of research needed to achieve the project purpose. The linkages between AARD and the Indonesian universities, agricultural extension services, and international research centers will result from the personnel receiving training at many different universities, from short-term observation training trips, and from working closely with nearby universities--making land and facilities available for university staff and students for research, by AARD staff lecturing at universities and extension training centers, etc.

The major assumptions for obtaining the stated outputs include: a) adequate budget, b) provincial public works willing and capable to assist in design/construction of physical facilities, c) IBRD loan will successfully provide long-term academic training, and required number of trained staff posted to stations, d) adequate number English-Speaking qualified students for graduate training abroad, and e) BSc and high school graduates available and provided by AARD. Each of these assumptions is discussed in the technical analysis and shown to be valid.

5. Inputs

The inputs from AID include \$5.5 million grant to finance the technical assistance and \$18.9 million loan to finance the foreign exchange costs of short-term training, vehicles, equipment and commodities, and some local currency costs of construction.

The GOI contribution includes \$17.5 million to finance a portion of the costs of construction of the physical facilities, training, etc. In addition, AARD will be contributing leadership and nucleus staff for the project and staff for training, hiring additional personnel, and conducting on-going research. The provinces will provide land for the station sites, and land will not be included in total project costs.

The magnitude of the inputs should be sufficient to achieve the expected outputs. The technical assistance will enable research to continue at the stations, will provide on-the-job training and guidance for long-term training, commodity procurement, etc. Reasonable allowance was made for contingency and inflation. See the Financial Plan for complete details.

The major assumptions concerning the inputs include:

a) AID's loan and grant are authorized at the figures recommended, b) the GOI provides adequate funds for AARD, c) the provinces provide all needed land, d) AARD is authorized to hire additional staff, and e) the Indonesian universities are willing to work with AARD. All assumptions appear valid based on discussions elsewhere in this PP.

PART III. PROJECT ANALYSIS

A. Technical Analysis

1. Appropriateness and Timeliness

Agricultural research in Indonesia started in 1885 when the first experiment station was established in the sugar growing area of E. Java. Others followed and scientists accomplished some of the most distinguished and advanced research work in the field of tropical agriculture. Most of the attention, however, centered on estates and commercial crops. By the time of independence in 1945, the nation inherited a rather extensive and fragmented group of research institutes. But it essentially had no trained manpower to staff them because no institutions of higher education in agriculture existed until after World War II.

While Indonesian scientists were being trained after independence, experimental buildings and field facilities were maintained as well as possible. It is only now, 35 years after independence, that a limited and still inadequate number of trained scientists make possible the development of a coordinated organization for agricultural research to serve national needs and the needs of small landholders and government estates.

With the establishment of AARD, the entire structure of agricultural research has been reorganized (Annex A.9). Donor activities are being coordinated, and the proposed project fills a need within that reorganization and coordination.

2. Station Sites

Under the reorganized structure, research will be conducted through and by five Central Research Institutes and the existing 24 Research Institutes managed by them. The five Central Research Institutes (CRI) cover Food Crops, Fisheries, Animal Husbandry, Forestry and Estate/Industrial Crops.

The respective Research Institutes have a chain of 99 Experiment Stations and/or Experimental Farms and 37 observation stations in different areas. Agricultural research in Indonesia, as elsewhere, is highly location specific in many aspects, and the strategy is to extend the research network to better meet the needs of these specific areas. In the past, the largest concentration of research staff and facilities has been on the island of Java. There is as well a Secretariat, directly

responsible to the Head of AARD, which provides administrative support such as budgeting, procurement and personnel services. In addition, three centers (Soil Research, Agro-Economic Research and Statistics and Agro-Data Processing) conduct research programs that tie-in with the commodity research institute's programs. In coordinating donor research activities, specific requests have been put forth by AARD, with the result that the Netherlands Government will address palawija crops, fruits and vegetables in E. Java. France will address rubber and animal health in Sembawa. FAO is providing assistance to the Center for Soil Research. Japan is providing technical assistance in cropping systems to CRIA. IBRD, in its first agricultural research loan is addressing rubber in Sumatra, and vegetables and palawija crops in W. Java; and in the second loan places major emphasis on institution building; a very large training program, technical assistance, renovation of existing facilities, and development of new facilities. The USAID Sumatra Research Project is establishing a network of nine research stations throughout that island.

The proposed project will establish/or add on to one headquarters/CRI site (Boror), two Research Institute sites (Kalimantan and Sulawesi), which will administer 11 Sub-stations and 3 Experimental Farm sites located in South, West and East Kalimantan, North and South Sulawesi, and Maluku. The project is an integrated approach to Maluku, Bali, and West Timor. The project is an integrated approach to agricultural research and development, combining as it does several research topics such as livestock and forestry with food crops under one roof.

3. Research Priorities

AARD executes a five-year National Agricultural Research Program, which is reviewed and revised annually. The five-year program is reviewed with representatives of each of the five line Directorates General (DG) and submitted to the Minister of Agriculture. An agricultural Research Board, chaired by the Minister of Agriculture, comprising the five DG (Food Crops, Estate Crops, Forestry, Fisheries, Animal Husbandry), the Head of the Agency for Agricultural Education and Training, and the Head of AARD is responsible for research policy, funding proposals and coordination of research programs. The five-year national agricultural research program is incorporated in each Repelita. Individual research programs are conducted by multidisciplinary teams concentrating on production oriented research from breeding through processing.

4. Linkages and Extension

AARD bears the statutory responsibility for the management of agricultural research of the nation and has the largest budget for this purpose. Moreover, it has the only national agricultural research network and research institutes located in most of the major islands. Other government agencies, corporations and universities contribute to the total effort as well, and national policy calls for close linkages between them and AARD.

In response to the need to foster close linkages with extension agencies, AARD has recently established a communications unit. It is responsible for organizing training courses for extension workers, technical meetings, seminars and publication of technical bulletins and papers dealing with all aspects of agricultural production. Research Subject Matter Specialists (RSMS) have been appointed to compile, package and translate research results and technology into meaningful terms for use by Extension Subject Matter Specialists (PPS). RSMS maintains close contact with PPS and ensures a two way flow of information between research and extension.

To further strengthen the linkages, PPS's belonging to the five Directorates-General have access to selected research institutes, stations and farms as home bases. PPS's have the opportunity to interact directly, with multidisciplinary research teams working at the research institutes and stations. At the same time researchers are also able to contribute to problem solving in the field and assist the provincial agricultural services in carrying out verification trials.

Agricultural activities in the provinces are coordinated by the inspector for agriculture (Kakanwil). The inspector is appointed by the Governor, and is usually the head of the most important subsector. In some provinces, advisory committees have been set up under the Governor/Kakanwil. The committee comprises representatives from AARD, extension services, universities, BAPPEDA and other agencies.

5. Staffing and Training

The total staff of AARD at present is about 1,240 permanent research scientists (Annex A.10) and 3,500 support staff. In addition to the permanent government employees there are some 385 scientists and support staff who work for AARD on an "honorarium" status under short and long term contracts. Effectively AARD has at present about 740 scientists with

PhD and MSc degrees, about 420 BSc and 470 with high school diplomas.

Staffing requirements under the proposed project call for 25 PhD, 30 MSc degrees and sufficient BSc and high school graduates to complement this senior staff. Present and proposed degree holders are as follows:

	<u>Present</u>		<u>Proposed</u>	
	<u>Kalimantan</u>	<u>Sulawesi</u>	<u>Kalimantan</u>	<u>Sulawesi</u>
PhD	1	1	13	12
MSc	-	2	31	49
Ir/BSc	4	17	6	26

Manpower development has been given first priority in strengthening the institutional capabilities of the AARD by the Head of that Agency. By 1985 AARD estimates that 1,900 research scientists will be needed to adequately staff its research network. This will require an expanded program of recruitment and graduate training, as well as short term training and general upgrading of present and recruited staff. New staff at the Ir., BSc, and high school diploma levels will be recruited from the many local and regional universities and agricultural high schools. It is believed that recruitment of sufficient staff to man the proposed facilities will not be a problem.

Graduate training at the MSc and PhD levels will be funded by the IBRD loan, to better coordinate AARD's requirements and provide a uniform participant training program. AARD will assign the returned participants to central and regional postings according to specific needs, including Kalimantan, Sulawesi, Maluku, Bali, West Timor and West Java. Provision for assigning returning participants to these locations will be the subject of a covenant in the loan agreement.

Short-term training for specialization and general upgrading, together with study tours, and provision for attendance at seminars and international conferences, will be provided through USAID assistance under the proposed project.

6. Physical Facilities

The proposed project will develop facilities at 16 different sites. Where practicable, a single facility will provide for the needs of several of the research subjects. The

Central Research Institute at Bogor will require certain new facilities and equipment, together with renovation of existing facilities. The Research Institute for Sulawesi is fairly well developed but requires additional facilities if it is to cope satisfactorily with the sub-stations and experimental farms that come under its auspices. The Research Institute for Kalimantan is to be relocated from Banjarmasin to Banjarbaru, and will be a new facility, as will the majority of the sub-station and experimental farm sites in Kalimantan.

New construction and renovation will provide the required laboratory, office space, service buildings, utilities, housing and farm development, predicated on the scope of activity of each station. The facility and equipment requirements have been developed by the Directors of the five Central Research Institutes and modified and endorsed by USAID advisors and consultants. Cost estimates follow the standards established by the National Planning Board (BAPPENAS). Preliminary designs and layouts are not required at this time as all civil works are relatively simple and uncomplicated and can be handled by local contractors. The consultant will later advise on any special requirements for buildings.

Technical Assistance

A total of 52 man-years of long term technical assistance will be provided by grant funding. The final composition, by discipline, will depend upon the contractor and will consist of a multidisciplinary team of experienced agricultural research scientists, one of whom will serve as chief-of-party, and one administrative assistant. Funding is also included for short term consultancy (24 pm). The team will provide advice on physical requirements and equipment needs; provide on-the-job training and guidance; assist AARD in the selection of participants for advanced training and in-country training needs; participate in on-going research, and provide support to the academically qualified but as yet inexperienced returning staff. They will be headquartered in Bogor (W. Java), Banjarbaru (S. Kalimantan) and Maros (S. Sulawesi), but will maintain regular and frequent contact with all stations, and are to be responsible to the Head of AARD. See Table III (pg 33).

8. Beneficiaries

The primary recipient of project benefits will be the GOI's National Agricultural Research Program by attaining a greater research capability to sustain meaningful research findings to pass on to the farmer.

9. Constraints

Manpower, in terms of academically qualified and experienced staff, is the single biggest constraint to agricultural research and, hence, development. AARD's integrated National Agricultural Research Program has a large training component to overcome this problem. A constraint to training heretofore has been the lack of adequate numbers of English speaking students to maintain the training schedule. This constraint has been relieved with the advent of increased PhD training capability within Indonesia.

No other constraints are envisaged.

10. Environmental

An initial Environmental Examination (IEE) was attached to the PID, recommending a negative determination since the proposed project involves agricultural research and training and therefore has little or no impact on the environment. A similar determination was made for Sumatra Agricultural Research Project 497-0263.

11. Summary and Conclusions

The project is considered to be technically sound, in that it responds to AARD strategy and is complementary to the activities of other donors to agricultural research. The project has been jointly developed by experienced AARD scientists and USAID personnel, and is endorsed by qualified consultants.

B. Economic Analysis

The quantifiable economic benefits from investments in national agricultural research programs have recently been documented in scientific as well as economic literature (Annex A.11). Evidence from different countries, for different commodities and over different time periods suggests that on the average, the annual rate of return on agricultural research expenditure is on the order of 50 percent. This figure of course, varies with commodity and location. For example research expenditures on rice in Asia for the period 1966-1975 have an annual rate of return between 73 and 102 percent, while research expenditures for corn in U.S., Mexico and Peru, over the period 1940-1967 show a rate of return between 35 and 55 percent. Returns for other staple crops such as soybeans and wheat are on the order of 79 to 96 percent. Returns on industrial crops research such as sugar cane and cotton are not quite as high, 40 to 77%.

In addition to the impressive quantifiable benefits cited above, there are other socio-economic benefits from agricultural research investments that do not lend themselves to precise measurement. In Indonesia for example, increased food production resulting from increased investment in agricultural research will:

- (a) reduce food deficits estimated to reach 2 and 3 million tons by 1990,
- (b) increase income and employment of small farmers as a result of improved farming systems,
- (c) increase food intake, improve nutrition, and reduce infant mortality among the poor,
- (d) reduce consumer prices due to increased food availability,
- (e) increase foreign exchange earnings, and
- (f) make the unproductive transmigration areas into productive areas and increase and maintain productivity of eroded lands.

While it is relatively easy to estimate the quantifiable economic benefits from national programs of research in agriculture and to cite their non-quantified economic and social benefits, it is difficult to isolate the benefits of one specific research project. This is because there are uncertainties inherent in the implementation, or the result, of one particular research project such as the one being proposed. First, there is the uncertainty regarding the time span needed to translate scientific ideas into an economically and commercially productive technology. Second, there is the uncertainty regarding the efficiency of transmitting

research results in the field. Third, there is the uncertainty of predicting the acceptability and rate of adoption of the new technology, and fourthly, there is the uncertainty regarding the measurement of costs and benefits. In any one research project there are positive and negative spin-offs outside of agriculture that are not anticipated making it difficult to measure precisely the magnitude of costs and benefits.

Nevertheless, it appears from the general discussions above supported by results of similar projects in other countries that this particular research being proposed will add to the general research capability of GOI and increase the agricultural productivity of Indonesia. The impact of this project taken together with other on-going agricultural research projects will undoubtedly show a pay-off much greater than the original investment, perhaps at about the same magnitude as those experienced in other countries.

C. Social Soundness Analysis

Summary Statement: This project consists of the establishment of a network of agricultural research stations in Kalimantan, Sulawesi, Bali, West Timor and Maluku. It is considered to be socially sound for the reasons given below.

1. The Project Setting

a) The Urgent Need for Agricultural Research

While 62% of Indonesia's labor force was engaged in agriculture in 1976 the contribution of this sector to the gross domestic product for the same year at current market prices was only 31%, a figure which remains virtually unchanged in the 1977 estimates and 1978 projection. These figures contrast with those of ten years ago: in 1968 agriculture's contribution at current market prices was 43%.

Between 1969 and 1976 wet rice productivity increased on the average 4.6% per year as a result of improved yield and extension of acreage under cultivation, yet over two million tons of rice were imported in 1978 to keep abreast of population growth and increased per capita consumption. The urgency for agricultural research and a feedback of information to improve production, not only in rice but in other crops which can supplement, or substitute for, rice is self-evident.

Finally, agricultural research must be location-specific, particularly in far-flung archipelagic Indonesia with its variety of physical environments: terrain, soils, cover, water-table, amount and pattern of rainfall, watersheds and the like. The creation of a network of research stations each within a larger coordinated framework but specifically concerned with problems, crops, technology and techniques peculiar to its location answers this particular requirement.

b) GOI Desire and Support for the Project

In the sense that the nucleus for this project already exists, it is not a new project. GOI plans for a carefully controlled expansion of the system, building on the old, for maximum efficiency. Among the more significant manifestations of GOI's intentions has been the formulation of a National Agricultural Research Program (NARP) to be executed by the Agency for Agricultural Research and Development (AARD), an entity formed in 1974 by the Department of Agriculture. AARD is the mainspring of the system. It is in the process of integrating its operations and eliminating overlap of function and floriation of channels of communication through amalgamation of its 24 institutes into defined commodity groups (Food Crops, Estate Crops, Forestry, Fisheries and Livestock Services) and a Service Center. This will permit tighter control of widely scattered research stations and also simplify the reporting system to the Head of AARD. He in turn will report to a planning and review board, headed by the Minister of Agriculture, which not only formulates a Five-Year Program but also annually reviews progress and revises plans as necessary. GOI has allocated to AARD US\$27 million (1979/1980) or about 5% of the budget of the Department of Agriculture.

To date 16 sites, including a 10-hectare central station in Bogor, West Java, have been proposed or activated by GOI. These sites prove another earnest of GOI intentions. Furthermore, within the capability of GOI, professionally qualified staff members have been, or will be, assigned to the research sites and centers. At Maros, South Sulawesi, for example, a key research center for Eastern Indonesia, a comparison of the staff composition for both research and administration at two points in time shows quantitative and qualitative improvement:

<u>Degree/Educ. Level</u>	<u>1978/80 % (n=271)</u>	<u>1971/72 % (n=132)</u>
Ph.D.	0.4	-
M.Sc.	0.7	0.7
Dokterandus	0.4	-
Engineer	13.3	3.0
B.Sc.	6.6	5.3
High School and below	78.6	91.0
	<u>100.0</u>	<u>100.0</u>

Finally, a proposal for assistance has been submitted to AID/Indonesia by the Head of AARD (Letter, Sadikin to Niblock, 20 Nov 78) and the project has been studied and approved by BAPPENAS, the National Planning Organization (December, 1979).

c) Compatibility with GOI Plans for Transmigration and Resettlement

The Third Five-Year Plan (1979-1984) calls for the annual transmigration of 100,000 families principally from Java, Madura and Bali to the Outer Islands. Even if these ambitious figures are only partially achieved, much work needs to be done to assist these transmigrants make a living in physical environments new to them, and the role of a network of applied agricultural research stations is crucial to this. Moreover, as has already happened, advice and assistance are also given to autochthonous peoples, thereby helping allay to a significant degree their resentment of newcomers.

d) Availability of Physical Space

There are literally millions of hectares in the Outer Islands which can be more efficiently or fully exploited for food crops, estate crops, livestock breeding or inland and brackish water fisheries. This does not mean that conditions are ideal; it does mean, however, that the application of the results of research and experimentation will not be hindered by the scarcity of physical space.

e) Linkages With Other Institutions

Not the least important aspect of this project are the linkages it creates. There is a history of bilateral aid from, for example, the Netherlands, Australia, Japan and other countries, and with the International Rice Research Institute (IRRI) and the World Bank (IBRD). More important, however, in another sense, are the linkages of the various research stations with local universities. At least six to eight Outer Island universities may become involved and a mutually cooperative dynamic relationship between university and research station can but serve to improve their quality and the level of regional higher education. In fact, a university consortium has already been formed in Eastern Indonesia. The project plan of implementation is scheduled according to the return of the IBRD trained participants. Linkages among AARD, USAID and IBRD should be greatly stretched during the life-of-project.

2. Beneficiaries

The number of direct beneficiaries may reach 1,500,000.

a) Trainees

Scarcity of trained personnel to carry on research is one of the greatest impediments to agricultural advance in Indonesia. USAID will send approximately 500 trainees on short-term courses in animal diseases, inland fisheries, forestry and other topics to fulfill the specific requirements of the various stations and centers.

Although it is expected that the majority of trainees will be men, GOI increasingly emphasizes the training of women in government service. Past experience with CRIA has revealed that 25% of CRIA staff are women. On the project site in Sumatra, the percentage is 23. Indonesia is aware of the desirability of including women in all government functions and, indeed, is influenced by the several matriarchal ethnic groups. It can be assumed that this percentable relationship will continue, at least in food crops research.

b) Small Farmers

At a conservative estimate, perhaps 350,000 small-land-holding households (including a possible 5,000 citrus fruit growing families) will be directly affected by this project. All of them own farms of less than 1 ha in size. An additional unknown number of farmers are sharecroppers. In general, the condition of most of these small farmers is stagnant due to lack of new crop varieties, poor soils, plant diseases, insect infestation, and outmoded cultivation techniques. Practical assistance in coping with these problems will help not only to increase farm income but to lessen a growing gap in some areas between rich and poor. Small farmers apparently are beginning to give up the struggle for subsistence on the land and are gradually moving into urban wage employment or have remained as sharecroppers after having been forced to sell their land after a bad season.

c) Livestock Breeders

A possible 20,000 households of cattle-owners, including water buffalo, would directly benefit. Despite the fact that they may keep but a few head of cattle, they are not among the poorest of the rural poor. On the other hand, a much larger number of households would improve their economic condition even if they did not aspire to a single cow or buffalo but were able to raise poultry, goats or sheep through the efforts of the research stations. Increase in the keeping of minor livestock would improve the economic conditions of subsistence farmers significantly.

d) Traditional Fishermen

Perhaps only a few thousand households of traditional riverine fishermen and a like number of sea fishermen will directly benefit from the planned fisheries stations. Traditional fishermen are, in general, among the poorest of Indonesia's rural poor, yet their importance is underlined by the fact that they account for 90% of the total annual fish catch in Indonesia. The development of brackish water fisheries (tambak) would help the previously mentioned small farmer group rather than traditional fishermen. But the line between them can be tenuous and definition becomes a moot point.

e) Loggers

Some 24,000 people, for example, were engaged in the lumber industry in East Kalimantan in 1977. Whether these and other loggers can be termed direct beneficiaries is problematical. Certainly research can improve reforestation and resource management and utilization but probably would not lead directly to expansion of employment opportunities or increase in income.

f) Transmigrants

Possibly 10,000 transmigrants and 1,000 resettlement households are located in the areas directly affected by the research stations. The benefits for these households will be similar to those list for residents of the areas.

g) Women

Women will benefit in the sense that they will share in any improvement of living conditions in the rural population. If, however, practical applied agricultural research brings forth certain results, women's benefits will be especially marked in terms of increased income and employment. Among them are:

- increase and expansion of brackish water and fishpond fisheries (increased employment)
- double or triple cropping, especially of rice (increased employment)
- keeping of minor livestock, especially of poultry (increased income through sales)
- increase in the growing of vegetables and fruits (increased income through sales).

Women will directly benefit as a percentage of the researchers trained for research and management at the institutes and sub-stations, and for research implementation/extension at the experimental sites.

3. Benefits and Spread Effects

Benefits of the project have been implicit in the foregoing paragraphs and perhaps only need to be restated in major categories and expanded where necessary. Among the more important are:

a) Trained Manpower

The training of technicians will remove a major impediment to the advance of agriculture in Indonesia and will induce a self-sustaining capability with important consequences for its economic future.

b) Rise in Agricultural Productivity

Because of applied agricultural research on a location-specific and particularistic basis, it is expected that crops will be introduced into areas new to them, diseases combatted through development of disease-resistant stock, soils tested to determine the nature of nutrients they need, swamp and grassland exploited as possible, livestock bred, and other methods tried to increase agricultural productivity. The end result will be the amelioration of the small farmers' lot through expansion of employment opportunities and rise in farm incomes.

It should be noted that the Indonesian rural family does not usually depend on one source of income, that is, on one major activity such as food crops, estate crops, fisheries or livestock breeding. It tries in however minor a way for a combination of these, with the addition of sale of garden produce, sale of eggs and poultry, preparation of home processed foods, and even operating a small general shop or coffee stall. The more the various sources of income, the better-off the household and, as might be expected, the more important the economic role of the woman.

c) Linkages With Local Universities

The research institutes and substations will often solicit assistance from the provincial universities, collaborating on research identification, implementation and dissemination. This project will indirectly strengthen the research capacity of the universities, and the linkages among institutions will be intensified by ready exchange of information, service and staff.

d) Transmigration and Resettlement

It is obvious that applied agricultural research and dissemination of the results of research will greatly aid GOI's transmigration and resettlement plans. Transmigration is indeed one of GOI's major vehicles for development of the nation.

4. Possible Problems and Follow-On Actions

Follow-on actions are necessary, in part to obviate certain problems, in part to keep alive project momentum.

a) There is a reluctance on the part of GOI employees to work in what they consider remote areas. The use of local staff to the extent possible (thus creating local employment and utilizing local institutional linkages) may solve part of the problem but it cannot be denied that Jakarta and "Headquarters" are powerful magnets especially for senior staff. A rotational plan may have to be devised or special incentives given for Outer Islands service.

b) In some areas of the Outer Islands there is a labor shortage (due, in fact, to low population density). To what extent agricultural operations will suffer because labor is lured away from the land is an unknown factor. The strong cultural value attached to being a landowner of however small a plot of good land may provide a counter.

D. Financial Analysis

Summary Cost Estimate & Financial Plan and Projection of Expenditures by Fiscal Years are shown in Table I (p.9) and Table II respectively.

An explanation of each major cost component (not including provision for contingencies and inflation) follows.

Construction will be one of five joint AID and GOI financed Project elements. The AID foreign exchange of approximately \$860,000 will be used for U.S. source and origin electric generators, water pumps communication systems and other pieces of industrial equipment. The remaining AID construction allocation of U.S.\$4.84 million will be in local currency for disbursement under the Fixed Amount Reimbursement (FAR) procedures that will be employed. AID disbursement will be made after building construction work has been completed by the local contractors and paid for by the GOI. Accordingly, AID disbursements will trail the GOI expenditures for this activity.

Farm Development, at the rupiah equivalent of U.S.\$3.17 million, is the only major Project element that will be borne entirely by the GOI. Expenditures will be for land preparation, drainage facilities, Station roadways, fencing and similar accouterments at each station as is necessary.

Laboratory Equipment will consist of various testing, measuring, control and analysis apparatus and devices specific to the Station's research. This is another of the project elements that will be joint-financed by AID assistance and GOI contributions. The local currency equivalent of US\$224,000 in the GOI allocation will be for domestically available equipment.

Land used in connection with Station construction and farm development is Provincial Government owned land that has been or will be made available to AARD for the research facilities. As such, it is not a costed item in Project calculations and no price or value worth has been attributed to it.

Field Equipment of US\$3.06 million will be an all-AID financed procurement exchange expenditure. Items included in this major equipment procurement are farm tractors, threshers, harvesters, cultivators, seed cleaners, etc.

Information Equipment shown in both tables covers a broad but necessary range of hard and software items in the data collection, storage and dissemination field. The procurement will include professional publication subscriptions, catalogs, books, reproduction machines, projectors and duplicating equipment. The US\$1.33 million cost of the Project element is shared 72/28% by AID and the GOI.

Vehicles for the transport of personnel and commodities will be financed by AID assistance. Cost estimates are made on current prices for AMC jeeps and pick-ups.

Training of AARD personnel outside of Indonesia will be a foreign exchange cost financed by AID. The GOI will finance in-country training and local currency costs related to participants going overseas. The cost estimates are predicated on present expenses and/or allowances for students at Indian, Philippines, Taiwan and domestic institutions where the participants will be sent.

Technical Assistance is AID Grant-financed foreign exchange with a small GOI local currency contribution for a total estimate of US\$5.1 million. Table III details the TA component of the project.

Contingency cost has been allocated at 10% of estimated item cost. That percentage represents conservative forecasting of possible cost-affecting Project variables that might be experienced.

Inflation allowance at 30% of estimated goods and services costs, is also a conservative projection, i.e. about 5.5% p.a.

Operating Expenses Will be greatly increased with the expansion of the NARP. By a covenant to the Loan Agreement, the GOI will agree to provide sufficient funds for the increase in operating expenses that will result from this project. Since the GOI has increased the AARD operating budget substantially in each of the last several years (see Annex A.3), there should be no difficulty in budgeting the additional funds needed in the future.

AID & GOI FINANCED
PROJECTION OF EXPENDITURES
BY U.S. FISCAL YEARS
(US \$ 000)

TABLE II

LOAN	FY1980		FY1981		FY1982		FY1983		FY1984		FY1985		FY1986		TOTALS
	AID	GOI	AID	GOI											
<u>USE</u>															
Construction	-	1030	970	2135	1370	1310	1280	1260	950	875	690	840	440	284	13434
Farm Develop- ment	-	268	-	915	-	640	-	560	-	480	-	200	-	103	3166
Lab Equipt	-	-	490	166	260	19	185	16	210	23	231	-	-	-	1600
Field Equipt	-	-	780	-	712	-	660	-	508	-	290	-	110	-	3060
Misc. Info Equipt.	-	-	185	157	255	86	210	90	120	40	150	-	37	-	1330
Vehicles	-	-	240	-	570	-	190	-	85	-	-	-	-	-	1085
Training	-	-	185	147	200	98	310	86	420	70	124	57	100	34	1831
Sub Total:		1298	2850	3520	3367	2153	2335	2012	2293	1488	1485	1097	687	421	25506
<u>GRANT</u>															
<u>USE</u>															
Tech. Asst.			870	150	870	110	790	100	720	70	700	50	677	20	5127
Sub Total		1298	3720	3670	4237	2263	3625	2112	3013	1558	2185	1147	1364	441	30633
Contingency @ 10%		130	370	365	423	225	362	210	301	155	218	111	136	40	3046
Inflation @ 30%		389	1116	1101	1271	679	1087	633	903	467	655	344	409	132	9186
Grand Total:		1817	5206	5136	5931	3167	5074	2955	4217	2180	3058	1602	1909	613	42865

PART IV. IMPLEMENTATION PLANNING

A. Administrative Arrangements

1. GOI

The project will be implemented by the Agency for Agricultural Research and Development (AARD). AARD is capable of implementing this project, having had considerable experience with AID, IBRD and other donors, and will receive technical assistance and staff upgrading by this project.

Overall responsibility for general guidance and implementation will be with Mr. Sadikin Soemintawikarta, Head, Agency for Agricultural Research and Development, who will be assisted by an AARD team consisting of the Directors of the Central Research Institutes. Day-by-day implementation will be under the general guidance of the Directors of the respective Research Institutes, who will be assisted by the consultant's chief of party.

The Public Works office in each province will aid in the contracting for and supervision of design and construction of the physical facilities in its province. Since all construction is of a simple, uncomplicated nature, no difficulty is expected with design and construction. AARD, with the assistance of the consultant, will give the Public Works office the general size, shape, and requirements for each structure. Public Works will be responsible for ensuring that the buildings are designed and built according to AARD's general specifications.

2. AID

The project officer will be the Research Advisor. He will be assisted, as needed, by a capital development officer, the legal advisor, an engineer, and other Mission personnel.

AARD's headquarters are in Bogor, 60 km from Jakarta. Both transportation and telephone connections between USAID and AARD are good. The Research Institutes in S. Kalimantan and S. Sulawesi are near to provincial capitals, which are serviced by several daily flights between the two and Jakarta. Telephone connections between the two institutes and Bogor is satisfactory.

Connections with the Sub-stations and Experimental Farms are good, by air, road and waterways, but at present do not include telephone connections. In some instances, particularly the Sub-stations, a radio system would ease communications.

Disbursements for foreign exchange costs will be by the usual letter of commitment method. The Fixed Amount Reimbursement (FAR) method probably will be used for all local currency costs.

The project should present no unusual or difficult implementation problems for the Mission.

B. Implementation Plan

1. Technical Assistance: This will be provided under a host country contract between AARD and a qualified U.S. consulting firm. The firm and contract will be approved by USAID. Grant funds may be used to finance travel to the U.S. of one or two AARD officials to interview short-listed firms.
2. Land: Public land in the provinces is generally owned, and/or controlled, by the provincial government or local authorities with individual agencies and offices permitted by the provincial government to use the land. AARD has documents providing indefinite use of the land where it already has stations. The governors of those provinces in which new stations will be sited have provided land, thus rights to all needed amounts of land have already been acquired or confirmed.
3. Construction: All construction will be through contracts with private contractors within the province selected through competitive bidding following the GOI normal contracting procedures. Since all construction is uncomplicated, work can be performed by experienced qualified local contractors. The provincial public works offices will assist AARD in contracting and supervising construction. The USAID Mission Engineering Office will approve (a) cost estimates, (b) specifications, (c) plans, prior to bidding. However, USAID will not review or approve the contracts or contractors. USAID will inspect all completed buildings and other works after completion and prior to reimbursement.

4. Commodities: All imported commodities (laboratory instruments and equipment, field equipment, etc.) will follow Handbook 11 (Chapters 1 and 3) procedures for procurement. Procurement will be limited to Code 941 countries, with most items coming from the U.S. Procurement under this project will be undertaken by the selected contractor in accordance with applicable AID regulations and good commercial practice.

It is anticipated that the selected contractor will, in consultation with SER/COM and AARD, select and subcontract with a qualified U.S. procurement agent for transacting all U.S. source procurements under the project. Such designation will be made as soon as possible and under no condition later than 30 days after signing of the basic contract with the selected contractor.

A preliminary procurement list has been prepared for the project. The contractor will be required to review this list with SER/COM before transmittal to the selected procurement agent for procurement action. Purchase awards will be made by the contractor on the basis of recommendations of the procurement agent, subject to concurrence of AARD and USAID/Jakarta.

The contractor's agreement with the procurement agent will stipulate the services to be rendered including arranging purchases and consolidations and setting up delivery to designated points as well as payment terms for equipment and the agents's service fees.

The above conditions will be incorporated in the contractor's service contract and will be considered an integral part of the services to be rendered.

5. Training (Overseas): Short-term overseas training will be administratively handled by the Consultant on behalf of AARD, with the Consultant paying all costs for training (except the student's regular salary and allowances as an AARD employee) and being reimbursed by AID on its monthly vouchers. All overseas training will be limited to Code 941 countries. AARD will select all students, and the training facility with the advice and assistance of the Consultant. USAID will approve the selected participants, nature of the training and cost estimates prior to beginning of travel for the training.

6. Training (In-Country): For short-term training in country, AARD will cooperate with the Agency for Agricultural Education, Training and Extension, of the Department of Agriculture.

7. Schedule for Implementation:

Research is on-going at seven of the station sites; the approach is to upgrade all stations simultaneously as permitted by the training and staffing schedule so research activities will increase where on-going and started as soon as possible on new sites as soon as possible at each station rather than fully staffing one station at a time. Therefore, the physical construction and equipment ordering schedules are equipment are not in place long before there is staff to use them. The schedule recognizes that the development of some stations must be later than others due to the time needed for land clearing and preparation. Thus, a number of factors and variables have been considered in the preparation of the detailed implementation schedules. A schedule of main events follows:

Project Authorized	July	1980
Grant Agreement Signed	August	1980
Loan Agreement Signed	August	1980
Conditions Precedent for Initial Disbursement	March	1981

The project implementation schedule is as follows:

Request for proposal issued	September	1980
Local contract signed for design of first buildings	November	1980
Proposals received	December	1980
Selection of consultants	December	1980
Host country contract signed	March	1981
First students begin short- term training	April	1981
Consultant Chief of Party arrives	April	1981
Procurement for first equipment begins	June	1981
Last buildings completed, project completed	December	1986

8. Negotiations and Problems: AARD and USAID have excellent and close working relationships developed over the years through the Agricultural Research (0198) and the Sumatra Agricultural Research (0263/048) projects. The Project Paper was developed in close collaboration with AARD. Therefore, the Mission anticipates no difficulties or delays in negotiating the grant and loan agreements.

After the proposed project has been authorized, AARD, IBRD and USAID will develop a coordinated plan of implementation, taking into consideration priority sites for development and the scheduled return of participant trainees.

9. Monitoring Plan: The USAID Project Officer will monitor the progress of the project with the assistance of an USAID engineer and capital development officer through the periodic progress reports, frequent site visits, and regular meetings with AARD and the Consultants personnel. Formal evaluations are discussed and scheduled in Section IV C.

C. Evaluation

Focus

Evaluation of this project will focus on the type and quality of research being performed on the various sites; dissemination of the research findings; the linkage of the Research Institutes with the provincial universities and international research centers; the effectiveness of the research strategies and priorities in improving the conditions of the smallholder and increasing production, the timeliness of construction and equipping of the stations; and the effectiveness of the technical assistance provided.

2. Methodology

The primary means of evaluation of this project will be annual joint USAID-GOI preparation of the USAID Project Evaluation Summary (PES) to evaluate institutional development of the DOA's research capacity. Evaluation will utilize project and AARD records and include analysis of research undertaken in the stations assisted by this project.

The PES as revised by this Mission provides a fully adequate analytical framework for our evaluation. We intend, nevertheless, in the interest of ensuring greater objectivity, to seek the services of one consultant for one month for the mid-term and final evaluation of this project. Questionnaires and interviews will be prepared for use during the mid-term and final evaluations.

Finally, we believe there should be a major impact evaluation undertaken 2-3 years after completion of this project to determine to what extent research findings, including new crop varieties, cropping technologies and new seeds have been passed on to and applied by farmers in the outer islands.

This evaluation should also seek to determine to what degree increased income, nutrition and employment may have derived from this project's outputs. AID/W funding and outside consultants will be required for this evaluation. If AID/W is agreeable to this proposal we should develop prior to completion of this project special linkages and understanding with an Indonesian university to gather baseline data and later assist in the final evaluation.

3. Responsibilities

USAID and AARD will cooperate in preparing the PES on an annual basis and managing any other types of evaluation decided upon for this project.

D. Conditions and Covenants

1. Conditions Precedent to Initial Disbursement: AARD, IBRD and USAID under AARD chairmanship, will develop a coordinated plan of implementation to define disbursement schedules and priority sites for development. This implementation plan will take into consideration the scheduled return of participants trained under IBRD. All other conditions will be limited to the standard conditions concerning legal opinion and authorized representatives.

2. Conditions Precedent to Commencement of Short-term Training:

AARD will provide USAID and USAID will agree with course description, names of students, and estimated cost of the training prior to the commencement of short-term training abroad. (Provision for assigning returning higher degree participants to station sites will be the subject of a covenant in the loan agreement.)

3. Conditions Precedent to Ordering Imported Commodities:

AARD and the consultant will certify that the commodities and their specifications are appropriate for the project and in accord with project plans.

4. Conditions Precedent to Physical Construction of Station Sites:

a. AARD and the Consultant will certify that the construction activities are in accord with project plans and the preliminary specifications and details are reasonable and appropriate.

- b. USAID will approve the detailed plans, specifications and cost-estimates prior to the commencement of construction. The cost estimates then become the basis for AID's reimbursement under the FAR arrangement.
 - c. The Provincial Governments have confirmed in writing that the needed land has been provided AARD for its use.
5. Covenants: In addition to the usual covenants, the borrower will agree to
- (a) Carry out the project in accordance with the project plan and implementation schedules. Any major modifications to these plans shall require AID's concurrence prior to commencement of the concerned activity.
 - (b) AARD will provide funding from their routine/development budgets for operating costs.
 - (c) If funds provided under the grant for technical assistance prove to be insufficient, additional funding will be provided from loan funds or by AARD.

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<u>Institute</u>	<u>No.</u>	<u>Discipline</u>	<u>P.Y.</u>	<u>Cost</u>
<u>Bogor</u>				
(Research Inst.)	1	Admin. Assistant	3	255,000
	1	Team Leader	3	255,000
	1	Physiologist	2	170,000
	1	Social Economist	1	85,000
	1	Legume Breeder	2	170,000
	1	Tuber Breeder	2	170,000
	1	Food Prod. Specialist	2	170,000
	1	Economist	2	170,000
			<u>17</u>	<u>1,445,000</u>
<u>B'Baru</u>				
(Research Inst.)	1	Agronomist	2	170,000
	1	Soil Scientist	2	170,000
	1	Social Economist	1	85,000
			<u>5</u>	<u>425,000</u>
<u>Moros</u>				
(Research Inst.)	1	Soil Scientist	2	170,000
	1	Rice Breeder	2	170,000
	1	Agronomist	2	170,000
(Forestry SS)	1	Social Economist	1	85,000
	1	Silviculturist	2	170,000
	1	Wildlife Mgr. Spec.	1	85,000
			<u>10</u>	<u>850,000</u>
<u>Balikpapan</u>				
(Forestry Substa.)	1	Silviculturist	2	170,000
	1	Soil Scientist	2	170,000
	1	Engineer	1	85,000
	1	Research Plan. Spec.	1	85,000
			<u>6</u>	<u>510,000</u>
<u>T'Bang Ulang</u>				
(Animal Husb, SS)	1	Pasture Agronomist	2	170,000
	1	Reprod/Physiologist	2	170,000
	1	Breeder	1	85,000
	1	Nutritionist	1	85,000
			<u>6</u>	<u>510,000</u>
<u>B'Baru</u>				
(Animal Disease SS)	1	Microbiologist	2	170,000
	1	Parasitologist	2	170,000
	1	Pathologist	2	170,000
			<u>6</u>	<u>510,000</u>
<u>Gondol, Bali</u>				
(Inland Fish SS)	1	Fisheries	2	170,000
			<u>2</u>	<u>170,000</u>
<u>S.T. Consultants: 24 PM @ 3,600</u>				
			<u>52</u>	<u>4,420,000</u>
				<u>206,000</u>
				<u>4,626,400</u>

SUMMARY OF PROJECT COMPONENTS (IRW Research II)

Commodity and other program	Location of works		Civil works		Equipment			Training & T/A			Total cost
	Institutes/ centers	Stations/ farms	Construction	Farm & also development	Vehicles	Farm & workshop	Office (\$ million)	Scientific	Training /A	Technical assistance	
Food crops	Malang	Brastagi Soloh Paku	4.09	0.89	0.17	0.20	0.14	0.57	2.74	1.54	10.34
Estate crops	Jember/Kali Wining Medan	Sumber Asin	2.82	0.45	0.11	0.10	0.06	0.55	2.07	1.03	7.20
Industrial crops	Malang Bogor Mampang	Natar Kayuwatu Pandu Kima Atas	7.56	1.01	0.29	0.30	0.25	1.03	1.82	1.29	13.55
Animal health	Bogor		1.24	0.09	0.05	0.01	0.04	0.34	} 0.46	} 0.93	4.51
Animal husbandry		Sel Putih	0.87	0.27	0.06	0.05	0.02	0.08			
Forest research) Forest product) research)	Bogor	-	0.42	0.04	0.06	0.02	0.03	0.30	1.52	0.71	3.10
Fish technology	Jakarta Ambon		1.17	0.07	0.06	0.06	0.10	1.14	} 1.02	} 1.19	12.02
Inland fisheries	Gondol Bogor (Cibinong) Maros	Banoa	3.23	2.69	0.04	0.06	0.07	0.50			
Library			-	-	0.01	-	0.16	0.62	/c	/c	0.79
Soils research	Bogor	Maros Padang	0.60	0.04	0.03	-	-	0.46	/c	/c	1.13
Other /b			-	-	-	-	-	-	2.07	1.06	3.13
Subtotal			<u>22.02</u>	<u>5.56</u>	<u>0.88</u>	<u>0.80</u>	<u>0.87</u>	<u>3.59</u>	<u>11.70</u>	<u>8.35</u>	<u>55.77</u>
Incremental operating costs											10.20
Total											<u>65.97</u>

/a Including language training.

/b Includes all other training and technical assistance.

/c Included in "Other".

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PROJECT COST SUMMARY
(IBRD Research II)

Annex A.2

Item	Local — (Rp billions)	Foreign	Total	Local — (US\$ millions)	Foreign	Total	Foreign exchange (%)
I. Civil Works							
1. Civil works	7.50	6.30	13.80	12.11	9.91	22.02	43
2. Site & farm development	1.30	1.50	3.40	3.05	2.30	5.56	45
Subtotal	<u>8.80</u>	<u>7.80</u>	<u>17.20</u>	<u>15.17</u>	<u>12.41</u>	<u>35.72</u>	55
II. Vehicles and Equipment							
1. Vehicles	0.13	0.40	0.50	0.18	0.70	0.88	60
2. Equipment	0.50	4.10	4.60	0.73	6.33	7.26	90
Subtotal	<u>0.63</u>	<u>4.50</u>	<u>5.10</u>	<u>0.91</u>	<u>7.23</u>	<u>8.14</u>	89
III. Training & Technical Services Cost							
1. Training							
a. Long-term	2.50	3.50	6.10	4.19	3.33	9.74	57
b. Short-term	-	1.10	1.10	-	1.80	1.80	100
2. Language	0.10	-	0.10	0.16	-	0.16	-
3. Technical assistance	0.49	2.79	3.23	0.79	4.46	5.25	85
4. Consultants fees & architect's fees	-	1.90	1.90	-	3.10	3.10	100
Subtotal	<u>3.19</u>	<u>9.29</u>	<u>12.43</u>	<u>5.14</u>	<u>14.91</u>	<u>20.05</u>	74
IV. Incremental Operating Cost							
1. Salaries & wages	2.30	-	2.30	3.64	-	3.64	-
2. Other	3.70	0.40	4.10	5.91	0.63	6.56	10
Subtotal	<u>6.00</u>	<u>0.40</u>	<u>6.40</u>	<u>9.55</u>	<u>0.63</u>	<u>10.22</u>	6
V. Project Base Cost							
	<u>19.13</u>	<u>21.99</u>	<u>41.18</u>	<u>30.77</u>	<u>35.20</u>	<u>65.97</u>	53
VI. Contingencies							
1. Physical	1.00	1.50	2.50	1.65	2.33	3.98	39
2. Price	11.21	7.64	18.85	18.56	12.99	31.65	41
Total Contingencies	<u>12.21</u>	<u>9.14</u>	<u>21.35</u>	<u>20.31</u>	<u>15.32</u>	<u>35.63</u>	43
Total Project Cost	<u>31.40</u>	<u>31.13</u>	<u>62.51</u>	<u>51.08</u>	<u>50.52</u>	<u>101.60</u>	50

1/ 10% of Civil Works and station development + 13% of vehicles and equipment.

INDONESIA

NATIONAL AGRICULTURAL RESEARCH PROJECT

Summary of ARD Budget - 1974/75 to 1979/80 /a

Year	Routine budget	Development budget (Rp million)	Total	Routine budget	Development budget (US\$'000)	Total
1974/75	-	1,935	1,935	-	3,096	3,096
1975/76	1,667	5,919	7,583	2,662	9,470	12,133
1976/77	1,999	8,904	10,903	3,198	14,246	17,445
1977/78	2,664	9,992	12,656	4,262	15,987	20,250
1978/79	3,274	10,985	14,259	5,238	17,576	22,814
1979/80	3,644	13,015	16,659	5,830	20,824	26,654

/a Indonesian fiscal year - April 1 to March 30. Some totals may not add up because of rounding.

Source: Agency for Agricultural Research and Development.

INDONESIA

NATIONAL AGRICULTURAL RESEARCH PROJECT

Budget for US\$ - 1979/80
(Rp million)

Research Institute, center or office	Development budget	Routine budget	Total budget
AARD Headquarters	1,273	321	1,594
<u>Food Crops</u>			
Central Research Institute for Agriculture	2,571	783	3,354
Horticulture Research Institute	436	386	822
Subtotal	<u>3,007</u>	<u>1,169</u>	<u>4,176</u>
<u>Staple Crops</u>			
Staple Crop Research Institute (Bogor)	701	-	701
Staple Crop Research Institute (Jember)	245	-	245
Tea and Cinnamon Research Institute (Gambung)	780	-	780
Staple Crop Research Institute (Semawa)	173	-	178
Staple Crop Research Institute (Medan)	727	-	727
Subtotal	<u>3,631</u>	-	<u>3,631</u>
<u>Industrial Crops</u>			
Industrial Crop Research Institute	855	522	1,377
<u>Animal Health/Veterinary</u>			
Animal Husbandry Research Institute	353	175	528
Animal Health	451	155	606
Animal Research and Development Center	300	-	300
Subtotal	<u>1,104</u>	<u>330</u>	<u>1,434</u>
<u>Forestry and Forest Products</u>			
Forest Research Institute	326	168	494
Forest Product Research Institute	403	179	582
Subtotal	<u>729</u>	<u>347</u>	<u>1,076</u>
<u>Fisheries</u>			
Island Fishery Institute	463	150	613
Marine Fishery Institute	527	132	659
Fishery Technology Institute	171	56	227
Subtotal	<u>1,161</u>	<u>338</u>	<u>1,499</u>
<u>Others</u>			
Agricultural Quarantine Center	125	341	466
Agro-Economic Research Center	91	-	92
Central Library	250	129	379
Statistics and Agro-Data Center	327	-	327
Planning Activities	32	-	32
Resources Conservation	75	-	75
Soil Research Institute	504	146	650
Transmigration Research	670	-	670
Subtotal	<u>3,052</u>	<u>616</u>	<u>3,668</u>
<u>Total</u>	<u>13,011</u>	<u>3,643</u>	<u>16,654</u>

Source: Agency for Agricultural Research and Development.

INDONESIA
NATIONAL AGRICULTURAL RESEARCH PROJECT

Annex A.5

Projected Growth of Senior Research Staff

	Present		Additional ^{a/}		Total at end of project period ^{b/}	
	Ph.D.	M.Sc./Ir.	Ph.D.	M.Sc.	Ph.D.	M.Sc./Ir.
<u>Staff Related to Components of National Agricultural Research Project</u>						
AARD headquarters	-	3	-	-	-	3
Food crops	2	90	20	75	22	165
Estate crops	5	42	11	64	16	106
Industrial crops	-	43	16	45	16	93
Animal husbandry	1	15	2	15	3	30
Forestry	3	63	12	40	15	103
Fisheries	-	38	9	25	9	63
Other	6	55	11	64	17	119
Sub-Total	<u>17</u>	<u>35</u>	<u>81</u>	<u>328</u>	<u>98</u>	<u>682</u>
<u>Other AARD Staff</u>						
AARD headquarters	-	-	2	20	2	20
Food crops	11	111	5	35	16	146
Estate Crops	-	27	-	35	16	63
Industrial Crops	-	-	4	25	4	25
Animal husbandry	1	17	8	10	9	27
Forestry	-	-	-	20	-	20
Fisheries	1	-	-	25	1	15
Other	-	10	-	19	-	46
Sub-Total	<u>13</u>	<u>155</u>	<u>19</u>	<u>197</u>	<u>32</u>	<u>362</u>
<u>Total AARD Staff</u>						
AARD headquarters	-	3	2	20	2	23
Food crops	13	201	25	110	38	311
Estate crops	5	69	11	100	16	169
Industrial crops	-	48	20	70	20	118
Animal husbandry	2	32	10	25	12	57
Forestry	3	63	12	60	15	123
Fisheries	1	38	9	40	10	78
Other	6	65	11	100	17	165
Sub-Total	<u>30</u>	<u>519</u>	<u>100</u>	<u>525</u>	<u>130</u>	<u>1,044</u>

^{a/} Projected output from training program; numbers for the project are based on information provided to the mission; numbers for other AARD staff are based on the difference between the total training program and project requirements.

^{b/} Present plus additional staff from training program. Assumes that retirement and resignations are compensated by recruitment of additional senior staff.

SHORT-TERM TRAINING

(man-months)

<u>Location</u>	<u>FC</u>	<u>IC</u>	<u>IF</u>	<u>F</u>	<u>AH</u>	<u>AD</u>	<u>Total</u>
Bogor	50						50
Banjarbaru	120					58	178
Bandi Manarap	10						10
Kuala Kapuas	6						6
Lempaka	6						6
Maros	180 ^{a/}			25			205
Balikpapan				32			32
West Timor					54		54
Gondol, Bali			18				18
<u>Total</u>	<u>372</u>	<u>0</u>	<u>18</u>	<u>57</u>	<u>54</u>	<u>58</u>	<u>559</u>

^{a/} represents request for all food crops stations in Sulawesi and Maluku (Kalase, Lanrang, Mariri, Bontobili, Jeneponto, and Makariki).

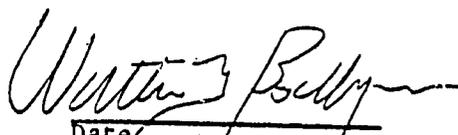
FC - Food Crops
 IC - Industrial Crops
 IF - Inland Fisheries

F - Forestry
 AH - Animal Husbandry
 AD - Animal Diseases

APPLIED AGRICULTURAL RESEARCH PROJECT
Certification Pursuant to Section 611 (e)
of the
Foreign Assistance Act of 1961, As Amended

I, Walter G. Bollinger, the acting principal officer of the Agency for International Development in Indonesia am acquainted with and have taken into account, among other things the performance, the development attitude and the budgetary planning of the Government of Indonesia and its implementing agencies in connection with prior AID financed projects in the agricultural sector. Based on these factors and observations, I consider that the Government of Indonesia has the capability to adequately use the AID assistance to be provided for the development of this Project.

Accordingly, I do hereby certify that in my judgement the Government of Indonesia, and the Department of Agriculture and the Agency for Agricultural Research and Development, have the financial and human resource capability to effectively utilize and maintain the facilities of the Applied Agricultural Research Project.


Date 5/14/80

INDONESIA
NATIONAL AGRICULTURAL RESEARCH PROJECT

Permanent Research Staff of AIRD
(July 1974)

Research Institute, center or office	PhD	MS	Ir	Drh	Drs/ Dra	BS	Res. Asst.	Total
<u>AARD Headquarters</u>	-	3	<u>/a</u>	<u>/b</u>	<u>/b</u>	10	<u>/c</u>	13
<u>Food Crops</u>								
Central Research Institute for Agriculture	12	16	144	-	13	40	17	244
Horticulture Research Institute	1	3	38	-	12	37	28	119
Subtotal	<u>13</u>	<u>19</u>	<u>182</u>	-	<u>25</u>	<u>77</u>	<u>45</u>	<u>363</u>
<u>Estate Crops</u>								
Estate Crop Research Institute (Togor)	2	5	25	-	6	15	32	85
Estate Crop Research Institute (M. Iin)	2	1	25	-	4	18	21	71
Tea and Chincona Research Institute	1	1	12	-	1	-	17	32
Subtotal	<u>5</u>	<u>7</u>	<u>62</u>	-	<u>11</u>	<u>33</u>	<u>70</u>	<u>188</u>
<u>Industrial Crops</u>								
Industrial Crop Research Institute	-	2	46	-	2	33	78	161
<u>Animal Health/Husbandry</u>								
Animal Disease Research Institute	1	-	-	11	7	3	2	24
Animal Husbandry Research Institute	1	5	27	3	-	3	16	55
Subtotal	<u>2</u>	<u>5</u>	<u>27</u>	<u>14</u>	<u>7</u>	<u>6</u>	<u>18</u>	<u>81</u>
<u>Forestry and Forest Products</u>								
Forest Product Research Institute	1	7	34	-	12	14	31	99
Forest Research Institute	2	2	20	-	4	12	29	69
Subtotal	<u>3</u>	<u>9</u>	<u>54</u>	-	<u>16</u>	<u>26</u>	<u>60</u>	<u>168</u>
<u>Fisheries</u>								
Fishery Technology Research Institute	-	1	6	-	3	7	10	27
Inland Fishery Research Institute	-	3	11	-	11	5	1	31
Marine Fishery Research Institute	1	2	15	-	3	6	22	49
Subtotal	<u>1</u>	<u>6</u>	<u>32</u>	-	<u>17</u>	<u>18</u>	<u>33</u>	<u>107</u>
<u>Others</u>								
Agricultural Quarantine Center	-	10	<u>/a</u>	<u>/b</u>	<u>/b</u>	9	<u>/c</u>	19
Agro-Economic Research Center	2	-	15	-	-	-	3	20
Central Library	1	4	<u>/a</u>	<u>/b</u>	<u>/b</u>	16	<u>/c</u>	21
Statistics and Agro-Data Center	1	2	10	<u>/b</u>	<u>/b</u>	3	3	20
Soil Research Institute	2	6	18	-	4	16	34	80
Subtotal	<u>6</u>	<u>22</u>	<u>53</u>	-	<u>4</u>	<u>54</u>	<u>41</u>	<u>160</u>
<u>Total</u>	<u>30</u>	<u>73</u>	<u>446</u>	<u>16</u>	<u>84</u>	<u>247</u>	<u>249</u>	<u>1,351</u>

/a Included under MS.

/b Included under BS.

/c Unknown.

/d Included with Ir.

Source: Agency for Agricultural Research and Development.

INDONESIA

NATIONAL AGRICULTURAL RESEARCH PROJECT

Permanent Research Staff of IARD
(July 1979)

Research Institute, center or office	PhD	MS	Ir	Drh	Drs/ Dra	SS	Res. Asst.	Total
IARD Headquarters	-	3	<u>1a</u>	<u>1b</u>	<u>1c</u>	10	<u>1d</u>	13
<u>Food Crops</u>								
Central Research Institute for Agriculture	12	16	154	-	15	40	17	244
Horticulture Research Institute	1	3	38	-	12	37	28	119
Subtotal	<u>13</u>	<u>19</u>	<u>192</u>	-	<u>27</u>	<u>77</u>	<u>45</u>	<u>363</u>
<u>Estate Crops</u>								
Estate Crop Research Institute (Dagor)	2	5	25	-	6	15	32	85
Estate Crop Research Institute (Moran)	2	1	25	-	4	18	21	71
Tea and Chiccona Research Institute	1	1	12	-	1	-	17	32
Subtotal	<u>5</u>	<u>7</u>	<u>62</u>	-	<u>11</u>	<u>33</u>	<u>70</u>	<u>148</u>
<u>Industrial Crops</u>								
Industrial Crop Research Institute	-	2	46	-	2	33	78	161
<u>Animal Health/Husbandry</u>								
Animal Disease Research Institute	1	-	-	11	7	3	2	24
Animal Husbandry Research Institute	1	5	27	5	-	3	16	57
Subtotal	<u>2</u>	<u>5</u>	<u>27</u>	<u>16</u>	<u>7</u>	<u>6</u>	<u>18</u>	<u>81</u>
<u>Forestry and Forest Products</u>								
Forest Product Research Institute	1	7	34	-	12	14	31	99
Forest Research Institute	2	2	20	-	4	12	29	69
Subtotal	<u>3</u>	<u>9</u>	<u>54</u>	-	<u>16</u>	<u>26</u>	<u>60</u>	<u>158</u>
<u>Fisheries</u>								
Fishery Technology Research Institute	-	1	6	-	3	7	10	27
Inland Fishery Research Institute	-	3	11	-	11	5	1	31
Marine Fishery Research Institute	1	2	15	-	3	6	22	49
Subtotal	<u>1</u>	<u>6</u>	<u>32</u>	-	<u>17</u>	<u>18</u>	<u>33</u>	<u>107</u>
<u>Others</u>								
Agricultural Quarantine Center	-	10	<u>1a</u>	<u>1b</u>	<u>1c</u>	9	<u>1d</u>	19
Agro-Economic Research Center	2	-	15	-	-	-	3	20
Central Library	1	4	<u>1a</u>	<u>1b</u>	<u>1c</u>	16	<u>1d</u>	21
Statistics and Agro-Data Center	1	7	10	<u>1b</u>	<u>1c</u>	3	-	20
Soil Research Institute	2	6	18	-	4	16	34	80
Subtotal	<u>6</u>	<u>27</u>	<u>58</u>	-	<u>20</u>	<u>44</u>	<u>61</u>	<u>166</u>
Total	<u>30</u>	<u>73</u>	<u>448</u>	<u>16</u>	<u>94</u>	<u>247</u>	<u>345</u>	<u>1,211</u>

1a Included under MS.1b Included under SS.1c Unknowns.1d Included with Ir.

Source: Agency for Agricultural Research and Development.

RECAPITULATION (U.S.\$)

ANNEX B.1

Institute	Construction	Farm Development	Laboratory equipment	Field equipment	Misc. library/ and information equipment	Vehicles	Short-term training	Foreign Consultants	Total
<u>Food Crops</u>									
1. Bogor, R.I	3,727,740.	800,000		242,000	120,000	132,000	340,000	494,800	5,856,540
2. B'baru, R.I	1,857,525.	298,500	600,000	94,500	90,000	139,500	360,000	425,000	3,865,025
3. B'manarap, SS	483,150	231,000	20,000	25,500	10,000	17,000	30,000		816,650
4. K'Kapuas, EF	176,650	35,600		10,000	3,000	13,200	18,000		256,450
5. Lempake, EF	197,450	87,000	2,000	16,000	7,500	17,000	18,000		344,950
6. Maros, R.I	973,000.	60,800	700,000	414,600	100,000	209,000	540,000	510,000	3,507,400
7. Kalase, SS	263,950.	89,000	30,000	89,500	40,000	32,000			544,450
8. Makariki, SS	266,500.	83,000	50,000	69,500	60,000	76,000			605,000
9. Bontobili, EF	48,000.	8,000	10,000	31,900	5,000	7,000			109,900
10. Lanrang, SS	162,600.	14,250	16,000	73,400	8,000	16,000			290,250
11. Jeneponto, SS	236,850.	64,550	80,000	55,500	10,000	32,000			478,900
12. Mariri, SS	255,150.	102,100	50,000	67,500	30,000	32,000			536,750
<u>Industrial Crops</u>									
13. Anjungan, SS	460,400.	450,000		25,000	25,000	42,500			1,002,900
(8) Makariki, SS	489,750.	300,000		25,000	25,000	42,500			878,250
<u>Forestry</u>									
14. Balikpapan, SS	665,850.	252,000	200,000	521,250	118,000	76,250	96,000	340,000	2,269,350
(6) Maros, SS	224,560.	124,200		31,000	69,000	36,240	75,000	170,000	730,000
<u>Animal Husbandry</u>									
15 West Timor SS	1,714,072.	160,000	500,000	54,000	85,000	78,020	135,000	255,000	2,981,092
<u>Animal Diseases</u>									
(2) B'baru, SS	617,690.	6,300	400,000	5,000	100,000	57,500	174,000	255,000	1,615,490
<u>Inland Fisheries</u>									
16 Condol, Bali SS	617,000		500,000	20,000	55,000	29,000	45,000	206,400	1,472,400
	13,433,887	3,166,300	3,158,000	1,870,650	960,500	1,084,710	1,831,000	2,656,200	20,161,747
	(12,915,897)								

Institute: Central Research Institute for Food Crops
 Location: Bogor, W. Java

Description	Total required	to be build	Existing	Unit Cost US \$	Total US \$
1. Civil works					
1. Land Development	15 ha	15 ha	-	1.5	800,000
2. Main building & constructions					
a. laboratories	2000 m ²	1700 m ²		300	510,000
b. offices	4000 m ²	3456 m ²		200	691,200
			544 m ² (renov)	35	19,040
c. Green houses	3000 m ²	3000 m ²		500	1,500,000
3. Supporting & building construction					
a. Field service center					
	4000 m ²	3900 m ²		200	730,000
			100 m ² (renov)	25	2,500
b. Drying floors	1500 m ²	1500 m ²		150	225,000
					<u>3,727,740</u>
Equipment					
1. Field equipment					
a. tractor 40 HP	3 unit			15,000	45,000
b. tractor 8 HP	2 unit			8,000	16,000
c. Thresher	3 unit			25,000	75,000
d. Harvester eq.	2 unit			20,000	40,000
e. Motor sprayer eq.	3 unit			5,000	15,000
f. Plow, harrow, trailer etc.	3 unit			5,000	15,000
g. Balance (500 kg)	3 unit			3,000	9,000
h. Cultivator	3 unit			5,000	15,000
i. Water pump	3 unit			4,000	12,000
					<u>242,000</u>
2. Information equipment					60,000
3. Library equipment					60,000
Vehicles					
1. Truck	3 unit			15,000	45,000
2. Pick up	3 unit			8,000	24,000
3. Jeep	7 unit			9,000	63,000
					<u>132,000</u>

Description	Total required	to be build	Existing	Unit Cost US \$	Total US \$
IV. Foreign Consultants					
1. Long term (+2 years)					
a. Physiology	(2) 1 m y (1)	2.		85,000/m y	85,000
b. Social Economy	1 m y			85,000/m y	85,000
c. Breeding					
c.1. Legumes	(1) 1 m y (4)	2.		85,000/m y	85,000
c.2. Tuber Crops	(1) 1 m y (1)	3.		85,000/m y	85,000
d. Processing (1+1 hours)	18 mm	2	2	8,600/mm	154,000
					<u>494,000</u>
V. Short term training					
1. 1/6 years (2 mo/trainee)					
	20 mm			3,000/mm	60,000
2. 1/4 years (3 mo/trainee)					
	20 mm			3,000/mm	60,000
3. 1/2 years (6 mo/trainee)					
	10 mm			3,000/mm	30,000
4. Attendance of International Conference (5 years)					
	10 seniors scientist			3,000/mm	90,000
5. Observation Trips (5 years)					
	10 seniors scientist				100,000
					<u>340,000</u>
GRAND TOTAL					<u>7,574,290</u>
					340
					<u>5,856,540</u>

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Institute: Food Crops Research Institute
 Location : Banjarbaru, South Kalimantan (50 ha)

Description		Total required	Unit Cost US \$	Total US \$
I. OFFICE & LABORATORIES				
1. Station Manager office		40 m ²	270	10,800
2. Researchers & Assistants Office		1000 m ²	270	270,000
3. Conference/Multi- purpose room		150 m ²	270	40,500
4. Laboratory		200 m ²	330	66,000
5. Library		150 m ²	270	40,500
				427,800
II. BOARDING DORMITORY & HOUSING				
1. 120 sq.M.House type	7 unit	840 m ²	215	180,600
2. 70 sq.M.House type	20 unit	1400 m ²	185	259,000
3. 50 sq.M.House type	20 unit	1000 m ²	185	185,000
4. 3b sq.M.House type	10 unit	360 m ²	185	66,600
5. Guest House (120 m)	1 unit	120 m ²	185	22,200
				713,400
III. FARM BUILDING & FACILITIES				
1. Field service center				
a. Workshop		100 m ²	185	18,500
b. Vehicles Shed		150 m ²	185	27,750
c. Field equipment		150 m ²	185	27,750
2. Storage				
a. Processing Hall		120 m ²	185	22,200
b. Crop storage		100 m ²	185	18,500
c. Chemical storage		75 m ²	185	13,875
d. Fertilizer storage		75 m ²	185	13,875
e. Field material storage		75 m ²	185	13,875
3. Green house	12 unit	600 m ²	550	330,000
4. Screen house	12 unit	400 m ²	350	140,000
5. Screen cage	1 unit	500 m ²	90	45,000
6. Drying floor	1 unit	500 m ²	90	45,000
				716,325
IV. SITE DEVELOPMENT				
1. Civil works				
a. Road & parking				96,000
b. Irrigation system		25 ha	1200	30,000
c. Land scaping		20 ha	1200	24,000

Description	Total required	Unit Cost US \$	Total US \$
2. Electrical works			
Electrical supply (PLN)			65,000
3. Mechanical works			
a. Water supply			
- Deep well			70,000
- Arthesia			
b. Water distribution			
c. Water reservoir			
d. Pump house			
4. Fuel storage	8 cons	1	3,500
5. Communication System/S.S.B. & telephone			10,000
			<u>298,500</u>

V. VEHICLES

1. Sedan		3	12,500	37,500
2. Jeep		7	9,000	63,000
3. Pick up	1-1,5 ton	2	8,000	16,000
4. Micro bus		1	13,000	13,000
5. Truck	2-2,5 ton	1	10,000	10,000
				<u>139,500</u>

VI. EQUIPMENT

1. Field equipment				
a. Tractor 25 - 30 HP		1	16,000	16,000
b. Tractor 12 - 15 HP		4	9,000	36,000
c. Mist blower		5	600	3,000
d. Hand Sprayer		15	100	1,500
e. Water pump		2	8,000	16,000
f. Seed Cleaner		2	2,000	4,000
g. Thresher		4	1,500	6,000
h. Drier	0,5 ton	4	3,000	12,000
2. Research equipment (non-laboratory)				150,000
3. Information equipment				20,000
4. Library equipment				40,000
5. Office equipment				30,000
6. Laboratory equipment				350,000
7. Storage equipment/ workshop equipment				50,000
8. Furniture office				25,000
9. Furniture expert & guest house				75,000
				<u>784,500</u>

Description	Total required	Unit Cost US \$	Total US \$
VII. FOREIGN CONSULTANTS (TECHNICAL ASSISTANT)			
Long term	5 m - y	85,000/m-y	425,000
VIII. SHORT TERM TRAINING			
1. 1/4 years (3 mo)	60 m - m	3,000/m-m	180,000
2. 1/2 years (6 mo)	60 m - m	3,000/m-m	180,000
			<u>360,000</u>
	Grand total		<u>3,865,025</u>

Description	Total Required	Existing	Unit Cost US\$	Total US\$
I. OFFICES				
1. Staff office	300 m ²	-	270	81,000
Staff office	-	40 m ² (renov)	50	2,000
2. Conference/multi-purpose room	100 m ²	-	270	27,000
				<u>110,000</u>
II. HOUSING				
1. 70 sq.m. House Type, 2 unit	140 m ²	-	140	19,000
2. 50 sq.m. House Type, 8 unit	400 m ²	-	140	56,000
				<u>75,000</u>
III. FARM BUILDING & FACILITIES				
1. Field service centre	150 m ²	-	185	27,750
2. Storage				
a. Processing hall	100 m ²	-	80	8,000
b. - Crop storage	100 m ²	-	185	18,500
- Crop storage		32 m ²	-	-
- Crop storage		48 m ² (renov)	100	4,800
c. Chemical fertilizer storage	50 m ²	-	185	8,250
d. Field Equipment storage	50 m ²	-	185	9,250
3. Green house	200 m ²	-	550	110,000
4. Screen cage - 1	1000 m ²	-	90	90,000
Screen cage - 2	-	300 m ²	-	-
5. Drying floor	-	500 m ² (renov)	40	20,000
				<u>297,550</u>
IV. SITE DEVELOPMENT				
1. Civil works				
a. Bridge	24 m ²	-	4,000	96,000
b. Road (up grading)	500 m ²	-	50	25,000
c. Farm road & parking				10,000
d. Irrigation system	14 ha	-	1,000	14,000
e. Land scaping	4 ha	-	2,500	10,000
2. Electrical works:				
- Electrical supply (PLN power)	-	-	-	40,000
3. Mechanical Works				
- Water reservoir	-	-	-	35,000
- Pump house	-	-	-	1,000
4. Fuel storage, 1 ton	1	-	-	1,000
				<u>231,000</u>
V. VEHICLE				
1. Jeep	1	-	9,000	9,000
2. Pick up	1	-	8,000	8,000
				<u>17,000</u>

Description	Total Required	Existing	Unit Cost US\$	Total US\$
/I. 1. EQUIPMENT				
a. Tractor (12-15 HP)	2	-	9,000	18,000
b. Drier, 0,5 ton	1	-	3,000	3,000
c. Hand sprayer	10	-	100	1,000
d. Thresher	1	-	1,500	1,500
e. Seed cleaner	1	-	2,000	2,000
2. Office Equipment				10,000
3. Research Equipment				20,000
				<u>55,500</u>
II. SHORT-TERM TRAINING				
1/4 Year	10 m-m	-	3,000	30,000
			T o t a l	816,650

Institute: Food Crops Experimental Farm

Location: Unit Tatas, Kuala Kapuas, Central Kalimantan 2
(10 ha)

Description	Total Required	Unit Cost US\$	Total US\$
I. OFFICE			
1. Staff Office	140 m ²	330	<u>46,200</u> 46,200
II. BOARDING DORMITORY & HOUSING			
1. 70 sq.m. House Type 1 unit	70 m ²	165	11,550
2. 50 sq.m. House Type, 4 unit	200 m ²	165	<u>33,000</u> 44,550
III. FARM BUILDING & FACILITIES			
1. Field Service Center:	60 m ²	215	12,900
2. Storage:			
a. Crop Storage	100 m ²	215	21,500
b. Chemical & fertilizer storage	50 m ²	215	10,750
c. Field Equipment storage	50 m ²	215	10,750
3. Drying floor	200 m ²	150	<u>30,000</u> 85,900
IV. SITE DEVELOPMENT			
1. Civil works			
a. Boat station (small quay)	30 m ²	100	3,000
b. Farm road	300 m ²		1,000
c. Irrigation system/drainage			10,000
2. Electrical works:			
a. Electrical supply)			
b. Electrical distribution)			20,000
c. Generator)			
3. Water reservoir & distribution			<u>1,600</u> 35,600
V. VEHICLES			
- Motor boat (cap. 6 person)			11,200
- Boat (15-20 HP) diesel engine		20,000	<u>2,000</u> 13,200
VI. EQUIPMENT			
1. Field Equipment			
a. Hand sprayer	10	200	2,000
b. Others			5,000
c. Drier			3,000
2. Office equipment & furniture			<u>3,000</u> 13,000
VII. SHORT TERM TRAINING			
1/4 years	6 m-m		<u>18,000</u> 18,000
		Grand total	<u>251,450</u>

Institute: Food Crops Experimental Farm
 Location : Lempake, Samarinda, East Kalimantan
 (17 ha)

Description	Total required	Unit Cost US \$	Total US \$
I. OFFICES			
1. Office	140 m ²	375	52,500
			<u>52,500</u>
II. HOUSING			
1. 70 sq.M. House type	1 unit	70 m ²	185
2. 50 sq.M. House type	4 unit	200 m ²	185
			<u>37,600</u>
			49,950
III. FARM BUILDING & FACILITIES			
1. Field service centre	60 m ²	250	15,000
a. Vehicle shed			
b. Workshop			
c. Field equipment			
2. Storages			
a. Crop storage	100 m ²	250	25,000
b. Chemical & Fertilizer storage	50 m ²	250	12,500
c. Field equipment storage	50 m ²	250	12,500
3. Drying floor	200 m ²	150	30,000
			<u>95,000</u>
IV. SITE DEVELOPMENT			
1. Civil works			
a. Road parking			20,000
b. Land scoping	4 ha	3000	12,000
c. Irrigation & drainage system	5 ha	3000	15,000
2. Electrical works			
a. Electrical supply 10 KVA			10,000
b. Electrical distribution			5,000
c. Generator House			5,000
3. Mechanical works			
a. Water supply (deep well))		
b. Water distribution)		
c. Water reservoir)		
d. Pump house)		20,000
			<u>87,000</u>
V. VEHICLES			
1. Jeep	1	9000	9,000
2. Pick Up	1	8000	8,000
			<u>17,000</u>

Description	Total required	Unit Cost US \$	Total US \$
VI. EQUIPMENT			
1. Field equipment			
a. Tractor mini (12 - 15 HP)	1	9000	9,000
b. Hand sprayer	10	200	2,000
c. Others			5,000
2. Office equipment			5,000
3. Research equipment			2,000
4. Furniture			2,500
			<u>25,500</u>
VII SHORT TERM TRAINING			
1. 1/6 Years			
2. 1/4 Years	6m - m	3000/m-m	-18,000
3. 1/2 Years	-	-	-
4. 3/4 Years	-	-	-
			<u>18,000</u>
GRAND TOTAL			<u>344,950</u>

Institute: Food Crops Research Institute
Location: Maros, South Sulawesi

Description	Total required	Unit Cost US \$	Total US \$
I. CIVIL WORKS			
<i>farm</i>			
1. Site development			
a. Topographic survey			
b. Site clearing & Landscaping	20 ha	640	12,800
c. Land reshaping			
d. Irrigation & Drainage	1500	32	48,000
e. Road works			
			60,800
2. Structures			
a. Office/laboratory	1000 m ²	200	200,000
b. Service building	200 m ²	175	35,000
c. Storage (general warehouse, chemical agricultural products)	200 m ²	175	35,000
d. Green house	1000 m ²	175	175,000
e. Screen house	1000 m ²	175	175,000
f. Library	200 m ²	200	40,000
g. Dormitory and guest house	200 m ²	200	40,000
h. staff house	2000 m ²	115	230,000
i. Drying floor	500 m ²	40	20,000
k. Machinery shed	200 m ²	115	23,000
			863,500
II. EQUIPMENT			
1. Office equipment	Lot		150,000
2. Laboratory equipment	Lot		700,000
3. Field equipment			
Tractor 40 HP	1 unit	32,000	32,000
Power tiller	8 units	4,000	32,000
Thresher	5 units	2,500	12,500
Drayer	5 units	3,500	17,500
Motor sprayer	10 units	200	2,000
Balance	Lot	Lot	5,000
Transplanter	3 units	5,000	15,000
Water pump	3 units	5,000	15,000
Generator	1 unit	32,000	32,000
Rotary cutter	1 unit	1,600	1,600
4. Library acquisition (book, journal, equipment)	Lot		100,000
5. Furniture	Lot		100,000
			1,214,600

Description	Total required	Unit Cost US \$	Total US \$
III. VEHICLES			
Sedan -- got	3	13,000	39,000
Jeep	7	9,000	63,000
Pick Up	5	7,000	35,000
Bus -- got	2	17,000	34,000
Truck -- got	2	19,000	38,000
			<u>209,000</u>
IV. FOREIGN CONSULTANTS			
Short term	3 m y	86,000	255,000
Long term	3 m y	86,000	255,000
			<u>510,000</u>
V. STAFF DEVELOPMENT			
Short term training			
1/6 Years	60 mm	3,000	180,000
1/4 Years	60 mm	3,000	180,000
1/2 Years	60 mm	3,000	180,000
			<u>540,000</u>
	Grand total:		3,507,400

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Description	Total Required	Unit Cost US\$	Total US\$
CIVIL WORKS			
1. ^{Site} Site development			
a. Topographic survey			4,000
b. Site clearing & Landscaping	50 Ha	160	8,000
c. Land reshaping	50 Ha	400	20,000
d. Irrigation & Drainage	1500 m ²	8	12,000
e. Road works	1800 m ²	25	45,000
	3,000 m ² (21,500,000 Rp)		<u>89,000</u>
2. Structure			
a. Office/laboratory building	500 m ² < m ² office	175	87,500
b. Service building	150 m ² < m ² lab.	175	26,300
c. Storage (general warehouse, chemical, agricultural products)	200 m ²	175	35,000
d. Green house	100 m ²	148	14,800
e. Screen house	100 m ²	112	11,200
f. Library	50	175	8,750
g. Auditorium			
h. Dormitory and guest house	120	115	13,800
i. Staff house	360 m ² <	115	41,400
j. Drying floor	500 m ²	32	16,000
k. Machinery shed, } Mach. repair }	80 m ²	115	9,200
			<u>263,950</u>
. EQUIPMENT			
1. Office equipment	lot		20,000
2. Laboratory equipment	lot		30,000
3. Field equipment			
a. Tractor 40 HP	1	20,000	20,000
b. Power tiller	4	4,000	16,000
c. Thresher	3	2,500	7,500
d. Dryer	2	3,500	7,000
e. Motor sprayer	5	300	1,500
f. Balance	lot	lot	2,500
g. Transplanter			
h. Generator	1	15,000	15,000
4. Library acquisition (books, journals, equipment)			10,000
5. Furniture			<u>30,000</u>
			159,500
.. VEHICLES			
Sedan			
Jeep	2	9,000	18,000
Pick Up	2	7,000	14,000
			<u>32,000</u>
Grand Total			544,450

Location: Makariki, Maluku

Description	Total Required	Unit Cost US\$	Total US\$
I. CIVIL WORKS			
1. Site development			
a. Topographic survey			4,300
b. Site clearing & Landscaping	50 Ha	80	4,000
c. Land reshaping	50 Ha	400	20,000
d. Irrigation & Drainage	2000 m ²	15	30,000
e. Road works	1000 m ²	25	25,000
			<u>83,000</u>
2. Structure			
a. Office/laboratory building	500 m ²	175	87,500
b. Service building	200 m ²	175	35,000
c. Storage (general warehouse, chemical, agricultural products)	150 m ²	175	26,250
d. Green house	100 m ²	148	14,800
e. Library	50 m ²	175	8,750
f. Dormitory and guest house	240 m ²	115	27,600
g. Staff house	360 m ²	115	41,400
h. Drying floor	500 m ²	32	16,000
i. Machinery shed & Mech. repair	80 m ²	115	9,200
			<u>266,500</u>
II. EQUIPMENT			
1. Office equipment	lot		20,000
2. Laboratory equipment	lot		30,000
3. Field equipment	lot		
a. Tractor 40 HP	1	20,000	20,000
b. Power tiller	4	4,000	16,000
c. Thresher	3	2,500	7,500
d. Dryer	2	3,500	7,000
e. Motor sprayer	5	300	1,500
f. Balance	lot	lot	2,500
g. Generator	1	15,000	15,000
4. Library acquisition (books, journal, equipment)			10,000
5. Furniture			50,000
			<u>179,500</u>
III. VEHICLES			
Sedan ¹⁰⁵			
Jeep	2	9,000	18,000
Pick Up	4	7,000	28,000
Bus ¹²⁵			
Truck ¹⁰⁵			
Motor Launch (boat) (100 H.P. + vrac)	1	30,000	30,000
			<u>76,000</u>
	Grand Total		605,000

Institute: Food Crops Research Sub-station
 Location : Bontobili, South Sulawesi (Gul)

Description	Total Required	Unit cost US \$	Total US \$
I. CIVIL WORKS			
1. Site development			
a. Road Works	2000 m	4	8,000
			<hr/> 8,000
2. Structures			
a. Service building	100 m ²	128	12,800
b. Storage (general warehouse, chemical, agricultural products)	150 m ²	128	19,200
c. Green house	200 m ²	80 ?	16,000
			<hr/> 48,000
II. EQUIPMENT			
1. Office equipment	Lot		5,000
✓ 2. Laboratory equipment (full)	Lot		5,000
3. Field equipment			
a. Tractor 40 HP	2	10,000	20,000
b. Thresher	Lot	Lot	2,000
c. Drayer	1	3,500	3,500
d. Motor sprayer	2	200	400
e. Balance	2	1,000	2,000
f. Generator	1	4,000	4,000
4. Library acquisition (books, journal, equipment)			5,000
			<hr/> 46,900
III. VEHICLES			
Pick Up	1	7,000	7,000
			<hr/> 7,000
			<hr/> 109,900
	Grand Total		

Institute: Food Crops Research Sub-station
Location: Lanrang, South Sulawesi

Description	Total Required	Unit Cost US \$	Total US \$
I. CIVIL WORKS			
1. Site development			
a. Road Works	570 m	25	14,250
			<u>14,250</u>
2. Structures			
a. Office/laboratory building	560 m ² <i>200 m² office</i>	200	100,000
b. Green house	200 m ² <i>120 guest</i>	175	35,000
c. Staff housing	240 m ² <i>2 x 70</i>	115	27,600
			<u>162,600</u>
II. EQUIPMENT			
1. Office equipment	Lot		8,000
2. Laboratory equipment	Lot		8,000
3. Field equipment			
a. Tractor 40 HP	1	32,000	32,000
b. Tractor 14 HP	2	10,000	20,000
c. Thresher	2	1,600	3,200
d. Balance	Lot	Lot	5,000
e. Transplanter	2	1,600	3,200
f. Generator	1	10,000	10,000
4. Furniture	Lot		8,000
			<u>97,400</u>
III. VEHICLES			
Jeep	1	9,000	9,000
Pick Up	1	7,000	7,000
			<u>16,000</u>
	Grand Total		<u>290,250</u>

Institute: Food Crops Research Sub-station
 Location: Jenepono, South Sulawesi (30 ha)

Description	Total required	Unit Cost		Total	
		US	\$	US	\$
I. CIVIL WORKS					
1. Site development					
a. Topographic survey	2300 m ²		16		4,000
b. Irrigation & Drainage	Lot		Lot		36,800
c. Road works	750 m ²		25		5,000
					18,750
					<hr/>
					64,550
2. Structures					
a. Office/laboratory building	400 m ² <i>ffha</i>		175		70,000
b. Service building	200 m ² <i>lab</i>		175		35,000
c. Storage (general warehouse, chemical, agricultural products)	150 m ²		175		26,250
d. Green house	150 m ²		148		22,200
e. Screen house	150 m ²		115 ?		17,250
f. Library	50 m ²		175		8,750
g. Staff house (4)	360 m ²		115		41,400
h. Drying floor	560 m ²		32 ?		16,000
					<hr/>
					236,850
II. EQUIPMENT					
1. Office equipment					
2. Laboratory equipment	Lot		1		30,000
3. Field equipment	Lot				50,000
a. Tractor 40 HP					
b. Tractor 14 Hp					
c. Motor sprayer					
d. Balance	10		300		3,000
e. Generator	Lot		Lot		2,500
4. Library acquisition	2		15,000		30,000
(books, journals, equipment)					10,000
5. Furniture					20,000
					<hr/>
					145,500
III. VEHICLES					
Jeep					
Pick Up	2		9,000		18,000
	2		7,000		14,000
					<hr/>
					32,000
					<hr/>
					Grand Total
					478,900

Institute: Food Crops Research Sub-station
 Location : Mariri, South Sulawesi (LXIII)

Description	Total required	Unit Cost		Total	
		US	\$	US	\$
I. CIVIL WORKS					
1. Site development					
a. Topographic survey					4,000
b. Site clearing & Landscaping	50 Ha	32	?(300)		1,600
c. Land reshaping	50	200			10,000
d. Irrigation & Drainage	3000 m ²		8		24,000
e. Road works	2500 m		25		62,500
					<u>102,100</u>
2. Structures					
a. Office/laboratory building	500 m	175			87,500
b. Service building	100 m	175			17,500
c. Storage (general warehouse, chemical, agricultural products)	200 m ²	175			35,000
d. Green house	100 m ²	148			14,800
e. Screen house	100 m ²	112			11,200
f. Library	50 m ²	175			8,750
g. Dormitory and guest house	120	115			13,800
h. Staff house	360 m ²	115			41,400
i. Drying floor	500 m ²	32	?		16,000
j. Machinery shed	80 m	115			9,200
					<u>255,150</u>
II. EQUIPMENT					
1. Office equipment	Lot				20,000
2. Laboratory equipment	Lot				30,000
3. Field equipment					
a. Tractor 40 HP	1	20,000			20,000
b. Power tiller	4	4,000			16,000
c. Thresher	3	2,500			7,500
d. Drayer	2	3,500			7,000
e. Balance	2	1,000			2,000
f. Generator	1	15,000			15,000
4. Library acquisition (books, journals, equipment)					10,000
5. Furniture	Lot				20,000
					<u>147,500</u>
III. VEHICLES					
Jeep	2	9,000			18,000
Pick Up	2	7,000			14,000
					<u>32,000</u>
	Grand Total				<u>536,750</u>

Institute: Industrial Crops Research Sub-station
Location : Anjungan, West Kalimantan

Description	Total required	Unit Cost US \$	Total US \$
I. SITE DEVELOPMENT			
1. Site opening	200 ha	1,500	300,000
2. Internal primary road	5 Km	30,000	150,000
			<u>450,000</u>
II. CONSTRUCTION			
1. Drainage	20,000 m ³	4	80,000
2. Main buildings			
a. Lab + greenhouse	150 m ²	320	48,000
b. Field office	200 m ²	240	48,000
			<u>96,000</u>
3. Supporting buildings			
a. Housing			
- Type 120 m ²	1	20,000	20,000
- Type 70 m ²	4	11,000	44,000
- Type 50 m ²	5	8,000	40,000
- Guest house 120 m ²	1	20,000	20,000
b. Field service			
- Fertilizer storage	100 m ²	190	19,000
- Production storage	100 m ²	190	19,000
- Pesticide storage	50 m ²	190	9,500
- Workshop + garage	150 m ²	190	28,500
- Fuel storage + garden equipment shed	60 m ²	150	11,400
- Drying floor	200 m ²	65	13,000
4. Power supply			
Generator Set (50 KVA)	(3 units)	7,000	21,000
Power house site works		3,000	3,000
5. Water supply			
Deep well system complete with pipe system, pump and	1 unit	36,000	36,000
		Total II	<u>460,400</u>
III. EQUIPMENT			
1. Field equipment			
a. Tractor 40 HP	1 unit	20,000	20,000
b. Plow, harrow, trailer	1 unit	5,000	5,000
			<u>25,000</u>
2. Furniture for office and houses		25,000	25,000
3. Vehicles			
1. Jeep	2 unit	10,000	20,000

Description	Total required	Unit Cost US \$	Total US \$
2. Pick-up	1 unit	7,500	7,500
3. Truck (5 ton)	1 unit	15,000	15,000
			<u>42,500</u>
		Total III	<u>92,500</u>
	Grand total		<u>1,002,900</u>

Description	Total required	Unit Cost US \$	Total US \$
I. SITE DEVELOPMENT			
1. Site opening	200 Ha	1,500	300,000
II. CONSTRUCTION			
1. Irrigation and Drainage			
a. Distribution pipe system	10 Km	5,400	54,000
b. Water reservoir	300 m ³	360	108,000
c. Drainage	10,000 m	3	30,000
<hr/>			
2. Main buildings			
a. Lab + greenhouse	125 m ²	250	31,250
b. Field office	150 m ²	220	33,000
<hr/>			
3. Supporting buildings			
a. Housing			
- Type 120 m ²	1	16,500	16,500
- Type 70 m ²	4	9,000	36,000
- Type 50 m ²	5	6,300	31,500
Guest house 120 m ²	1	16,500	16,500
b. Field service			
- Fertilizer storage	100 m ²	150	15,000
- Production storage	100 m ²	150	15,000
- Workshop + garage	200 m ²	150	30,000
- Fuel storage + garden equipment shed	60 m ²	100	6,000
- Drying floor	200 m ²	50	10,000
<hr/>			
4. Power supply			
General Set (50 KVA)		7,000	14,000
Power house site works	(2 units)	3,000	3,000
5. Water supply			
Deep well complete with pipe system, reservoir and pump	1 unit	36,000	36,000
<hr/>			
485,750			
III. EQUIPMENT			
1. Field Equipment			
a. Tractor 40 HP	1 unit	20,000	20,000
b. Flow, harrow, trailer	1 unit	5,000	5,000
<hr/>			
2. Furniture for office and houses			
25,000			
3. Vehicles			
a. Jeep	2 units	10,000	20,000

Description	Total required	Unit Cost US \$	Total US \$
b. Pick-up	1 unit	7,500	7,500
c. Truck (5 ton)	1 unit	15,000	15,000
			<u>42,500</u>
	Grand total		878,250

Institute: Forest and Forest Products Research Sub-Station
 Location: Balikpapan, East Kalimantan

Description	Total required	Unit Cost		Total US \$
		US	\$	
I. CIVIL WORKS				
1. Land development		637		252,000
a. Experimental forest for forest and forest products research	39,500 Ha			
b. Station grounds on the outskirts of Balikpapan including arboretum, emplacement/parking place, nurseries staff housing	15 Ha			
2. Main buildings & construction				
a. laboratories and workshop, green house	400 (200* + 200)**	455		182,000
b. administration offices, including seminar room, library, and stores for supplies	400 (200* + 200)**	375		150,000
3. Supporting buildings & construction				
a. drying floors		150		11,250
b. staff housing	1300 m ² (75 m ² ** + 600**)	213		255,600
c. storage	100 m ²	150		15,000
d. roads, bridges	10 km	4,400		44,000
e. water supply, pump & water distribution	-	-		8,000
				<u>665,850</u>
II. EQUIPMENT				
1. Research equipment**				200,000
seed lab., diesel generator 50 KVA, microscope, autoclave etc.				
2. Field equipment **				150,000
camping unit, forest assessment, climatological apparatus, seed and herbarium collection etc.				
3. Information/office equipment				60,000
projector, camera, charts, calculator, type writer etc.				
4. Library equipment, books, magazine, subscription				20,000
5. Furniture: all buildings, houses, lab. and offices				38,000
6. Forest Exploitation				
- Chainsaw still 070 AV	5 unit	650		3,250
- Clark Ranger skidder	1 unit	112,000		112,000
- Self loading trucks Isuzu	2 unit	48,000		96,000
- Crawler tractor Cat. D7 + ripper, winch, dozer blade	1 unit	160,000		160,000
				<u>364,250</u>

Description	Total required	Unit Cost		Total US \$
		US	\$	
III. VEHICLES				
Truck Dodge	1 unit	16,250		16,250
Jeep C-J-7	2 unit	12,000		24,000
Jeep C-J	2 unit	10,000		20,000
Pick Up	2 unit	8,000		16,000
				76,250
IV. FOREIGN CONSULTANTS				
Total		85,000 m/y		340,000
Silviculturist	1 m/y			
Forest soil scientist	1 m/y			
Forest engineering	1 m/y			
Forest research planning specialist	1 m/y			
V. SHORT TERM TRAINING (ABROAD)				
1/12 years (study tours, seminar and training)	32 m m	3,000 mm		96,000
1/6 years	5 m m			
1/4 years	6 m m			
1/2 years	9 m m			
	12 m m			
				2,269,350
Grand total				

NOTE: *) Forest Product Research Institute
 **) Forest Research Institute

Description	Total required	Unit Cost		Total US \$
		US	\$	
I. CIVIL WORKS				
1. Land development	300 Ha	414		124,200
2. Main building & Construction				
a. laboratories	140 m ²	285		40,320
b. offices	300 m ²	200		60,000
green houses	100 m ²	200		20,000
3. Supporting buildings & Construction				
a. field service centre	200 m ²	100		20,000
b. drying floord	200 m ²	75		15,000
c. houses	540 m ²	115		62,100
d. storage	70 m ²	100		7,140
II. EQUIPMENT				
1. Field equipment Forest assessment, camping unit, seeds, herbarium collector etc.	-	-		31,000
2. Information equipment projector, camera, etc.				25,000
3. Library equipment books, maganize, subscriptions publications				13,000
4. Furniture: all buildings, offices, houses, lab				31,000
III. VEHICLES: Jeep <u>CJ-7</u> Hardtop	3 unit	12,080		36,240
IV. FOREIGN CONSULTANTS				
Total	2 m/y	85,000		170,000
a. Silviculturist	1 m/y (1)			
b. Wildlife management expert	1 m/y (2)			
V. SHORT TERM TRAINING				
1/6 years	6 m m	3,000		75,000
1/4 years	6 m m			
1/2 years	6 m m			
1/2 years (study tour/seminar)	7 m m			
		Grand total		730,000

Institute: Animal Husbandry Research Sub-station

Location: Tambang-Ulang, South Kalimantan

Description	Total Required	Unit Cost US\$	Total US\$
I. CIVIL WORKS			
1. Land development	200 Ha	800	160,000
2. Main buildings & construction			
a. Laboratories			
- Physiology	100 m ²	340	34,000
- Nutrition	100 m ²	340	34,000
b. Offices	200 m ²	270	54,000
c. Library	100 m ²	270	27,000
3. Supporting building & construction			
a. Field service centre			
- Animal house	1100 m ²	215	236,500
- Animal shed	200 m ²	215	43,000
- Barn for feed stuff	100 m ²	150	15,000
- Feed store	100 m ²	185	18,500
- Fences	15000 m ²	25	375,000
- Workshop & Garage	150 m ²	185	27,750
- Forage chopping barn	100 m ²	100	10,000
- Animal clinic	50 m ²	185	9,250
- Quarantine	100 m ²	80	8,000
- Balance building	20 m ²	150	3,000
- Pipping	1 unit	5,000	5,000
- Drying floor	200 m ²	150	30,000
- Watersupply	1 unit	10,000	10,000
b. Houses			
- Type 120 m ²	1 unit	18,432	18,432
- Type 70 m ²	5 unit	9,408	47,040
- Type 50 m ²	5 unit	6,720	33,600
- Type 30 m ²	15 unit	5,000	75,000
c. Others (Power electrical, int./ext.road, irrigation)		600,000	600,000
			1,714,072
I. EQUIPMENT			
1. Research equipment (laborat.)	4 unit	200,000	500,000
2. Field equipment			
- Tractor 40 HP	1 unit	15,000	15,000
- Tractor 8 HP	1 unit	4,000	4,000
- Motor Driven forage chopper	1 unit	5,000	5,000
- Animal balance	2 unit	5,000	10,000
- Cattle yard (portable)	1 unit	5,000	5,000
- Plow, harrow, forage harvester, trailer	1 unit	10,000	10,000
- Cultivator	1 unit	5,000	5,000
3. Information equipment	1 unit	5,000	5,000
4. Library equipment	1 unit	5,000	5,000
5. Furniture	5 unit	40,000	200,000
III. VEHICLES			
1. Truck	1 unit	15,700	15,700
2. Pick-Up	2 unit	7,000	14,000
3. Jeep	4 unit	12,080	48,320
			78,020

Description	Total Required	Unit Cost US\$	Total US\$
IV. FOREIGN CONSULTANTS			
Long-term			
- Pasture agronomist	1 m/y	85,000	85,000
- Reproduction/Physiologist	1 m/y	85,000	85,000
- Animal breeding expert	1 m/y	85,000	85,000
			<u>255,000</u>
V. FELLOWSHIP			
1. Short-term training			
- Pasture agronomist	6 m/m	3,000	18,000
- Reproduction/Physiologist	6 m/m	3,000	18,000
- Animal breeding	6 m/m	3,000	18,000
- Animal nutrition	6 m/m	3,000	18,000
- Laboratory	6 m/m	3,000	18,000
2. Study tours	20 m/m	1,500	30,000
3. Seminar, conference	10 m/m	1,500	15,000
			<u>135,000</u>
Grand total			2,981,092

Institute: Animal Disease, Research Sub-station
Location: Banjarbaru, South Kalimantan

Description	Total required	Unit Cost US \$	Total US \$
I. CIVIL WORKS			
1. Land development	7 ha	900	6,300
2. Main building & constructions			
a. Laboratories	400 m ²	345	138,000
b. Offices	200 m ²	245	49,000
3. Supporting building & construction			
a. Field service centre animal houses:			
- small animal	100 m ²	135	13,500
- medium animal	100 m ²	135	13,500
- large animal & access	150 m ²	150	22,500
- workshop & garage	150 m ²	135	20,250
- fence	1000 m ²	35	35,000
b. Houses			
- Guest house	1 unit	200	40,400
- Type 120 m ²	3 unit	360	55,440
- Type 70 m ²	7 unit	135	66,150
- Type 50 m ²	7 unit	135	47,250
c. Other			
- Drainage (sewer)	700 m ²	35	24,500
- Generator/housing/distribution system	1 unit	40,000	40,000
- Water supply			
- Deepwell	1 unit	16,000	16,000
- Water pipe system	2,500	10	25,000
- Water pump 5 HP	1 unit	1,600	1,600
- reservoir	20 m ³	480	9,600
			<u>617,690</u>
II. EQUIPMENT/EPFNDABLES/CHEMICALS			
1. Research equipment			
a. Microbiology	1 unit	100,000	100,000
b. Epizootiology	1 unit	100,000	100,000
c. Parasitology	1 unit	100,000	100,000
d. Pathology	1 unit	100,000	100,000
			<u>400,000</u>
2. Field equipment			
a. Tractor	1 unit	3,000	3,000
b. Trailer	1 unit	2,000	2,000

Description	Total required	Unit Cost US \$	Total US \$
3. Information equipment/ Library	1 unit	100,000	100,000
III. VEHICLES AND SPARE PARTS:			
1. Jeep	4 unit	12,500	50,000
2. Pick Up	1 unit	7,500	7,500
			<u>57,500</u>
IV. FOREIGN CONSULTANTS			
a. Microbiologist	1 m/yr	85,000/yr	85,000
b. Parasitologist	1 m/yr	85,000	85,000
c. Pathologist	1 m/yr	85,000	85,000
			<u>255,000</u>
V. SHORT TERM TRAINING			
6 months training	24 m/m	3,000/m	72,000
Freshing course	24 m/m	3,000/m	72,000
Seminars/study-tours (1 month)	10 m/m	3,000/m	30,000
			<u>174,000</u>
		Grand total	<u>1,615,490</u>

Institute: Inland Fisheries Research Sub-station
 Location : ~~Tenggarong, East Kalimantan~~, Gondol, Bali

Description	Total required	Unit Cost US \$	Total US \$
I. CIVIL WORKS			
1. Main building & Construction			
a. Laboratories	360 m ²	200/m ²	72,000
b. Offices	100 m ²	150/m²	15,000
2. Supporting building & Construction			
a. Field Service centre	200 m ²	100/m ²	20,000
b. Ponds	9,000 m ²	50/m ²	450,000
c. Houses	400 m ²	150/m ²	60,000
			<u>617,000</u>
II. EQUIPMENT			
1. Research equipment			500,000
2. Field equipment			20,000
3. Information equipment			15,000
4. Library equipment			20,000
5. Furniture			20,000
III. VEHICLES			
a. Inboard motor boat			20,000
b. Jeep			9,000
			<u>29,000</u>
IV. FOREIGN CONSULTANTS			
a. Long term	24 m m	8,600/m m	206,400
V. SHORT TERM TRAINING			
	18 m m	2,500/m m	45,000
			<u>1,472,400</u>

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INCOMING
TELEGRAM

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EO 12865: N/A

SUBJECT: GCI REQUEST FOR APPLIED AGRICULTURAL RESEARCH
PROJECT

REF: SALEM AFIFF/THOMAS G. NIBLOCK LETTER NO. 1834/D. I/
VII/1980 DATED JULY 7, 1980

1. USAID INDONESIA: RECEIVED JULY 7, 1980 GCI REQUEST FOR
APPLIED AGRICULTURAL RESEARCH PROJECT. THIS REQUEST WAS
SIGNED BY SALEM AFIFF, DEPUTY CHAIRMAN NATIONAL DEVELOP-
MENT PLANNING AGENCY (BAPPENASI), INDONESIA.

2. TEXT OF THE LETTER FOLLOWS: QUOTE THIS IS TO FORMALLY
REQUEST AID ASSISTANCE IN THE IMPLEMENTATION OF SUBJECT
PROJECT. THE PURPOSE OF THIS PROJECT IS TO STRENGTHEN
THE AGRICULTURAL RESEARCH IN KALIHANTAN, SULAWESI AND
DOGOR.

AS DISCUSSED WITH SALEM IN PLANNING THIS PROJECT, THIS
REQUESTED ASSISTANCE WILL TAKE THE FORM OF AN AID GRANT
OF ABOUT \$1 MILLION AND AN AID LOAN OF \$12.5 MILLION.
THESE FUNDS WILL BE USED TO FINANCE THE PROJECT OVER A
SIX YEAR PERIOD. THE LOAN COMPONENT WILL BE USED CHIEFLY
TO FINANCE TRAINING, CONSTRUCTION OF LABORATORIES,
LABORATORY EQUIPMENT, FIELD EQUIPMENT, LIBRARY AND
INFORMATION EQUIPMENT, FOR RESEARCH ON FOOD CROPS,
INDUSTRIAL CROPS, FORESTRY, ANIMAL HUSBANDRY, DISEASES
AND INLAND FISHERIES. THE GRANT COMPONENT WILL BE USED
CHIEFLY TO FINANCE A MAJOR OF THE COST OF ENGAGING THE
SERVICES OF A TEAM OF APPROPRIATELY SKILLED CONSULTANTS
AND PROVIDING FOR THEIR OPERATION AND SUPPORT THROUGHOUT
THE LIFE OF THE PROJECT. THE REQUESTED ASSISTANCE WILL
BE NEEDED IN TIME TO BEGIN IMPLEMENTATION OF PROJECT
COMPONENTS IN INDOONESIAN FISCAL YEAR 1981/1982.
THE PROJECT IS CONSIDERED TO BE HIGH PRIORITY AND ENTIRELY
CONSISTENT WITH THE DEVELOPMENTAL GOALS EXPRESSED IN
REPLEITA III.

YOUR APPROVAL OF THIS REQUEST WILL BE APPRECIATED. UNQUOTE.
MASTERS

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LOGICAL FRAMEWORK

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<u>G O A L</u>			
1. To increase agricultural production, rural employment and income, and development of agricultural related industry.	1. Annual increase in agricultural production of 4.4%. 2. Annual increase in agricultural employment by 1.6%. 3. Annual increase of per capita agricultural income of 5.5%.	DOA statistics Central Bureau of Statistics.	1. Continued investments in agricultural technology, and rural development. 2. Research findings disseminated by extension services to farmers. 3. Farmers and fishermen accept and employ new technology. 4. Supporting agencies providing credit, floor prices, etc. (BULOG, BRI, BIMAS, etc.)
<u>P U R P O S E</u>			
1. Expand and improve agricultural research capability on the islands of Kalimantan, Sulawesi, Maluku and W. Java, which focuses on food crops, livestock, fisheries, industrial/estate	1. Applied research being performed by functioning research stations throughout Kalimantan, Sulawesi, Maluku, Bogor research network.	1. Formal evaluation. 2. Project records.	1. Project fully coordinated with IBRD Research II activities. 2. IBRD efforts to upgrade extension services continue and are successful.

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LOGICAL FRAMEWORK

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
	<u>P U R P O S E</u>		
crops, and forestry to address agro-climatic conditions peculiar to these islands, and the socio-economic condition of the farmers.	<ol style="list-style-type: none">2. Personnel have operational linkages to Indonesian higher educational institutions, appropriate Directors General, and agri-business concerns.3. Research strategies and priorities set through consultation and coordination with provincial planning boards, extension services, universities, and concerned GOI offices.	<ol style="list-style-type: none">3. Site visits.4. Project review.	<ol style="list-style-type: none">3. The 5 Central Research Institutes of AARD successfully coordinate their various activities.4. Full coordination of the Research Institutes with the 5 functioning Support Centers.5. Successful implementation of the new Center for Programming and Monitoring.

LOGICAL FRAMEWORK

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<u>O U T P U T S</u>			
1. Physical facilities in place.	1. All physical facilities, equipment, vehicles, etc. completed or delivered for one Central Institute site, 2 Research Institute sites, 11 sub-station sites and 3 Experimental Farm sites.	Project records, consultant's progress reports, site visits, meetings, etc.	1. Adequate budget.
	2. 25 PhD, 80 MSc degree holders trained and posted to duty stations.		2. Provincial Public Works willing and capable to assist in design/construction.
	3. Approximately 1200 man-months of specialized training provided.		3. IBRD National Agricultural Research II loan will successfully provide schedules long term training for all AARD scientific personnel (100 PhD, .. 525 MSc.)
	4. General staff upgrading through observation training, trips, attendance at seminars and conferences and short term training.		4. Adequate number English-speaking qualified students for graduate training abroad.
			5. BSc and High School graduates available and provided by AARD.

LOGICAL FRAMEWORK

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<u>I N P U T S</u>			
<u>AID</u>			
\$18.9 million loan (training, construction, commodities).	See financial plan for details.	Project reports, site visit, etc.	1. Loan and grant approved.
\$6.5 million grant (technical assistance).			2. GOI provides adequate funds.
			3. Provinces provide land for new sites.
			4. AARD authorized hire additional staff.
			5. Indonesian universities will work with AARD on research programs.
<u>GOI</u>			
1. \$20.0 million cost sharing.			
2. Land for station sites.			
3. Staff for training; additional staff hired.			
4. Indonesian universities participate in limited research at stations.			

I. COUNTRY CHECKLIST

Listed below are, first, statutory criteria applicable generally to FAA funds, and then criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

- | | |
|---|---|
| <p>1. <u>FAA Sec. 116</u>. Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights?</p> | <p>Yes. See Social Analysis in Project Paper.</p> |
| <p>2. <u>FAA Sec. 431</u>. Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?</p> | <p>No.</p> |
| <p>3. <u>FAA Sec. 620 (b)</u>. If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?</p> | <p>Yes, the required determination has been made.</p> |

4. FAA Sec. 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?
- We are not aware of any cases that make Indonesia ineligible under this section.
5. FAA Sec. 620 (e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?
- The majority of business and properly owned by U.S. citizens which was nationalized during the Sukarno regime (principally in 1961 and early 1965) has been returned to U.S. owners or mutually acceptable settlement negotiated. A Presidential Decree dated 14 December 1966 indicated its willingness to return nationalized assets.
6. FAA Sec. 620 (a), 620 (f); FY App. Act. Sec. 108, 114 and 606. Is recipient country a Communist country? Will assistance be provided to the Socialist Republic of Vietnam, Cambodia, Laos, Cuba, Uganda, Mozambique, or Angola?
6. No.
7. FAA Sec. 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?
- No.
8. FAA Sec. 620(i). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?
- No.
9. FAA Sec. 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID
- Indonesia has initiated the investment guaranty program.

Administrator within the past year considered denying assistance to such government for this reason?

10. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters,
- a. has any deduction required by the Fishermen's Protective Act been made?
- b. Has complete denial of assistance been considered by AID Administrator?
11. FAA Sec. 620; FY 79 App. Act. Sec. 603, (a) Is the government of the recipient country in default for more than six months on interest or principal of any AID loan to the country?
(b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds?
12. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget which is for military expenditures, the amount of foreign exchange spent on military equipment and the amount spent for the purchase of sophisticated weapons systems? (An affirmative answer may refer to the record of the annual "Taking Into Consideration" memo: "Yes, as reported in annual report on implementation of Sec. 620(s)."

Indonesia has not seized any U.S. fishing vessels.

No to both questions.

Yes

This report is prepared at time of approval by the Administrator of the Operational Year Budget and can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

13. FAA Sec. 620(c). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? No.
14. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? Indonesia is not delinquent on U.S. obligations.
15. FAA Sec. 620A, FY 79 App. Act, Sec. 607. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism? No.
16. FAA Sec. 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA? No.
17. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or re-processing equipment, materials, or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after August 3, 1977, although not a "nuclear-weapon State" under the nonproliferation treaty? No.

LEADING CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

a. FAA Sec. 102(b) (4). Have criteria been established and taken into account to assess commitment progress of country in effectively involving the poor in development, on such indexes as: (1) increase in agricultural productivity through small-farm labor intensive agriculture, (2) reduced infant mortality (3) control of population growth, (4) equality of income distribution, (5) reduction of unemployment, and (6) increased literacy. Yes

b. FAA Sec. 104(d)(1). If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families through modification of economic and social conditions supportive of the desire for large families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development, and assistance to urban poor? N/A

2. Economic Support Fund Country Criteria

a. FAA Sec. 501B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? No.

b. FAA Sec. 533(b). Will assistance under the Southern Africa program be provided to Mozambique, Angola, Tanzania, or Zambia? If so, has President determined (and reported to the Congress) that such assistance will further U.S. foreign policy interests? N/A

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

d. FY 79 App. Act. Sec. 113. Will assistance be provided for the purpose of aiding directly the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? No.

e. FAA Sec. 620B. Will security supporting assistance be furnished to Argentina after September 30, 1978? N/A

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project? Yes.
6. FAA Sec. 209. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. Project is part of a multi-donor effort in the Agricultural Research activities. Other donors are making contributions but to different activities in the same field.
7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. Yes.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). U.S. equipment, commodities and technology will be financed and imported into Indonesia.

9. FAA Sec. 612(b); Sec.635(h).
Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.
- The GOI is financing 43% of total project costs.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- No.
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
- Yes.
12. FY 79 Add. Act Sec.608. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?
- No.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b); 111; 113; 231a.
Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology spreading investment out from cities

The project will, through the agricultural extension service of the GOI provide information and assistance to rural poor farm families.

to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: (discuss only applicable paragraph which corresponds to source of funds used. If more than one fund source is used for project, discuss relevant paragraph for each fund source.)

(1) (103) for agriculture, rural development or nutrition: if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;

(2) (104) for population planning under sec. 104(b) or health under sec. 104(c); if so, extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of mothers and young children, using paramedical and auxiliary

- b. Agricultural coops will benefit.
- c. Through better farm operation.
- d. Women in the rural area form an important element of farm labor. The benefits of this projects research will all members of rural farm families.
- e. Perhaps, but uncertain at this time.

Yes, assistance is being made available from Development Loan Funds.

See Paper

N/A

medical personnel, clinics and health posts, commercial distribution systems and other modes of community research.

(3)(105) for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development; N/A

(4)(106). for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is: N/A

(i) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations; N/A

(ii) to help alleviate energy problems; N/A

(iii) research into, and evaluation of, economic development processes and techniques; N/A

(iv) reconstruction after natural or manmade disaster; N/A

(v) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance; N/A

(vi) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development. N/A

c. (107) Is appropriate effort placed on use of appropriate technology?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Yes.

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?

No.

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental and political processes essential to self-government.

The research activities that will be financed requires the rural farmer as an important link in the development process.

g. FAA Sec. 122(5). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes.

2. Development Assistance Project Criteria (Loans only)

a. FAA Sec. 122(5). Information and conclusion on capacity of the country to repay the loan, including reasonableness of repayment prospects.

The GOI is not delinquent on any of its assistance loans from the United States.

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?

Not for productive enterprise.

3. Project Criteria Solely for Economic Support Fund

a. FAA Sec. 531(a). Will this assistance support promote economic or political stability? To the extent possible, does it reflect the policy directions of Section 102?

N/A

b. FAA Sec. 533. Will assistance under this chapter be used for military, or paramilitary activities?

No.

III. STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds. These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed? Yes. These arrangements will be made when procurement is to be initiated.
2. FAA Sec. 604(a). Will all commodity procurement financed be from the U.S. except as otherwise determined by the President or under delegation from him? Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the U.S. on commodities financed? Does not discriminate. will be in agreement
4. FAA Sec. 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? N/A
5. FAA Sec. 608(a). Will U.S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items? This will be explored with the GOI. (and in agreement)

5. FAA Sec. 603. (a) Compliance with requirement in section 901 (b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. Yes. The Project Agreement will so state.
7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.
8. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will provision be made that U.S.-flag carriers will be utilized to the extent such service is available? Yes.
9. PI 79 App. Act Sec. 105. Does the contract for procurement contain a provision authorizing the termination of such contract for the convenience of the United States? It will so state.

3. CONSTRUCTION

1. FAA Sec. 501(d). If a capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interest? AID is financing less than one sixth of total construction cost. And A&E services will be provided by GOI agencies.
2. FAA Sec. 511(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? Yes.
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million? Not productive enterprise.

G. OTHER RESTRICTIONS

1. FAA Sec. 122(e). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? Yes.
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? N/A
3. FAA Sec. 620(h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-bloc countries, contrary to the best interests of the U.S.? Project Agreement will so state.
4. FAA Sec. 636(l). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U.S., or

guaranty of such transaction?

5. Will arrangements preclude use of financing:
- a. FAA Sec. 104(f). To pay for performance of abortions or to motivate or coerce persons to practice abortions, to pay for performance of involuntary sterilization, or to coerce or provide financial incentive to any person to undergo sterilization? Yes.
 - b. FAA Sec. 620(z). To compensate owners for expropriated nationalized property? Yes.
 - c. FAA Sec. 660. To finance police training or other law enforcement assistance, except for narcotics programs? Yes.
 - d. FAA Sec. 662. For CIA activities? Yes.
 - e. FY 79 App. Act Sec. 104. To pay pensions, etc., for military personnel? Yes.
 - f. FY 79 App. Act Sec. 106. To pay U.N. assessments? Yes.
 - g. FY 79 App. Act Sec. 107. To carry out provisions of FAA sections 209(d) and 251(h)? (Transfer of FAA funds to multilateral organizations for lending.) Yes.
 - h. FY 79 App. Act Sec. 112. To finance the export of nuclear equipment, fuel, or technology or to train foreign nations in nuclear fields? Yes.

1. FY 79 App. Acc Sec. 601
To be used for publicity on
propaganda purposes within
U.S. not authorized by
Congress?

Yes.

A.I.D. Loan No. 497-T-064

A.I.D. Project No. 497-0302

PROJECT
LOAN AGREEMENT
BETWEEN
THE REPUBLIC OF INDONESIA
and the
UNITED STATES OF AMERICA
for
APPLIED AGRICULTURAL RESEARCH PROJECT

Dated: September 29, 1980

PROJECT LOAN AGREEMENT

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A.I.D. Loan No. 497-T-064
A.I.D. Project No. 497-0302

PROJECT LOAN AGREEMENT

Dated: September 29, 1980

Between THE REPUBLIC OF INDONESIA ("Borrower")
And THE UNITED STATES OF AMERICA, acting through the AGENCY FOR
INTERNATIONAL DEVELOPMENT ("A.I.D.").

Article 1. The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Borrower of the Project described below, and with respect to the financing of the Project by the Parties.

Article 2. The Project

SECTION 2. 1. Definition of Project. The Project, which is further described in Annex 1, will consist of the expansion and improvement of agricultural research capability to address factors peculiar to the varied agro-climatic zones of Kalimantan, Sulawesi, Maluku, Nusa Tenggara Timur, Bali and West Java. Annex 1, attached, amplifies the above definition of the Project.

Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 9.2, without formal amendment of this Agreement.

Article 3. Financing

SECTION 3. 1. The Loan. To assist the Borrower to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, agrees to lend the Borrower under the terms of this Agreement not to exceed five million United States ("U.S.") dollars (\$5,000,000) ("Loan"). The aggregate amount of disbursements under the Loan is referred to as "Principal".

The Loan may be used to finance foreign exchange costs, as defined in Section 7.1, and local currency costs, as defined in Section 7.2, of goods and services required for the Project.

SECTION 3. 2. Borrower Resources for the Project

(a) The Borrower agrees to provide or cause to be provided for the Project all funds, in addition to the Loan, and all other resources required to carry out the Project effectively and in a timely manner.

(b) The resources provided by Borrower for the Project (Loan and Grant) will be not less than the equivalent of U.S.\$17,345,000, including costs borne on an "in-kind" basis.

SECTION 3. 3. Project Assistance Completion Date

(a) The "Project Assistance Completion Date" (PACD), which is September 30, 1985, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Loan will have been furnished for the Project as contemplated in this Agreement.

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(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Loan for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, are to be received by A.I.D. or any bank described in Section 8.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D. giving notice in writing to the Borrower, may at any time or times reduce the amount of the Loan by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4. Loan Terms

SECTION 4. 1. Interest. The Borrower will pay to A.I.D. interest which will accrue at the rate of two percent (2%) per annum for ten (10) years following the date of the first disbursement hereunder and at the rate of three percent (3%) per annum thereafter on the outstanding balance of Principal and on any due and unpaid interest. Interest on the outstanding balance will accrue from the date (as defined in Section 8.5) of each respective disbursement, and will be payable semiannually.

The first payment of interest will be due and payable no later than six (6) months after the first disbursement hereunder, on a date to be specified by A.I.D.

SECTION 4. 2. Repayment. The Borrower will repay to A.I.D. the Principal within forty (40) years from the date of the first disbursement of the Loan in sixty-one (61) approximately equal semiannual installments of Principal and interest. The first installment of Principal will be payable nine and one-half (9-1/2) years after the date on which the first interest payment is due in accordance with Section 4.1. A.I.D. will provide the Borrower with an amortization schedule in accordance with this Section after the final disbursement under the Loan.

SECTION 4. 3. Application, Currency, and Place of Payment. All payments of interest and Principal hereunder will be made in U. S. Dollars and will be applied first to the payment of interest due and then to the repayment of Principal. Except as A.I.D. may otherwise specify in writing, payments will be made to the Controller, Office of Financial Management, Agency for International Development, Washington, D. C. 20523, U. S. A., and will be deemed made when received by the Office of Financial Management.

SECTION 4. 4. Prepayment. Upon payment of all interest and any refunds then due, the Borrower may prepay, without penalty, all or any part of the Principal. Unless A.I.D. otherwise agrees in writing, any such prepayment will be applied to the installments of Principal in the inverse order of their maturity.

SECTION 4. 5. Renegotiation of Terms.

(a) The Borrower and A.I.D. agree to negotiate, at such time or times as either may request, an acceleration of the repayment of the Loan in the event that there is any significant and continuing improvement in the internal and external economic and financial position and prospects of Indonesia, which enable the Borrower to repay the Loan on a shorter schedule.

(b) Any request by either Party to the other to so negotiate will be made pursuant to Section 9.1, and will give the name and address of the person or persons who will represent the requesting Party in such negotiations.

(c) Within thirty (30) days after delivery of a request to negotiate, the requested Party will communicate to the other, pursuant to Section 9.1, the name and address of the person or persons who will represent the requested Party in such negotiations.

(d) The representatives of the Parties will meet to carry on negotiations no later than thirty (30) days after delivery of the requested Party's communication under subsection (c). The negotiations will take place at a location mutually agreed upon by the representatives of the Parties, provided that, in the absence of mutual agreement, the negotiations will take place at the office of Borrower's Ministry of Finance in Indonesia.

SECTION 4. 6. Termination on Full Payment. Upon payment in full of the Principal and any accrued interest, this Agreement and all obligations of the Borrower and A.I.D. under it will cease.

Article 5. Conditions Precedent to Disbursement

SECTION 5. 1. First Disbursement. Prior to the first disbursement under the Loan, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Borrower will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) An opinion of the Minister of Justice that this Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Borrower, and that it constitutes a valid and legally binding obligation of the Borrower in accordance with all of its terms;

(b) A statement of the name of the person holding or acting in the office of the Borrower specified in Section 9.2, and of any additional representatives, together with a specimen signature of each person specified in such statement;

(c) A detailed implementation plan for the Project, which will include coordination with other donor assistance related to agricultural research. The plan will define disbursement schedules and priority sites for development, taking into consideration the scheduled return of participants trained under the National Agricultural Research Project which is partly funded through an IBRD (International Bank for Reconstruction and Development) loan.

SECTION 5. 2. Disbursements for Short Term Training. Prior to disbursement under the Loan, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for short term training, the Borrower will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D. the course description, names of students and estimated cost of the training prior to the commencement of short term training.

SECTION 5. 3. Disbursement for Imported Commodities. Prior to disbursement under the Loan, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the ordering of imported commodities, the Borrower will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D. certification that the commodities and their specifications are appropriate for the Project and in accord with Project plans.

SECTION 5. 4. Disbursements for Construction. Prior to disbursement under the Loan or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for construction, the Borrower will, except as A.I.D. may otherwise agree in writing furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) Certification that the construction activities are in accord with Project plans and that the preliminary specifications and details are reasonable and appropriate.

(b) Detailed plans, specifications, and cost estimates. The cost estimates then will become the basis for A.I.D.'s reimbursement under FAR.

(c) Evidence that the Government of Indonesia has provided the needed land to the Agency for Agricultural Research and Development.

SECTION 5. 5. Notification. When A.I.D. has determined that the conditions precedent specified in Sections 5.1, 5.2, 5.3 and 5.4 have been met, it will promptly notify the Borrower.

SECTION 5. 6. Terminal Dates for Conditions Precedent. If all of the conditions specified in Section 5.1 have not been met within 90 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D. at its option, may terminate this Agreement by written notice to Borrower.

Article 6. Special Covenants

SECTION 6. 1. Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

- (a) Evaluation of progress toward attainment of the objectives of the Project;
- (b) identification and evaluation of problem areas or constraints which may inhibit such attainment;
- (c) assessment of how such information may be used to help overcome such problems; and
- (d) evaluation, to the degree feasible, of the overall development impact of the Project.

SECTION 6. 2. Borrower agrees to assign the returning long term participants to central and regional postings according to specific needs.

SECTION 6. 3. The Borrower agrees to carry out the Project in accordance with the project plan. Any major modifications to these plans shall require A.I.D.'s concurrence prior to commencement of the concerned activity.

Article 7. Procurement Source

SECTION 7. 1. Foreign Exchange Costs. Disbursements pursuant to Section 8. 1 will be used exclusively to finance the costs of goods and services required for the Project having their source and origin in countries included in Code 941 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods and services ("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Loan Standard Provisions Annex, Section C.1(b) with respect to marine insurance.

Ocean transportation costs will be financed under the Loan only on vessels under flag registry of the United States or Indonesia.

SECTION 7. 2. Local Currency Costs. Disbursements pursuant to Section 8. 2 will be used exclusively to finance goods and services required for the Project having their source, and except as A.I.D. may otherwise agree in writing, their origin in Indonesia ("Local Currency Costs").

Article 8. Disbursements

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SECTION 8. 1. Disbursement for Foreign Exchange Costs

(a) After satisfaction of conditions precedent, the Borrower may obtain disbursements of funds under the Loan for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services or (B) requests for A.I. to procure commodities or services in Borrower's behalf for the Project; or

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letter of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Borrower in connection with Letters of Commitment and Letters of Credit will be financed under the Loan unless the Borrower instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Loan.

SECTION 8. 2. Disbursement for Local Currency Costs

(a) After satisfaction of conditions precedent, the Borrower may obtain disbursements of funds under the Loan for Local Currency Costs required for the Project in accordance with the terms of this

greement, by submitting to A.I.D., with necessary supporting documentation s prescribed in Project Implementation Letters, requests to finance such osts. These disbursements may be made by A.I.D.:

- (1) In U.S. dollar equivalent to the local currency cost, or
- (2) In local currency acquired by A.I.D. by purchase or from local currency already owned by the U.S. Government.

SECTION 8. 3. Other Forms of Disbursement. Disbursements of the oan may also be made through such other means as the Parties may agree o in writing.

SECTION 8. 4. Rate of Exchange. Except as may be more specifically provided under Section 8.2, if funds provided under the Loan, are introduced into Indonesia by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Borrower will make such arrangements as may be necessary so that such funds may be converted into currency of Indonesia at the highest rate of exchange which, at the time the conversion is made, is not unlawful in Indonesia.

SECTION 8. 5. Date of Disbursement. Disbursements by A.I.D. will be deemed to occur (a) on the date on which A.I.D. makes a disbursement to the Borrower or its designee, or to a bank, contractor or supplier pursuant to a Letter of Commitment, contract, or purchase order;

(b) on the date on which A.I.D. disburses to the Borrower or its designee local currency acquired in accordance with Section 8.2 (b).

Article 9. Miscellaneous

SECTION 9. 1. Communications. Any notice, request, document, or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following address:

To the Borrower:

Mail Address: Departemen Luar Negeri
Jalan Pejambon 6
Jakarta Pusat
Indonesia.

Alternate address for telegrams: DEPLU JAKARTA.

To A.I.D.:

Mail Address: U. S. Agency for International Development
American Embassy
Jalan Medan Merdeka Selatan 5
Jakarta, Indonesia.

Alternate address for telegrams: USAID AMEMB JAKARTA.

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

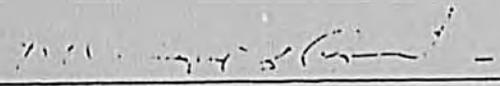
SECTION 9. 2. Representatives. For all purposes relevant to this Agreement, the Borrower will be represented by the individual holding or acting in the office of Chairman or Vice Chairman, National Development Planning Agency ("BAPPENAS") and A.I.D. will be represented by the individual holding or acting in the office of Director, A.I.D. Mission to Indonesia, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Borrower, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 9. 3. Standard Provisions Annex. A "Project Loan Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Republic of Indonesia and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

REPUBLIC OF INDONESIA

UNITED STATES OF AMERICA



M. Panggabean
Minister for Foreign Affairs a.i.


Edward E. Masters
Ambassador

AMPLIFIED DESCRIPTION OF THE PROJECT

1. Purpose: To improve agricultural research capability in Kalimantan, Sulawesi, Maluku, Nusa Tenggara Timur, Bali and West Java by expanding and strengthening a network of agricultural research facilities.
2. Targets: In order to address problems peculiar to the varied agro-climatic zones, the Project will improve or establish one Central Research Institute site (Bogor*), three Research Institute sites (Bogor**, Banjarbaru and Maros), 13 Research Stations (Handil Manarap, Kalasey, Makariki**, Lanrang, Janeponto, Mariri, Anjungan, Makariki**, Balikpapan, Maros, Banjarbaru, Gandol and Kupang) and 3 Experimental Farms (Kuala Kapuas, Lempake and Bantobili) by: (a) constructing physical facilities, (b) providing laboratory, office and field equipment, (c) providing short-term training for manpower specialization and general upgrading, and (d) providing technical assistance for the above activities as well as for research guidance at the stations until all become self-sufficient in trained personnel. Working through the established structure of the Agency for Agricultural Research and Development (AARD), research findings will be transferred to the farmer through subject matter specialists (PPS) in cooperation with the existing agricultural extension services and the information centers.

* The Bogor Central Research Institute and the Bogor Research Institute are distinct administratively but are one physical facility.

** There are two Makariki research stations, one for industrial crops and the other for food crops.

Project Management: AARD will have overall responsibility for general guidance and implementation on behalf of the GOI. Day-by-day implementation and supervision will be provided by an AARD designated Project Implementation Officer. The Public Works office in each province will aid in the contracting and supervision of design and construction of the physical facilities, and will be responsible for insuring that the buildings are designed and built according to specifications.

4. Project Duration: September 1980 through September 1985.
5. Financing: The Project will be financed from funds provided both by A.I.D. and the Government of Indonesia. A.I.D. will provide in US FY 1980 up to \$5,000,000 in loan funds under A.I.D. Loan No. 497-T-064. These funds will assist the Government of Indonesia in carrying out the Project. The GOI contribution is to be not less than \$17,345,000 making total funds available of \$22,345,000 for the Project as described in the detailed Financial Plan (Attachment 1, Annex 1). This plan set forth the estimated expenditures for the various components of the Project and the estimated implementation targets. These first phase funds will be targeted for 5 research facilities; one at Bogor, two at Maros, and two at Banjarbaru, which are expected to be able to usefully absorb these funds during the first years of the Project.

Subject to the availability of funds, an additional \$8,000,000 of loan funds and \$2,000,000 of grant funds will be made available in US FY 1981 by amendment to this Agreement (still within the GOI FY 80). This would increase the loan amount to \$13,000,000 thus making a total A.I.D. contribution of \$15,000,000 (Attachment 1, Annex 1). These funds will be used at an additional 8 research facilities: two at Makariki, and one each at Gondol, Kupang, Janeponto, Handil Manarap, Lanrang and Kulase.

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Subject to the availability of funds and the Agreement of the Parties, the Loan amount furnished by A.I.D. may be increased in years subsequent to US FY 81 by \$5,900,000 up to a total of \$12,900,000, and the grant increased by \$4,500,000 up to a total of \$6,500,000 (Attachment 1, Annex 1). The combined contribution of A.I.D. and the GOI for the Project would then be \$42,745,000 (Attachment 2, Annex 1). A major portion of funds made available subsequent to US FY 1981 are targeted for the remaining 6 facilities at Bontobili, Mariri, Anjungan, Balikpapan, Kuala Kapuas and Lempale.

As necessary, changes up to 40% may be made to line item amounts without formal revision of the Financial Plan provided that A.I.D. agrees to such changes in writing, and that the total A.I.D. contribution is not increased or the GOI's contribution decreased.

6. Implementation and Reimbursement: AARD monitors the Project in cooperation with A.I.D. to insure compliance with jointly approved project descriptions, plans specifications and cost estimates. A host country contract between AARD and a U.S. consulting firm(s) provides technical assistance and manages commodity orders and out-of-country training. Disbursements for foreign exchange costs are by letter of commitment. Fixed Amount Reimbursement (FAR) may be used for local currency costs.
7. Vehicles: The Project will require approximately \$1,323,000 for heavy duty vehicles. A.I.D. will provide approximately \$1,017,000 and the remaining \$306,000 will be provided by the GOI.

PROJECT FINANCIAL PLAN (BY YEAR)
(Thousands US\$)

I N P U T S	U.S. FY 1980		U.S. FY 1981				U.S. FY 1982				U.S. FY 1983		US FY 84	US FY 85
	A.I.D. Loan		Loan FX	A.I.D. Grant		GOI	Loan FX	A.I.D.		GOI	A.I.D. Grant FX	GOI	GOI	GOI
	FX	LC		LC	FX			LC	Grant FX					
Technical Assistance					2000				2500	82	2000	75	96	47
Construction	230	1310	368	2096	1030	271	1546	2054			1389	2065	1028	
Farm Development					268			915			640	1040	303	
Laboratory Equipment	365		584		-	431		166			19	39		
Field Equipment	790		1264		-	933								
Misc. Information Equip.	255		408		-	301		157			86	130	-	
Vehicles	270		432		-	319		81			60	69	96	
Training	355		568		-	419		147			98	156	91	
Contingency (+10%)	230	130	368	208	130	271	153	360			224	360	155	
Inflation (+30%)	625	330	1096	608	389	908	448	1081			668	1079	470	
T O T A L:	3130	1520	5038	2912	2000	1817	3753	2147	2500	5043	2000	3259	5035	2131

PROJECT FINANCIAL PLAN (Total)
(Thousands U.S. \$)

As of September 1980

INPUTS	A. I. D.			Total AID	GOI	All Costs
	Grant	Loan				
	FX	FX	LC			
Technical Asst.	4817			4817	400	5217
Construction		860	4840	5700	7428	11128
Farm Development					3166	3166
Lab. Equipment		1376		1376	224	1600
Field Equipment		3128		3128	-	3128
Misc. Info Equip.		957		957	373	1330
Vehicles		1017		1017	306	1323
Training		1339		1339	492	1831
	4817	8677	4840	18334	12389	30723
Contingency (+10%)	482	868	484	1834	1239	3073
Inflation (+30%)	1201	2587	1444	5232	3717	3949
TOTAL:	6500	12132	6768	25400	17345	42745.

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Project Loan Standard Provisions Annex

Definitions: As used in this Annex, the "Agreement" refers to the Project Loan Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

Article A: Project Implementation Letters. To assist Borrower in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon Project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

Article B: General Covenants

SECTION B.1. Consultation. The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the Project, the performance of obligations under this Agreement, the performance of any consultants, contractors, or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2. Execution of Project. The Borrower will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules, or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experienced management for, and train such staff as may be appropriate for the maintenance and operation of the Project, and, as applicable for continuing activities, cause the Project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3. Utilization of Goods and Services.

(a) Any resources financed under the Loan will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion of the Project, and thereafter will be used so as to further the objectives sought in carrying out the Project.

(b) Goods or services financed under the Loan, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION B.4. Taxation.

(a) This Agreement and the Loan will be free from, and the Principal and interest will be paid free from, any taxation or fees imposed under laws in effect in the territory of the Borrower.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Loan, and any property or transactions relating to such contracts and (2) any commodity procurement transaction financed under the Loan are not exempt from identifiable taxes, tariffs, duties, or other levies imposed under laws in effect in the territory of the Borrower, the Borrower will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Loan.

SECTION B.5. Reports, Records, Inspections, Audit.

The Borrower will:

(a) furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request;

(b) maintain or cause to be maintained, in accordance with generally accepted accounting principles and practices consistently applied, books and records relating to the Project and to this Agreement, adequate to show, without limitation, the receipt and use of goods and services acquired under the Loan. Such books and records will be audited regularly, in accordance with generally accepted auditing standards, and maintained for three years after the date of

SECTION B.5. (b)

last disbursement by A.I.D.; such books and records will also be adequate to show the nature and extent of solicitations of prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project toward completion, and

(c) afford authorized representatives of a Party the opportunity at all reasonable times to inspect the Project, the utilization of goods and services financed by such Party, and books, records, and other documents relating to the Project and the Loan.

SECTION B.6. Completeness of Information. The Borrower confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or caused A.I.D. to be informed, in the course of reaching agreement with A.I.D. on the Loan, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments. Borrower affirms that no payments have been or will be received by any official of the Borrower in connection with the procurement of goods or services financed under the Loan except fees, taxes, or similar payments legally established in the country of the Borrower.

SECTION B.8. Information and Marking. The Borrower will give appropriate publicity to the Loan and the Project as a program to which the United States has contributed; identify the Project site, and mark goods financed by A.I.D., as described in Project Implementation Letters.

Article C: Procurement Provisions

SECTION C.1. Special Rules.

(a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

SECTION C.1.

(b) Premiums for marine insurance placed in the territory of the Borrower will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a)

(c) Any motor vehicles financed under the Loan will be of United States manufacture, except as A.I.D. may otherwise agree in writing.

SECTION C.2. Eligibility Date. No goods or services may be financed under the Loan which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as the Parties may otherwise agree in writing.

SECTION C.3. Plans, Specifications, and Contracts. In order for there to be mutual agreement on the following matters, and except as the Parties may otherwise agree in writing:

(a) The Borrower will furnish to A.I.D. upon preparation:

(1) any plans, specifications, procurement of construction schedules, contracts, or other documentation relating to goods or services to be financed under the Loan, including documentation relating to the prequalification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services which, though not financed under the Loan, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a) (2) will be identified in Project Implementation Letters;

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Loan will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurements;

(c) Contracts and contractors financed under the Loan for engineering and other professional services, for construction services, and for such other services, equipment, or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

SECTION C. 3.

(d) Consulting firms used by the Borrower for the Project but not financed under the Loan, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Borrower for the Project but not financed under the Loan shall be acceptable to A.I.D.

SECTION C. 4. Reasonable Price. No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Loan. Such items will be procured on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C. 5. Notification to Potential Suppliers. To permit all United States firms to have the opportunity to participate in furnishing goods and services to be financed under the Loan, the borrower will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letter.

SECTION C. 6. Shipping.

(a) Goods which are to be transported to the territory of the Borrower may not be financed under the Loan if transported either:

(1) on an ocean vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment; or

(2) on an ocean vessel which A.I.D., by written notice to the Borrower has designated as ineligible; or

(3) under an ocean or air charter which has not received prior A.I.D. approval.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Loan, if such goods or persons are carried:

(1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs," without prior written A.I.D. approval; or

(2) on an ocean vessel which A.I.D., by written notice to the Borrower, has designated as ineligible; or

SECTION C.6.

(2) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels,

(1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately owned United States-flag commercial vessels, and

(2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Borrower on dry cargo liners shall be paid to or for the benefit of privately owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this subsection must be achieved with respect to any cargo transported from U.S. ports and also any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance.

(a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Borrower may be financed as a Foreign Exchange Cost under this Agreement provided,

(1) such insurance is placed at the lowest available competitive rate, and

(2) claims thereunder are payable in the currency in which such goods were financed or in any freely convertible currency. If the Borrower (or government of Borrower), by statute, decree, rule, regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Borrower financed by A.I.D. hereunder will be insured against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

SECTION C.7.

(b) Except as A.I.D. may otherwise agree in writing, the Borrower will insure, or cause to be insured, goods financed under the Loan imported for the Project against risks incident to their transit to the point of their use in the Project; such insurance will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Borrower under such insurance will be used to replace or repair any material damage or any loss of the goods insured or will be used to reimburse the Borrower for the replacement or repair of such goods. Any such replacement will be of source and origin of countries listed in A.I.D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provisions of the Agreement.

SECTION C.8. U.S. Government-Owned Excess Property. The Borrower agrees that wherever practicable United States Government-owned excess personal property, in lieu of new items financed under the Loan, should be utilized. Funds under the Loan may be used to finance the costs of obtaining such property for the Project.

Article D: Termination; Remedies.

SECTION D.1. Cancellation by Borrower. The Borrower may, by giving A.I.D. 30 days written notice, cancel any part of the Loan which has not been disbursed or committed for disbursement to third parties.

SECTION D.2. Events of Default; Acceleration. It will be an "Event of Default" if Borrower shall have failed:

(a) to pay when due any interest or installment of Principal required under this Agreement, or

(b) to comply with any other provision of this Agreement, or

(c) to pay when due any interest or installment of Principal or other payment required under any other loan, guaranty or other agreement between the Borrower or any of its agencies and A.I.D. or any of its predecessor agencies. If an Event of Default shall have occurred, then A.I.D. may give the Borrower notice that all or any part of the unpaid Principal will be due and payable sixty (60) days thereafter, and, unless such Event of Default is cured within that time

(1) such unpaid Principal and accrued interest hereunder will be due and payable immediately, and

SECTION D.2.

(2) the amount of any further disbursements made pursuant to the outstanding commitments to third parties or otherwise will become due and payable as soon as made.

SECTION D.3. Suspension. If at any time:

(a) An Event of Default has occurred; or

(b) An event occurs that A.I.D. determines to be an extraordinary situation that makes it improbable either that the purpose of the Loan will be attained or that the Borrower will be able to perform its obligations under this Agreement; or

(c) Any disbursement by A.I.D. would be in violation of the legislation governing A.I.D.; or

(d) The Borrower shall have failed to pay when due any interest, installment of principal or other payment required under any other loan, guaranty, or other agreement between the Borrower or any of its agencies and the Government of the United States or any of its agencies;

Then A.I.D. may:

(1) suspend or cancel outstanding commitment documents to the extent they have not been utilized through irrevocable commitments to third parties or otherwise, giving prompt notice thereof to the Borrower;

(2) decline to issue additional commitment documents or to make disbursements other than under existing ones; and

(3) at A.I.D.'s expense, direct that title to goods financed under the Loan be transferred to A.I.D. if the goods are from a source outside Borrower's country, are in a deliverable state and have not been offloaded in ports of entry of Borrower's country. Any disbursement made under the Loan with respect to such transferred goods will be deducted from Principal.

SECTION D.4. Cancellation by A.I.D. If, within sixty (60) days from the date of any suspension of disbursements pursuant to Section D.3, the cause or causes thereof have not been corrected, A.I.D. may cancel any part of the Loan that is not then disbursed or irrevocably committed to third parties.

SECTION D.5. Continued Effectiveness of Agreement. Notwithstanding any cancellation, suspension of disbursements, or acceleration of repayment, the provisions of this Agreement will continue in effect until the payment in full of all Principal and accrued interest hereunder.

SECTION D.6. Refunds

(a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A.I.D., notwithstanding the availability or exercise of any other remedies provided for under this Agreement, may require the Borrower to refund the amount of such disbursement in United States Dollars to A.I.D. within sixty (60) days after receipt of a request therefor. The right to require such a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three (3) years from the date of the last disbursement under this Agreement.

(b)

(1) any refund under the preceding subsection, or

(2) any refund to A.I.D. from a contractor, supplier, bank, or other third party with respect to goods or services financed under the Loan, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will

A. be made available first for the cost of goods and services required for the Project, to the extent justified, and

B. the remainder, if any, will be applied to the installments of Principal in the inverse order of their maturity and the amount of the Loan reduced by the amount of such remainder.

SECTION D.7. Nonwaiver of Remedies. No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be construed as a waiver of such right or remedy.

A.I.D. Project No. 497-0302

PROJECT
GRANT AGREEMENT
BETWEEN
THE REPUBLIC OF INDONESIA
AND THE
UNITED STATES OF AMERICA
FOR
APPLIED AGRICULTURAL RESEARCH PROJECT

Dated: December 15, 1980

Appropriation No. 72-1111021
Attachment No. 162-50-497-00-69-01

PROJECT GRANT AGREEMENT

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PROJECT GRANT AGREEMENT

Dated: December 15, 1980

Between the REPUBLIC OF INDONESIA ("Grantee") and the UNITED STATES OF AMERICA, acting through the AGENCY FOR INTERNATIONAL DEVELOPMENT ("A.I.D.").

Article 1. The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described below, and with respect to the financing of the Project by the Parties.

Article 2. The Project

SECTION 2. 1. Definition of Project. The Project, which is further described in Annex 1, will consist of the expansion and improvement of agricultural research capability to address factors peculiar to the varied agro-climatic zones of Kalimantan, Sulawesi, Maluku, Nusa Tenggara Timur, Bali and West Java. Annex 1, attached, amplifies the above definition of the Project.

Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2, without formal amendment of this Agreement.

Article 3. Financing

SECTION 3. 1. The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the

Foreign Assistance Act of 1961, as amended, agrees to grant to the Grantee under the terms of this Agreement not to exceed one million five hundred thousand United States ("U.S.") dollars (\$1,500,000) ("Grant").

The Grant may be used to finance foreign exchange costs, as defined in Section 7. 1, of goods and services required for the Project.

SECTION 3. 2. Grantee Resources for the Project

(a) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

(b) The resources provided by Grantee for the Project will be not less than the equivalent of U.S.\$17,345,000, including costs borne on an "in-kind" basis. This amount is the same as that referred to in the Loan Agreement dated September 29, 1980.

SECTION 3. 3. Project Assistance Completion Date

(a) The "Project Assistance Completion Date" (PACD), which is September 30, 1985, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods furnished under the Grant will have been furnished for the Project as contemplated in this Agreement.

(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to

the PACD of for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, are to be received by A.I.D. or any bank described in Section 7. 1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D. giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4. Conditions Precedent to Disbursement

SECTION 4. 1. First Disbursement Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D. a statement of the name of the person holding or acting in the office of the Grantee specified in Section 8.2, and of any additional representatives, together with a specimen signature of each person specified in such statement.

SECTION 4. 2. Notification. When A.I.D. has determined that the condition precedent specified in Section 4. 1 has been met, it will promptly notify the Grantee.

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SECTION 4 Terminal Date for Conditions Precedent.

(a) If the condition specified in Section 4. 1 has not been met within 60 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

Article 5. Special Covenants

SECTION 5. 1. Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

- (a) Evaluation of progress toward attainment of the objectives of the Project;
- (b) identification and evaluation of problem areas or constraints which may inhibit such attainment;
- (c) assessment of how such information may be used to help overcome such problems; and
- (d) evaluation, to the degree feasible, of the overall development impact of the Project.

Article 6. Procurement Source

SECTION 6. 1. Foreign Exchange Costs. Disbursements pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having their source and origin in countries included in Code 000 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods and services

("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1(b) with respect to marine insurance.

Article 7. Disbursements

SECTION 7. 1. Disbursement for Foreign Exchange Costs

(a) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or (B) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letter of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless the Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7. 2. Other Forms of Disbursement. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 7. 3. Rate of Exchange. Except as may more specifically be provided under Section 7.2, if funds provided under the Grant are introduced into Indonesia by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D., hereunder, the Grant will make such arrangements as may be necessary so that such funds may be converted into currency of Indonesia at the highest rate of exchange which, at the time the conversion is made, is not unlawful in Indonesia.

SECTION 7. 4. Date of Disbursement. Disbursements by A.I.D. will be deemed to occur on the date on which A.I.D. makes a disbursement to the Grantee or its designee, or to a bank, contractor or supplier pursuant to a Letter of Commitment, contract, or purchase order.

Article 8. Miscellaneous

SECTION 8. 1. Communications. Any notice, request, document, or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Mail Address: Head,
Agency for Agricultural Res. and Development
Jalan Ragunan 29
Pasar Minggu
Jakarta Selatan, Indonesia.

To A.I.D.:

Mail Address: US Agency for International Development
American Embassy
Jalan Medan Merdeka Selatan 5
Jakarta, Indonesia.

Alternate address for telegrams: USAID AMEMB JAKARTA.

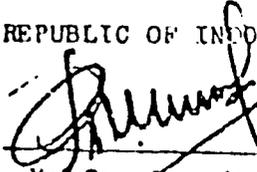
All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

SECTION 8. 2. Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of Head, Agency for Agricultural Research and Development (AARD), and A.I.D. will be represented by the individual holding or acting in the office of Director, A.I.D. Mission to Indonesia, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2. 1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 8. 3. Standard Provisions Annex. A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Republic of Indonesia and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

REPUBLIC OF INDONESIA



Maj. Gen. Panoedjoe
Secretary General,
Department of Agriculture

UNITED STATES OF AMERICA



Thomas C. Niblock
Director
USAID/Indonesia

APPLIED DESCRIPTION OF THE PROJECT
(Grant Agreement)

1. Purpose: To improve agricultural research capability in Kalimantan, Sulawesi, Maluku, Nusa Tenggara Timur, Bali and West Java by expanding and strengthening a network of agricultural research facilities.

2. Targets: In order to address problems peculiar to the varied agro-climatic zones, the Project will improve or establish one Central Research Institute site (Bogor*), three Research Institute sites (Bogor**, Banjarbaru, and Maros), thirteen Research Stations (Handil Manarap, Kalasey, Kamariki**, Lanrang, Janeponto, Mariri, Anjungan, Makariki**, Balikpapan, Maros, Banjarbaru, Candol and Kupang) and three Experimental Farms (Kuala Kapuas, Lompake and Bantobill) by:
(a) constructing physical facilities, (b) providing laboratory, office and field equipment, (c) providing short-term training for manpower specialization and general upgrading, and (d) providing technical assistance for the above activities as well as for research guidance at the stations until all become self-sufficient in trained personnel. Research to be undertaken on these facilities will focus on foodcrops, livestock, fisheries, industrial crops and forestry. Working through the established structure of the Agency for Agricultural Research and Development (AARD), research findings will be transferred to the farmer through subject matter specialists (PPS) in cooperation with the existing agricultural extension services and the information centers.

* The Bogor Central Research Institute and the Bogor Research Institute are distinct administratively but are one physical facility.

** There are two Makariki research stations, one for industrial crops and the other for food crops.

3. Project Management: AID will have overall responsibility for general guidance and implementation on behalf of the COJ. Day-by-day implementation and supervision will be provided by an AARD designated Project Implementation Officer. The Public Works office in each province will aid in the contracting and supervision of design and construction of the physical facilities, and will be responsible for insuring that the buildings are designed and built according to specifications.

4. Grant Financed Technical Assistance: The grant funded portion of the Project will be utilized for the procurement and support of professional technical assistance from a highly qualified management consultant. The consultant will: (a) assist in the management or establishment of one Central Research Institute, three Research Institutes, thirteen Research Stations, and three Experimental Farms, (b) provide advice on physical requirements and construction of facilities, (c) provide advice on laboratory and field equipment needs and assist in the procurement of said equipment, (d) provide on-the-job and short term training for manpower specialization and upgrading, (e) participate in the selection of candidates for short term training and travel, (f) participate in on-going research and provide research guidance to the returning trained staff, and (g) assist the AARD in other areas of project implementation. Total level of effort for the assistance required is estimated to be 54 person years over a five year period. During US FY 1981 A.I.D. will provide \$1,500,000 of the projected total grant of \$6,500,000.

5. Project Duration: September 1980 through September 1985.

- e. Financing: In addition to the above mentioned grant, A.S.D. 1981 provide a total of \$12,600,000 in loans through U.S. FY 1981. The GOI contribution for the life of the Project is to be not less than \$17,345,000. Further details of financing appear in the Loan Agreement (497-T-064) "Amplified Description of the Project".

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Project Grant Standard Provisions Annex

Definitions: As used in this Annex, the "Agreement" refers to the Project Grant Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

Article A: Project Implementation Letters. To assist Grantee in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon Project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

Article B: General Covenants

SECTION B.1. Consultation. The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the Project, the performance of obligations under this Agreement, the performance of any consultants, contractors, or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2. Execution of Project. The Grantee will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experience management for, and train such staff as may be appropriate for the maintenance and operation of the Project, and, as applicable for continuing activities, cause the Project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3. Utilization of Goods and Services

(a) Any resources financed under the Grant will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion of the Project, and thereafter will be used so as to further the objectives sought in carrying out the Project.

(b) Goods or services financed under the Grant, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity, associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION B.4. Taxation

(a) This Agreement and the Grant will be free from any taxation or fees imposed under laws in effect in the territory of the Grantee.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Grant, and any property or transaction relating to such contracts and (2) any commodity procurement transaction financed under the Grant, are not exempt from identifiable taxes, tariffs, duties or other levies imposed under laws in effect in the territory of the Grantee, the Grantee will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Grant.

SECTION B.5. Reports, Records, Inspections, Audit.

The Grantee will:

(a) furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request;

(b) maintain or cause to be maintained, in accordance with generally accepted accounting principles and practices consistently applied, books and records relating to the Project and to this Agreement, adequate to show, without limitation, the receipt and use of goods and services acquired under the Grant. Such books and records will be audited regularly, in accordance with generally accepted auditing standards, and maintained for three years after

SECTION B.5. (b)

the date of last disbursement by A.I.D.; such books and records will also be adequate to show the nature and extent of solicitations of prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project toward completion; and

(c) afford authorized representatives of a Party the opportunity at all reasonable times to inspect the Project, the utilization of goods and services financed by such Party, and books, records, and other documents relating to the Project and the Grant.

SECTION B.6. Completeness of Information. The Grantee confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or cause A.I.D. to be informed, in the course of reaching agreement with A.I.D. on the Grant, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments. Grantee affirms that no payments have been or will be received by any official of the Grantee in connection with the procurement of goods or services financed under the Grant, except fees, taxes, or similar payments legally established in the country of the Grantee.

SECTION B.8. Information and Marking. The Grantee will give appropriate publicity to the Grant and the Project as a program to which the United States has contributed, identify the Project site, and mark goods, financed by A.I.D., as described in Project Implementation Letters.

Article C: Procurement Provisions

SECTION C.1. Special Rules.

(a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

(b) Premiums for marine insurance placed in the territory of the Grantee will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a).

(c) Any motor vehicles financed under the Grant will be of United States manufacture, except as A.I.D. may otherwise agree in writing.

(d) Transportation by air, financed under the Grant, of property or persons, will be on carriers holding United States certification, to the extent service by such carriers is available. Details on this requirement will be described in a Project Implementation Letter.

SECTION C.2. Eligibility Date. No goods or services may be financed under the Grant which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as the Parties may otherwise agree in writing.

SECTION C.3. Plans, Specifications, and Contracts. In order for there to be mutual agreement on the following matters, and except as the Parties may otherwise agree in writing:

(a) The Grantee will furnish to A.I.D. upon preparation,

(1) any plans, specifications, procurement or construction schedules, contracts, or other documentation relating to goods or services to be financed under the Grant, including documentation relating to the prequalification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services, which, though not financed under the Grant, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a) (2) will be identified in Project Implementation Letters;

SECTION C.3.

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Grant will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurements;

(c) Contracts and contractors financed under the Grant for engineering and other professional services, for construction services, and for such other services, equipment or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

(d) Consulting firms used by the Grantee for the Project but not financed under the Grant, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Grantee for the Project but not financed under the Grant, shall be acceptable to A.I.D.

SECTION C.4. Reasonable Price. No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Grant. Such items will be procured on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C.5. Notification to Potential Suppliers. To permit all United States firms to have the opportunity to participate in furnishing goods and services to be financed under the Grant, the Grantee will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letters.

SECTION C.6. Shipping.

(a) Goods which are to be transported to the territory of the Grantee may not be financed under the Grant if transported either: (1) on an ocean vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment, or (2) on an ocean vessel which A.I.D. by written notice to the Grantee has designated as ineligible; or (3) under an ocean or air charter which has not received prior A.I.D. approval.

SECTION C.6.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Grant, if such goods or persons are carried: (1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs," without prior written A.I.D. approval; or (2) on an ocean vessel which A.I.D., by written notice to the Grantee, has designated as ineligible; or (3) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels, (1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately owned United States-flag commercial vessels, and (2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Grantee on dry cargo liners shall be paid to or for the benefit of privately owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this subsection must be achieved with respect to both any cargo transported from U.S. ports and any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance.

(a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Grantee may be financed as a Foreign Exchange Cost under this Agreement provided (1) such insurance is placed at the lowest available competitive rate, and (2) claims thereunder are payable in the currency in which such goods were financed or in any freely convertible currency. If the Grantee (or government of Grantee), by statute, decree, rule, regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Grantee financed by A.I.D. hereunder will be insured against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

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SECTION C. 7.

(h) Except as A. I. D. may otherwise agree in writing, the Grantee will insure, or cause to be insured, goods financed under the Grant imported for the Project against risks incident to their transit to the point of their use in the Project; such insurances will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Grantee under such insurance will be used to replace or repair any material damage or any loss of the goods insured or will be used to reimburse the Grantee for the replacement or repair of such goods. Any such replacements will be of source and origin of countries listed in A. I. D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provisions of the Agreement.

SECTION C. 8. U.S. Government-Owned Excess Property. The Grantee agrees that wherever practicable, United States Government-owned excess personal property, in lieu of new items financed under the Grant, should be utilized. Funds under the Grant may be used to finance the costs of obtaining such property for the Project.

Article D: Termination; Remedies.

SECTION D. 1. Termination. Either Party may terminate this Agreement by giving the other Party 30 days written notice. Termination of this Agreement will terminate any obligations of the Parties to provide financial or other resources to the Project pursuant to this Agreement, except for payment which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the termination of this Agreement. In addition, upon such termination A. I. D. may, at A. I. D.'s expense, direct that title to goods financed under the Grant be transferred to A. I. D. if the goods are from a source outside Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of Grantee's country.

SECTION D. 2. Refunds.

(a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A. I. D.,

SECTION D.2.

notwithstanding the availability or exercise of any other remedies under this Agreement, may require the Grantee to refund the amount of such disbursement in U.S. Dollars to A.I.D. within sixty (60) days after receipt of a request therefor.

(b) If the failure of Grantee to comply with any of its obligations under this Agreement has the result that goods or services financed under the Grant are not used effectively in accordance with this Agreement, A.I.D. may require the Grantee to refund all or any part of the amount of the disbursements under this Agreement for such goods or services in U.S. Dollars to A.I.D. within sixty days after receipt of a request therefor.

(c) The right under subsection (a) or (b) to require a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three years from the date of the last disbursement under this Agreement.

(d) (1) Any refund under subsection (a) or (b), or (2) any refund to A.I.D. from a contractor, supplier, bank or other third party with respect to goods or services financed under the Grant, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will (A) be made available first for the cost of goods and services required for the Project, to the extent justified, and (B) the remainder, if any, will be applied to reduce the amount of the Grant.

(e) Any interest or other earnings on Grant funds disbursed by A.I.D. to the Grantee under this Agreement prior to the authorized use of such funds for the Project will be returned to A.I.D. in U.S. Dollars by the Grantee.

SECTION D.3. Nonwaiver of Remedies. No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be construed as a waiver of such right or remedy.

SECTION D.4. Assignment. The Grantee agrees, upon request, to execute an assignment to A.I.D. of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with A.I.D. financed in whole or in part out of funds granted by A.I.D. under this Agreement.

AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT
MINISTRY OF AGRICULTURE

DETAILED IMPLEMENTATION PLAN
for
APPLIED AGRICULTURAL RESEARCH PROJECT
(497 - 0302)

December 1980

APPLIED AGRICULTURAL RESEARCH PROJECT

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ATTACHMENT :

1. Organizational Structure for Project Implementation Unit (FIU) of AAPP.
2. Location of Research Facilities for AAPP by Groups.
3. Location of Research Facilities for AAPP.
4. Masterplan for Administrative Staffing for AAPP.
5. Masterplan for Academic Training and Staffing for AAPP, Research Staff.
6. Phases of Construction for AAPP.
7. Detailed Construction Plan for AAPP.

8. Technical Assistance Program for AAPP.
9. Detailed Procurement Plan for AAPP.
10. Detailed Vehicle Procurement Plan for AAPP.
11. Vehicle Procurement by USAID and GOI.
12. Steps in Vehicle Procurement Through USAID.
13. Short Term Training for AAPP.
14. Projected AAPP Disbursement Schedule.
15. Development Implementation Schedule for AAPP.

Detailed Implementation Plan
Applied Agricultural Research Project

Background and Introduction

The basic project document, the Indonesia Applied Agriculture Research Project Paper (497-0302) dated September 1980, was developed jointly by the Agency for Agricultural Research and Development (AARD) and the United States Agency for International Development Mission to Indonesia (USAID) in collaboration with responsible authorities and agencies at both the national and provincial level. Although the document contains information on project background and detailed description, project analysis, and implementation planning, it does not go into sufficient detail with respect to actual implementation to serve as an action guide. Furthermore, during the final stages of project planning, changes were made in the location and commodity orientation of two research facilities as well as in the number and makeup of the technical assistance component financed under the grant portion of the project. In order to fill in these information gaps and incorporate last-minute changes, and to schedule activities based upon actual dates of loan and grant agreements, a joint AARD/USAID Implementation Planning Committee (IPC) has worked in concert

to produce an implementation document with sufficient detail to serve as a guide to implementation actions. The objective is to fully coordinate and integrate project activities so that inputs are phased in a logical and mutually supportive manner.

Project Organization

The AAFD is the implementing agency on behalf of the Government of Indonesia (GOI). The organization chart of AARD appears in Annex A.9 of the Project Paper. In order to implement and monitor this project, AARD has set up an Applied Agricultural Research Project (AARP) Project Implementation Unit (PIU). The proposed organizational chart of the PIU appears in Attachment 1. Since the PIU headquarters will be located on Java, while 18 of the 20 sites to be developed under the project will be off Java, site coordinators are responsible for coordinating activities in the field with the headquarters group. Based on transportation and communication logistics three groups of sites have been identified, each with a site coordinator. Attachments 2 and 3 identify the sites within each group and their locations.

Construction Schedule

The Project will undertake construction activities at 19 sites on 5 islands. Some of these sites already have functioning research facilities while others have none at all. In fact, land acquisition and certification is not yet complete for a number of sites.

In determining the schedule for construction, the IPC has taken into account land availability and ownership status as well as manpower availability for staffing facilities as they are constructed. In this regard, the IPC has prepared a masterplan for both administration and research academic training and staffing requirements which will be submitted to the AARD Manpower Development Committee (See Attachments 4 and 5). This committee coordinates AARD academic training which is partly funded through a World Bank Loan.

Based on the aforesaid criteria, two construction phases have been identified. Sites to be developed within each phase are identified in Attachment 6. The detailed construction plan, Attachment 7, identifies 19 activities, primary and collaborative action agents, and time schedules for the construction program.

ponderance of equipment will be imported, necessitating differences in procurement procedure. In both cases the overriding phasing criterion has been the arrival of equipment and vehicles on site when needed.

Equipment arrival is closely correlated to the completion of facility construction. Vehicles have been phased according to present local needs and to the arrival of consultant personnel. Attachment 11 details vehicle requirement by site and by funding source. Attachment 12 details the steps and timing of USAID assisted vehicle procurement.

Academic Training, Short Term Training, and Staffing

A masterplan for academic training and staffing has been prepared for each facility being developed under the AARP (Attachments 5 and 6). These documents detail existing manpower by degree and planned manpower development by degree and specialization. The IPC has discussed this masterplan concept with the chairman designate of the AARD Manpower Development Committee. These documents will be submitted for incorporation into AARD's academic training masterplan.

Also included in our Detailed Implementation Plan is a schedule for short term training (Attachment 13). The Project provides some 559 man months of this training over the life of the project.

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Coordination with other Donor Assistance Related to
Agricultural Research

USAID's activities in support of agricultural research include the Agricultural Research Project (497-0193), the Sumatra Agricultural Research Project (497-3263), and the Applied Agricultural Research Project (497-0302). These projects fit together in an integrated manner with the assistance provided by the IBRD, The Netherlands, France, Japan and the FAO to support the requirements of AARD for the next several years.

Specifically, the AARP is closely coordinated with the IBRD supported National Agricultural Research Project (NAR II). Because AARD decided to consolidate academic training under NAR II, this input was not included in the AARP. Since the success of this project depends to some extent on the academic training provided under NAR II and to the assignment of returning participants to the facilities being developed under this project, we have closely coordinated our detailed implementation plan with the AARD Manpower Development Committee.

AARP has also carefully coordinated its activities at the Gondol Inland Fisheries Research Station with NAF II. This facility will be constructed under NAF II, but technical assistance, equipment, and training will be supplied through AARP. The detailed

plans for this facility are thus based upon NAR II schedules.

We are also coordinating our plans for the proposed Nusa Tenggara Timur facility with the Canadian aid group (CIDA). The Canadians, long interested in dry-land agriculture, may provide assistance with manpower training and development.

Disbursement Schedule

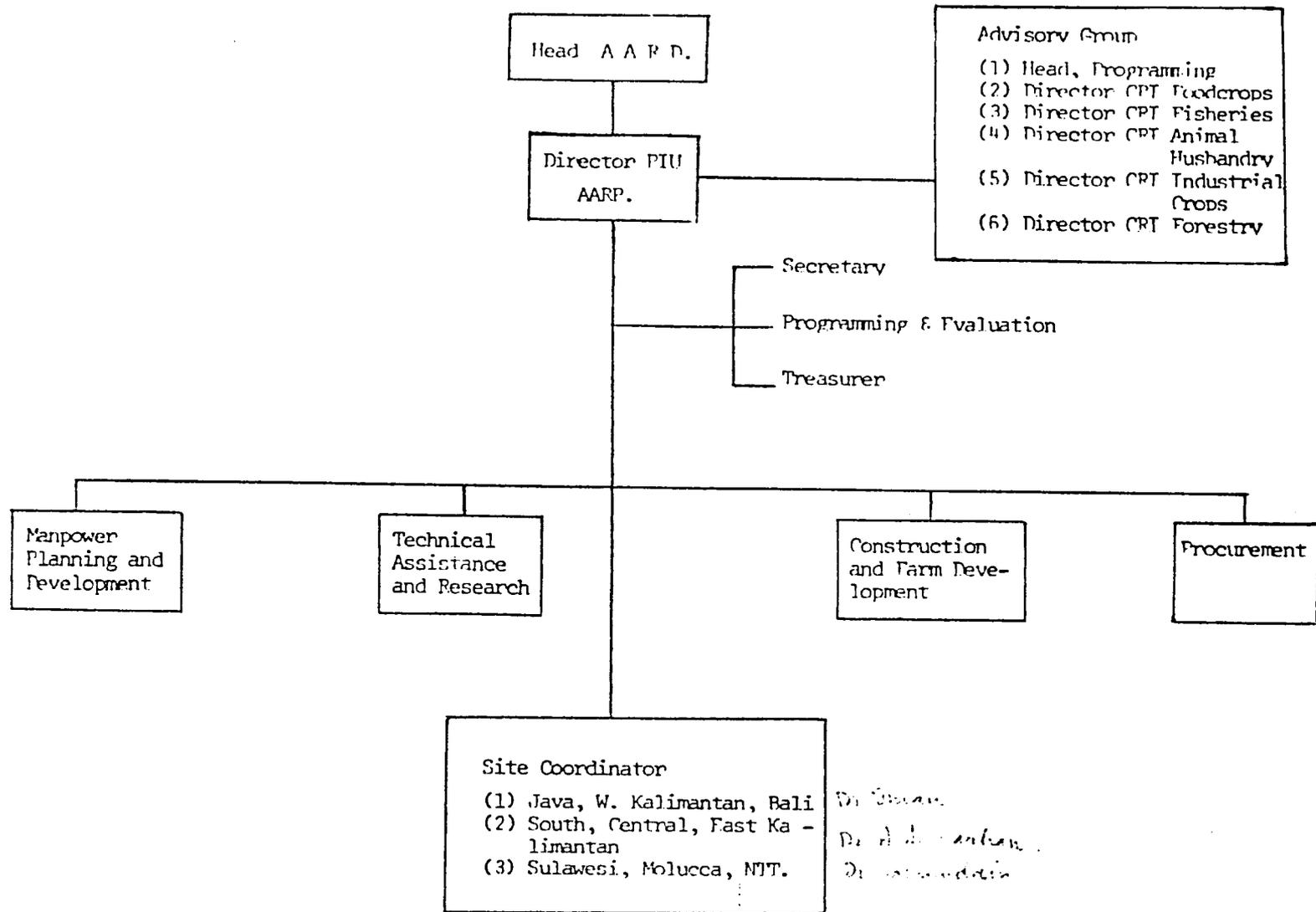
The AARP disbursement schedule (Attachment 14), based on all the information contained in this detailed implementation plan, is the best projection to date of the phasing of project expenditures. We have tailored this schedule to the Indonesia fiscal year, which runs from April through March. The disbursement schedule parallels the line item format of the financial plans of the Loan Agreement and Project Paper. However, because Annex B.2 of the Project Paper is very general and in some cases not consistent in the way certain inputs are allocated to particular line items, and since changes have been made in the location and commodity orientation of two research facilities, a revision is in order. It should also be noted that the budgets for laboratory equipment, field equipment and miscellaneous information equipment line items presented in this disbursement schedule differ from

Project Loan Agreement projections. However, the total budget for the three "equipment" line items is the same in both documents. After finalizing the details of Annex B.1 and B.2 through consultation with institute directors and USAID personnel, the IPC will develop a revised financial/disbursement plan.

Development Implementation Schedule

The final document of the Detailed Implementation Plan integrates the individual schedules and plans into a single Project Development Implementation Schedule (Attachment 15). This presents the overall phasing of activities during the life of the project in a general way.

ORGANIZATIONAL STRUCTURE FOR PROJECT IMPLEMENTATION UNIT (PIU)
OF AARP



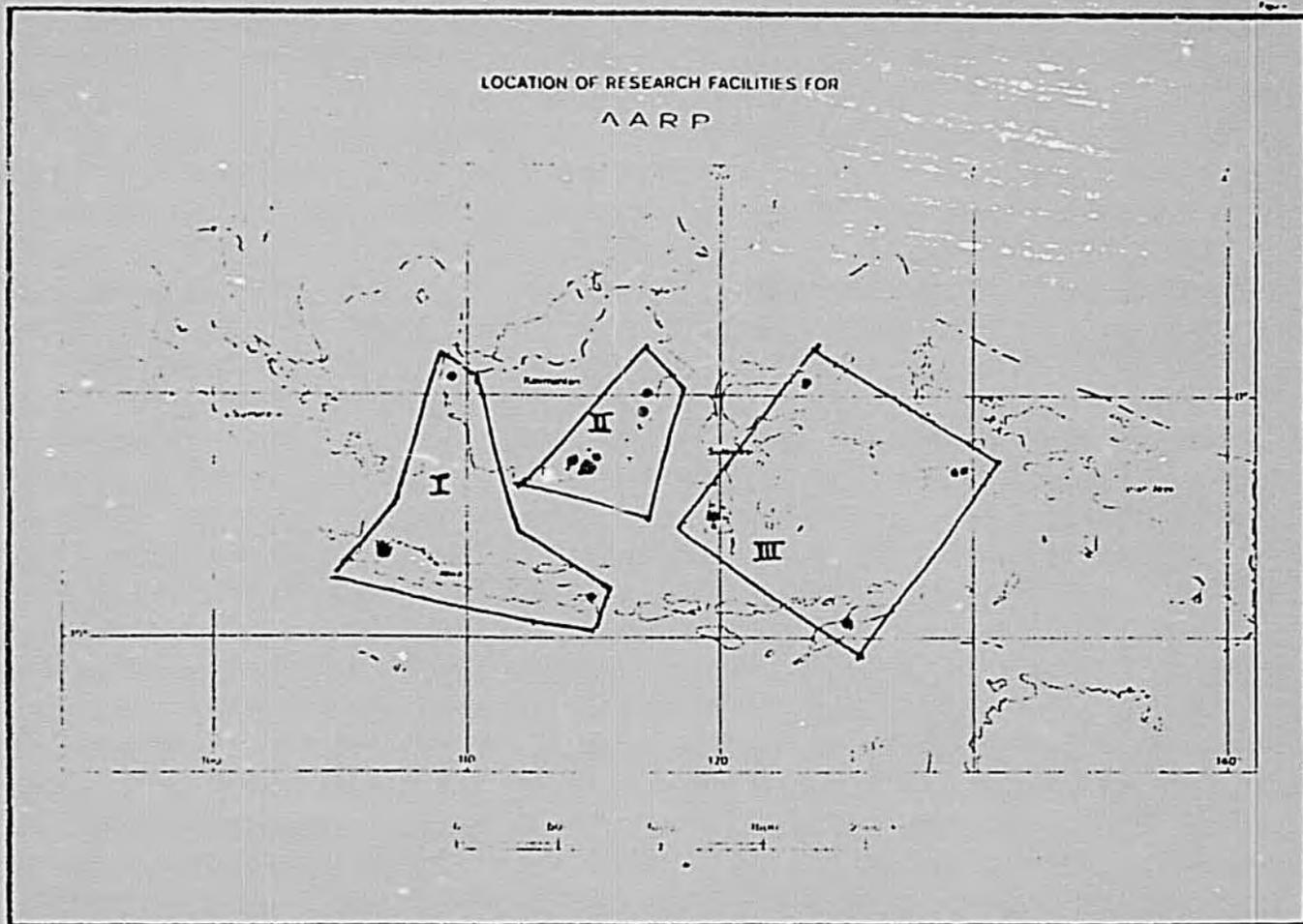
209

LOCATION OF RESEARCH FACILITIES FOR AARP
BY GROUPS

Groups / location	Status	Area / Commodity	Total US \$
Group I: Java - Bali - West Kalimantan			
1. Bogor	CRI	Foodcrops)	5,856,540
2. Bogor	RI	Foodcrops	
3. Anjungan	RS	Industrial Crops	1,002,900
4. Gondol	RS	Inland Fisheries	<u>1,472,400</u>
			8,331,840
Group II: South Kalimantan- Central Kalimantan- East Kalimantan			
1. Banjarbaru	RI	Foodcrops	3,865,025
2. Handil Manarap	RS	Foodcrops	816,650
3. Kuala Kapuas	EF	Foodcrops	256,450
4. Lerpake	EF	Foodcrops	344,950
5. Balikpapan	RS	Forestry	2,269,350
6. Banjarbaru	RS	Animal Diseases	<u>1,615,490</u>
			9,167,915
Group III: Sulawesi - Molucca - Kupang / NTT.			
1. Maros	RI	Foodcrops	3,507,400
2. Kalase	RS	Foodcrops	544,450
3. Makariki	RS	Foodcrops	605,000
4. Lanrang	RS	Foodcrops	290,250
5. Jenepero	RS	Foodcrops	478,900
6. Mariri	RS	Foodcrops	536,750
7. Bontobili	EF	Foodcrops	109,900
8. Makariki	RS	Industrial Crops	878,250
9. Maros	RS	Forestry	730,000
10. Kupang / NTT	RS		<u>2,981,092</u>
			10,661,092
			<u>28,161,747</u>

CRI = Central Research Institute
RI = Research Institute

RS = Research Station
EF = Experimental Farm



12

MASTERPLAN FOR ADMINISTRATIVE STAFFING FOR AARP

Institute & Location	PhD/Dr		M.S		Tr/Drs		B.S		SLTA		Total	
	F	P	E	P	E	P	E	P	E	P	E	P
<u>I. Food Crops</u>												
1. Bogor CRI	1	1	-	-	2	8	4	14	28	64	35	87
2. Bogor RI	-	-	-	-	-	-	-	6	-	15	-	21
3. Banjar Baru RI	-	-	-	1	-	-	2	5	13	20	15	26
4. Maros RI	-	-	-	-	2	4	7	14	43	43	52	61
5. Handil Manarap RS	-	-	-	-	-	-	-	1	4	8	4	9
6. Kalase RS	-	-	-	-	-	1	-	7	-	2	-	10
7. Makariki RS	-	-	-	-	-	1	-	-	-	2	-	10
8. Lanrang RS	-	-	-	-	-	1	-	-	2	2	2	10
9. Jenepono RS	-	-	-	-	-	1	-	-	-	2	-	10
10. Mariri RS	-	-	-	-	-	1	-	-	-	2	-	10
11. K Kapuas ES	-	-	-	-	-	-	-	1	-	3	-	4
12. Lempake EF	-	-	-	-	-	-	-	1	-	3	-	4
13. Bontobili EF	-	-	-	-	-	1	-	7	1	1	1	9
14. Kupang RS	-	-	-	-	-	-	-	1	-	5	-	6*
<u>II. Industrial Crops</u>												
15. Anjungan RS	-	-	-	-	-	1	-	1	-	17	-	19
16. Makariki RS	-	-	-	-	-	1	-	1	-	17	-	19
<u>III. Forestry</u>												
17. Balikpapan RS	-	-	-	-	-	2	-	2	-	11	-	15
18. Maros RS	-	-	-	-	-	-	-	1	-	3	-	4
<u>IV. Animal Des. + Hus.</u>												
19. Banjar Baru RS	-	1	-	1	-	1	-	2	-	5	-	10
<u>V. Inland Fisheries</u>												
20. Gondol RS	-	-	-	-	-	1	-	3	1	5	1	12
TOTAL	1	2	-	2	4	24	13	95	92	133	110	356

Note: E = Existing

P = Planned

*) Staff for Animal Husbandry

MASTERPLAN FOR ACADEMIC TRAINING AND STAFFING FOR AAPP

INDONESIA STATE

Institute & Location	Dh./Dtr.		P.S.		Te/Drs.		P.S.		SIPA / SIA		TOTAL	
	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned
INDUSTRIAL CROPS												
1. Agrop. CPI	-	-	-	-	-	-	-	-	-	-	-	-
2. Negeri PI	4	4A, 4B, 1E, 2F, 2P = 15	14	7A, 5B, 6F, 1F, 5P, 2S, 2T = 30	110	110	74	72	103	144	274	271
3. Ranisartaru PI	1	7	1	7	15	40	8	20	8	50	31	174
4. Maros PI	2	8	4	21	34	48	2	51	47	67	94	195
5. Nantil Marasap PS	-	-	-	3	-	3	-	5	1	10	1	14
6. Kalase PS	-	-	-	1	4	5	2	8	7	8	8	22
7. Makariki PS	-	-	-	1	1	8	-	10	2	8	3	27
8. Lembang PS	-	-	-	1	-	4	-	10	3	7	3	27
9. Jember PS	-	-	-	1	1	8	-	10	-	10	1	24
10. Mariki PI	-	-	-	1	1	8	-	10	5	5	6	24
11. Kuala Kapuas ET	-	-	-	-	-	1	-	2	-	8	-	4
12. Jember ET	-	-	-	-	-	1	-	2	-	6	-	4
13. Nantobil ET	-	-	-	-	-	1	-	5	4	6	4	12
14. Kuning / NTT	-	-	-	-	-	-	-	-	-	-	-	-
- Forestry	-	-	-	-	-	1FS, 1S, 1W = 3	-	3	-	4	-	10
- Animal Husbandry	-	1	-	2PA, 2N, 2R, 2B = 8	-	1US, 1S, 1TM = 3	-	1	-	20	-	32
INDUSTRIAL CROPS												
15. Antaiyan PS	-	-	-	-	-	2A, 1B, 1F, 1P, 1T = 6	-	-	-	6	-	12
16. Makariki PS	-	-	-	-	-	2A, 1B, 1F, 1P, 1T = 6	-	-	-	6	-	12
INDUSTRIAL CROPS												
17. Balikpapan PS	-	-	-	1S+1	1	1B, 1M, 1FS, 2S, 1UG, 1PB, 1PT, 2PC = 12	-	3	2	23	3	39
18. Maros PS	-	-	-	1S+1	-	1FS, 1S, 1W = 3	-	2	-	13	-	19
INDUSTRIAL CROPS + HIBB.												
19. Ranisartaru PS	-	1PT, 1PR, 1N = 3	-	1PT, 1PR, 1N = 3	-	1PT, 1PR, 1N = 3	-	3	-	8	-	20
INDUSTRIAL CROPS												
20. Gwihl PS.	-	1UP, 1RW, 1TN = 3	1	1UP, 1FD, 1PF, 1PH, 1CI = 5	1	4F, 4P = 10	1	4	2	20	7	42
	12	36	74	81	175	288	45	221	179	427	435	1053

INDUSTRIAL CROPS

- A = Agronomist
- B = Brewer
- E = Entomologist
- F = Fungusologist
- S = Socio-ecologist
- T = Technologist/Plant Material

INDUSTRIAL CROPS

- FE = Forest Engineer
- FC = Forest Ecologist
- FS = Forest Soil Management
- S = Silviculturalist
- M = Wild Life Management
- R = Botanist
- AG = Agroforester
- TB = Forest Biometrician

INDUSTRIAL CROPS

- PP = Perceptive Physiologist
- PM = Plant Management
- PN = Plant Nutritionist
- MP = Marine Physiologist
- IN = Insectologist
- QI = Chemist
- F = Fish Aquaculturist
- B = Biologist

INDUSTRIAL CROPS

- PT = Pathologist
- PR = Parasitologist
- M = Microbiologist

INDUSTRIAL CROPS

- PA = Pasture Agronomist
- M = Nutritionist
- R = Ruminant Reproductive Physiologist
- B = Breeder
- HS = Health Supervisor
- S = Socio-ecologist
- TM = Technologist

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Phases of Construction for AARP.

Phases/Locations	Status	Area/ commodity	Construction budget US \$
<u>Phase I :</u>			
1. Bogor	CRI	Foodcrops	3,727,740
2. Bogor	RI	Foodcrops	
3. Maros	RI	Foodcrops	973,000
4. Kalasey	RS	Foodcrops	263,950
5. Makariki	RS	Foodcrops	266,500
6. Lanrang	RS	Foodcrops	162,600
7. Jeneponto	RS	Foodcrops	236,850
8. Mariri	RS	Foodcrops	255,150
9. Bontobili	EF	Foodcrops	48,000
			5,433,790
<u>Phase II :</u>			
1. Banjarbaru	RI	Foodcrops	1,857,525
2. Handilmanarap	RS	Foodcrops	483,150
3. Kuala Kapuas	EF	Foodcrops	176,650
4. Lempake	EF	Foodcrops	197,450
5. Balikpapan	RS	Forestry	665,850
6. Maros	RS	Forestry	224,560
7. Anjungan	RS	Industrial Crops	460,400
8. Makariki	RS	Industrial Crops	485,750
9. Banjarbaru	RS	Animal Diseases	617,690
10. Kupang / NTT.	RS	Foodcrops	1,714,072
11. Gondol	RS	Fishery	-
			6,883,097
			12,316,887

1. Criteria Used for phasing construction :
- (1) Existing and planned manpower
 - (2) Land availability

2. CRI = Central Research Institute
 RI = Research Institute
 RS = Research Station
 EF = Experimental Farm

R.P.-

Vehicle Procurement by USAID and GOI.

Institute & Location	USAID		G O I			
	Jeeps	Pick-ups	Trucks (2 tons)	Trucks (5 tons)	Bus	Sedan
I. 1. AAPD headquarter	4	-				5
II. <u>Foodcrops</u>						
2. Bogor CFI)	4	4	3			
3. Bogor RI						
4. Banjarbaru RI	6	2	1		1	3
5. Maros RI	6	5	2		2	3
6. Handil Manarap RS	1	1				
7. Kalasa FS	2	2				
8. Makariki RS	2	4				
9. Lanrang FS	1	1				
10. Jenepono RS	2	2				
11. Mariri FS	2	2				
12. Kuala Kapuas RS	-	-				
13. Lempake EF	1	1				
14. Bontobili EF	-	1				
15. NTT / Kupang	3	2		1		
III. <u>Industrial Crops</u>						
16. Anjungan RS	2	1		1		
17. Makariki RS	2	1		1		
IV. <u>Forestry</u>						
18. Balikpapan FS	4	2		1		
19. Maros RS	3	-				
V. <u>Animal Disease</u>						
20. Banjarbaru RS	4	1				
VI. <u>Inland Fisheries</u>						
21. Gondol RS	3	-				1
TOTAL	52	32	6	4	3	12

/msg.-

STEPS IN VEHICLE PROCUREMENT THROUGH USAID

ACTIVITIES	Action Agent	Months								
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
1. Request USAID to open "direct reimbursement authority" for purchase of x number of vehicles (specifications necessary)	AAPD	█								
2. Requests AID/W to open "direct reimbursement authority"	USAID		█							
3. Contract with supplier for vehicles	USAID			█						
4. Delivery	Supplier				█					

/msg.-

SHORT TERM TRAINING FOR AAPP

Attachment 13

Institute & location	Total m m	1/6 years / 2 months					1/4 years / 3 months					1/2 years / 6 months					International Conferences & Trips				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I. Headquarter																					
1. A A R D	40	2	2	2	1	1	2	2	2	2	-										
II. Fieldrops																					
2. Bogor (RI)	73	2	2	2	2	2	1	2	2	1	1	-	1	1	-	-	4	4	4	4	4
3. Bogor RI																					
4. Banjarbaru RI	120	-	-	-	-	-	4	4	4	4	4	2	2	2	2	2					
5. Maros RI	180	6	6	6	6	6	4	4	4	4	4	2	2	2	2	2					
6. Handil Munarap RS																					
7. Kalase RS																					
8. Mekariki RS																					
9. Lanrang RS																					
10. Jenepono RS																					
11. Murrri RS																					
12. Kuala Kapuas RS																					
13. Lempake EF																					
14. Pontobili EF																					
15. Kupang / NTT (forestry)	18									2					2						
III. Industrial Crops																					
16. Anjungan RS																					
17. Mekariki RS																					
IV. Forestry																					
18. Balikpapan RS	28		2				1		2					2			2	1			
19. Maros RS	25		2						3				1					2	2	2	
V. Animal Disease																					
20. Banjarbaru RS	56	-	-	-	-	-	-	2	2	2	2	-	-	2	2		2	2	2	1	1
VI. Inland Fisheries																					
21. Gendol RS	19			1				2	3								2				
Total persons	199	10	14	11	9	9	12	16	22	15	11	4	6	9	8	4	10	9	8	7	5
Total man months	559	20	28	22	18	18	36	48	66	45	33	24	36	54	48	24	10	9	8	7	5

1st year 110 man. FX \$ 216,000
 2nd year 120 man. FX \$ 216,000.
 3rd year 150 man. FX \$ 357,000.
 4th year 110 man. FX \$ 287,000.
 5th year 50 man. FX \$ 187,000.

2022

PROJECTED AARP DISBURSEMENT SCHEDULE

(THOUSAND U.S \$)

INITS	IFY '80/'81			IFY '81/'82				IFY '82/'83				IFY '83/'84				IFY '84/'85				IFY '85/'86				ALL COSTS
	LEAID			LEAID		ODI		LEAID		ODI		LEAID		ODI		LEAID		ODI		LEAID		ODI		
	Loan	Grant		Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	Loan	Grant	
	FY	LC	FY	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	FY	LC	
Technical Assistance	-	-	22	-	-	180	20	-	-	965	80	-	-	1815	150	-	-	1565	130	-	-	270	20	5217
Construction	-	-	-	160	-	-	491	400	-	-	-	300	2517	-	3607	-	1936	-	2775	-	387	-	555	13178 (424)
Farm Development	-	-	-	-	-	-	790	-	-	-	790	-	-	-	790	-	-	-	796	-	-	-	-	3164
Lab Equipment	-	-	-	240	-	-	-	1125	-	-	181	1077	-	-	175	-	-	-	-	-	-	-	-	2800
Field Equipment	-	-	-	160	-	-	-	836	-	-	-	928	-	-	-	-	-	-	-	-	-	-	-	1824
Misc. Information Equipment	-	-	-	123	-	-	-	480	-	-	186	464	-	-	181	-	-	-	-	-	-	-	-	1434
Vehicles	-	-	-	398	-	-	130	299	-	-	88	320	-	-	44	-	-	-	44	-	-	-	-	1323
Training	-	-	-	216	-	-	79	290	-	-	108	359	-	-	133	287	-	-	103	187	-	-	69	1831
			22	1,277	180	1,510	3,430	465	1,435	3,348	2517	1215	5,080	287	436	1565	3,848	187	387	270	644			30723
Contingency (+ 10%)																								3073
Inflation (+ 20%)																								8949
TOTAL																								42745

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DEVELOPMENT IMPLEMENTATION SCHEDULE FOR AAKP.

Attachment 15.

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CATEGORIES	1981												1982												1983												1984												1985																																																																																																																																																																																																		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12																																																																																																																																																																																							
1. Farm Development	Including site surveys and development, land clearing, roadworks, irrigation, drainage and fencing																																																																																																																																																																																																																																																		
2. Construction	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%;">Phase I</td> <td colspan="12">Preparation, detailed plan and tender document</td> <td colspan="12"></td> <td colspan="12"></td> <td colspan="12"></td> <td colspan="12"></td> </tr> <tr> <td>Phase II</td> <td colspan="12"></td> <td colspan="12">Boqor CR, Boqor RI, Maros RS, Kalassy KS, Makariki KS, Lanrang PS, Cenerento RS, Mariri PS, Rontocili FF</td> <td colspan="12"></td> <td colspan="12">Liability limited</td> <td colspan="12"></td> </tr> <tr> <td></td> <td colspan="12"></td> <td colspan="12">Banjerbaru RS, Mandil Manarap RS, Kualaasahan FF, Lennake FF, Salsipayan RS, Padang RS, Makariki RS, Rontocili FF, Mariri PS</td> <td colspan="12"></td> <td colspan="12">Liability limited</td> <td colspan="12"></td> </tr> </table>																																																												Phase I	Preparation, detailed plan and tender document																																																												Phase II													Boqor CR, Boqor RI, Maros RS, Kalassy KS, Makariki KS, Lanrang PS, Cenerento RS, Mariri PS, Rontocili FF																								Liability limited																																					Banjerbaru RS, Mandil Manarap RS, Kualaasahan FF, Lennake FF, Salsipayan RS, Padang RS, Makariki RS, Rontocili FF, Mariri PS																								Liability limited																							
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3. Technical Assistance	Preparation, evaluation and selection of prime consultant group															2 man-years															22,5 manyears															6 manyears															18 manyears																																																																																																																																																																																						
4. Lab - Equipment	Phase I	Preparation and approval of procurement plan / detailed commodity list and tendering period															Delivery															Transshipment																																																																																																																																																																																																																			
		Field Equipment																																																																																																																																																																																																																																																	
Misc. Equipment	Phase I	Preparation and approval of procurement plan / detailed commodity list and tendering period															Delivery															Transshipment																																																																																																																																																																																																																			
5. Training	90 manmonths															121 manmonths															150 manmonths															118 manmonths															80 manmonths																																																																																																																																																																																						
6. Vehicles	Request I	12J+19P+5T+7d															Request II	21J+5P+1T+56-36															Request III	1+3 + 40 - 40																																																																																																																																																																																																																	



MENTRI KEHAKIMAN
REPUBLIK INDONESIA

MEMORANDUM

OF THE MINISTER OF JUSTICE OF THE REPUBLIC OF
INDONESIA ON THE VALIDITY AND LEGALLY BINDING
CHARACTER OF THE A.I.D. LOAN AGREEMENT
NO. 497-T-064 CONCLUDED BETWEEN THE REPUBLIC
OF INDONESIA AND THE UNITED STATES OF AMERICA

With regard to the A.I.D. Loan Agreement No. 497-T-064
concluded on September 29, 1980 between the Republic of
Indonesia and the United States of America, acting through
the Agency for International Development :

I, the Minister of Justice of the Republic of
Indonesia do hereby certify that the mentioned Agreement has
been duly authorized, and executed on behalf of the Borrower,
and that it constitutes a valid and legally binding obligation
of the Borrower in accordance with all of its terms.

Done in Jakarta on this 14th day of October of
the year nineteen hundred and eighty.

THE MINISTER OF JUSTICE
OF THE
REPUBLIC OF INDONESIA



Josito

MUDJ. SH



REPUBLIC OF INDONESIA
NATIONAL DEVELOPMENT PLANNING AGENCY
JAKARTA, INDONESIA

No. :3198/WK/12/1980

Jakarta, December 23, 1980

Mr. Thomas C. Niblock
Director
USAID Mission
c/o American Embassy
Jakarta

Subject : AID Loan No. 497-T-064
Designation of Other Representatives
of the Borrower

Dear Mr. Niblock,

In accordance with Article V Section 5.01(b) of the Loan Agreement between the Government of the Republic of Indonesia and the Government of the United States of America, which provides for the financing of equipment, materials and services in support of Indonesia's programme for the expansion and improvement of its agricultural research capability, I hereby designate the following officials of the Department of Agriculture to be the other representatives :

<u>Name</u>	<u>Title</u>	<u>Signature</u>
1. Dr. Ibrahim Manwan	Chief, Centre for Agricultural Research Programme Preparation	
2. Ir. Budhoyo Sukotjo	Staff, Centre for Agricultural Research Programme Preparation	

Their signatures on any instrument may be taken as conclusive evidence that any action effected by such instrument is duly authorized.

Yours sincerely,



J.B. Sumarlin

Minister of State/Vice Chairman of Bappenas

- Cc: : 1. Sec.Gen.Dept.of Agriculture
2. Chief, Agency for Agricultural Research and Development
3. Dir.Gen. of Foreign Monetary Affairs
4. Dir.Gen. of Budget
5. Bank Indonesia.

AGENCY FOR INTERNATIONAL DEVELOPMENT
AMERICAN EMBASSY
JAKARTA, INDONESIA

Date: January 15, 1981

Departemen Luar Negeri
Jl. Pejambon No.6
Jakarta Pusat

Subject: AID Loan No. 497-T-064
Applied Agricultural Research
Project Implementation Letter No.2

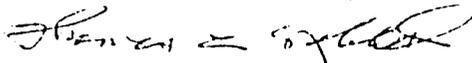
Gentlemen:

USAID has received the following documents:

- 1) Ministry of Justice Legal Opinion
dated October 20, 1980.
- 2) BAPPENAS statement of project loan representatives
dated December 23, 1980.
- 3) AARD detailed implementation plan
dated December 24, 1980.

We are pleased to inform you that these documents are acceptable and that AID considers the Conditions Precedent to First Disbursement, Section 5.1 (a), 5.1 (b) and 5.1 (c) to the subject Loan Agreement satisfied.

Sincerely,



Thomas C. Niblock
Director

Distribution: 15 - DEPLU
5 - BAPPENAS
5 - DOA
5 - AARD

AGENCY FOR INTERNATIONAL DEVELOPMENT
 AMERICAN EMBASSY
 JAKARTA, INDONESIA

Date: 18 February, 1981

Mr. Sadikin S. W.
 Director General for
 Agricultural Research and Development
 Agency for Agricultural Research and Development
 Jl. Ragunan 29 - Pasar Minggu
 Jakarta Selatan

Subject: AID Project No. 497-0302 Grant Agreement
 Applied Agriculture Research
 Project Implementation Letter No. 3

Dear Mr. Sadikin:

USAID has received your letter number 102.329 a - LNs of
 4 February, 1981 designating the project grant representatives.

We are pleased to inform you that this document satisfies the
 Condition Precedent to First Disbursement, Article 4.,
 Section 4.1 to the subject Grant Agreement.

Sincerely,

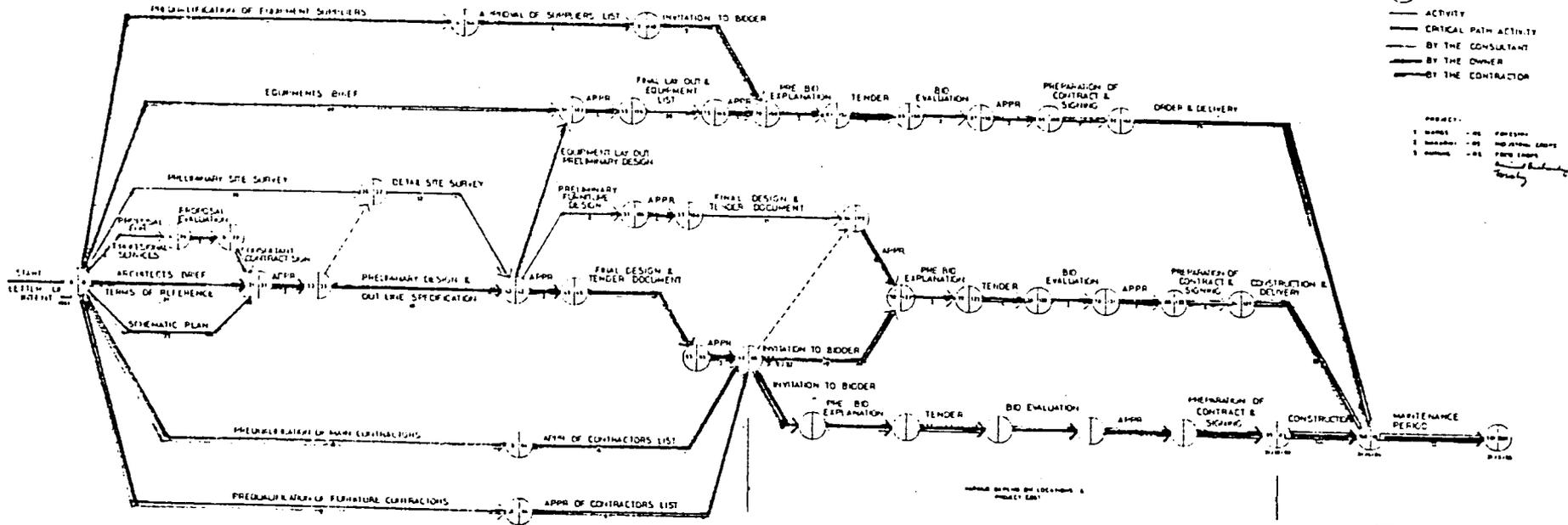


Walter C. Tappan
 Chief, Agricultural Development

Distribution: 5 - SERKAB
 5 - DGA
 5 - AARD
 5 - BAPPENAS

CRITICAL PATH SCHEDULING

APPLIED AGRICULTURAL RESEARCH PROJECT
(497-0302) - PHASE II



TEAM 4
ARCHITECT & CONSULTING ENGINEERS
JALAN BANGSAKUNDA 14
SILVER STAR BUILDING
46000

DAFTAR PERUSAHAAN YANG MENYERAHKAN PRA-
KUALIFIKASI TA UNTUK AARP.

No.	Perusahaan	Judul	Kode/Tgl./ Jumlah
1	2	3	4
1.	EXPERIENCE, INCORPORATED, MINNEAPOLIS, MINNESOTA. 55402.	PRE-QUALIFICATION DATA PROJECT NO. 497-0302 AARP, DEC. 22. 1980	TL. 011 2 -1-81 2 eks.
2.	SECID - (THE SOUTH EAST CONSUMPTION FOR INTERNATIONAL DEVELOPMENT (USA). NORTH CAROLINA 27514.	PRE-QUALIFICATION INFORMATION	TL. 137 21-1-81 2 eks.
3.	BLACK & VEATCH INTERNATIONAL, INC. P.O. BOX 8405 KANSAS CITY, MISSOURI 64114, USA.	QUALIFICATION AND EXPERIENCE FOR BLACK & VEATCH INTERNATIONAL AND ASSOCIATES. AARP 497-0302.	TL. 136 21-1-81 2 eks.
4.	BLACK & VEATCH INTERNATIONAL, FREDERIKSEN, KAMINE, AND ASSOCIATES, INC.	SERVICES RESOURCES MANAGEMENT EVALUATION, PLANNING AND IMPLEMENTATION PRE-QUALIFICATION FOR AGRICULTURAL PROJECTS.	TL. 136 21-1-81 1 eks.
5.	CONSUMPTION FOR INTERNATIONAL DEVELOPMENT 5151 E. BROADWAY, SUITE. 1500 TUCSON, ARIZONA. 85711.		TL. 21-1-81 2 eks.
6.	INSTITUTE OF INTERNATIONAL EDUCATION 809 U.N. PLAZA NEW YORK N.Y. 10017	AID PROJECT 497-0302 APPLIED AGRICULTURAL RESEARCH	TL. 30-12-80 2 eks.
7.	LOUIS BERGER INTERNATIONAL, INC. AFRICA, ASIA, EUROPE, LATIN AMERICA, MIDDLE EAST.		TL. 128 20-1-81

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1.	2	3	4
8.	IADS. I. AID QUESTIONAIRES & FINANCIAL STATEMENTS. II. IADS SUPPLEMENTARY MATERIALS. III. SUNY SUPPLEMENTARY MATERIALS. IV. ICLARM SUPPLEMENTARY MATERIALS. V. WINROCK SUPPLEMENTARY MATERIALS.		TL. 149 24-1-81 2 eks
9.	MUCIA - MIDWEST UNIVERSITY CONSORTIUM FOR INTERNATIONAL ACTIVITIES, INC. 134 DERBY HALL, 154 NORTH OVAL MALL, COLUMBUS, OHIO, 43210	PRE-QUALIFICATION STATEMENT FOR AARP.	TL. 21-1-81 2 eks.
10.	DENVER RESEARCH INSTITUTE UNIVERSITY OF DENVER COLORADO SEMINARY. P.O. BOX 10127, DENVER COLORADO 80208.	PROPOSAL APPLIED AGRICULTURAL	TL. 21-1-81 1 eks.
11.	R.M.I. - RESOURCES MANAGEMENT INTERNATIONAL, INC. ASIA : JL. MELAWAI VI/8, KEBAYORAN BARU - JAKARTA	VOL. I - PRE-QUALIFICATION DATA USAID FROM 10-20-6- MANAGEMENT CONSULTING QUESTIONAIRE AARP. VOL. II - A STATEMENT OF CORPORATE CAPABILITIES FOR THE AARP.	TL. 155 24-1-81 3 eks. 24-1-81 3 eks.
12.	FLAD & ASSOCIATES, 6200 MINNERAL POINT ROAD, P.O. BOX 5098, MADISON, WISCONSIN 53703.	AGRI ARCHITECTURE.	LN. 119 26-1-81 2 eks.
13.	UNIVERSITY OF FLORIDA, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCE.	AARP 497-0302 THE AID 14-20-6	TL. 157 24-1-81 2 eks.

14. /.....

1.	2	3	4
14.	MA SI - MULTI AGRIBUSINESS SYSTEM INCORPORATED 1015 EIGHTEENTH	PRE-QUALIFICATION AARP.	TL. 157 24-1-81
15.	I R I - RESEARCH INSTITUTE INC. ONE ROCKEFELLER PLAZA, ROOM 1401 NEW YORK, N.Y. 10020.	PRE-QUALIFICATION DOCUMENT	TL. 148 23-1-81 2 eks.
16.	DEVELOPMENT ALTERNATIVES, INC. ARTHALOKA BUILDING, 2ND FLOOR, JLN. JEND. SUDIRMAN NO. 2, JAKARTA.-	A REQUEST FOR TECHNICAL ASSIS- TANCE PRE-QUALIFICATION AARP IMPLEMENTATION USAID PROJECT 497-0302/LOAN NO. 497-T-065. VOL. 1 : DAI/PPA EXPERIENCE AND CAPABILITY. .. VOL. 2 : CURRICULUM VITAE CALOBORATIVE EXPE- RIENCE	TL. 124 26-1-81 2 eks. 2 eks.

Ed/msg.-

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SURAT KEPUTUEAN
KEPALA BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN

Nomor.: 10 - AL7/1981

Tentang

PEMBENTUKAN TEAM PRAKUALIFIKASI PERUSAHAAN KONSULTAN
UNTUK SATUAN PELAKSANA PROYEK PADA PROYEK PENELITIAN
DAN PENGEMBANGAN PERTANIAN BANTUAN UGAID (APPLIED
AGRICULTURE RESEARCH PROJECT/AARP)

KEPALA BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN,

- Menimbang** : bahwa untuk memperlancar pelaksanaan Satuan Pelaksana Proyek pada Proyek Penelitian dan Pengembangan Pertanian Bantuan UGAID dipandang perlu untuk membentuk Team Prakuwalifikasi Perusahaan Konsultan
- Mengingat** : 1. Keputusan Presiden RI Nomor 44 dan Nomor 45 tahun 1974 ;
2. Keputusan Presiden RI Nomor 47 tahun 1979 ;
3. Keputusan Presiden RI Nomor 157/M tahun 1974 tanggal 28 Nopember 1974 ;
4. Keputusan Presiden RI Nomor 14 A tahun 1980 ;
5. Surat Keputusan Menteri Pertanian Nomor 453/Kpts/Org/6/1980 tanggal 23 Juni 1980 ;
6. Surat Badan Penelitian dan Pengembangan Pertanian Nomor 012.3610-LNB tanggal 28 Desember 1980 kepada Direktur USAID Jakarta tentang Rencana Pelaksanaan AARP.
- M E M U T U B K A N**
- Menetapkan**
PERTAMA : Menunjuk dan mengangkat anggota Team Prakuwalifikasi Perusahaan Konsultan untuk Satuan Pelaksana Proyek dari Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID yang selanjutnya disebut Team Prakuwalifikasi dengan susunan keanggotaan seperti yang tercantum dalam lampiran Surat Keputusan ini.
- KEDUA** : Team Prakuwalifikasi bertugas untuk :
1. Membuat tatacara teknis penyelenggaraan prakuwalifikasi ;
 2. Menyelenggarakan prakuwalifikasi perusahaan konsultan ;
 3. Dalam rangka prakuwalifikasi memilih 5 (lima) perusahaan konsultan yang mampu dan memenuhi persyaratan ;
 4. Mengadakan wawancara dengan 5 (lima) perusahaan konsultan yang terpilih ;
 5. Mengadakan evaluasi dan memilih 1 (satu) perusahaan konsultan sebagai calon kontraktor ;
 6. Mengusulkan 1 (satu) perusahaan konsultan yang terpilih kepada Pemimpin Proyek AARP ;
 7. Membantu Pemimpin Proyek AARP mengadakan negosiasi dalam rangka membuat kontrak kerjasama dengan perusahaan konsultan yang terpilih.

- KETIGA** : Dalam melaksanakan tugas tersebut pada diktum KEDUA, Team Prakwalifikasi harus menaati pedoman dan ketentuan yang ditetapkan dalam Keputusan Presiden RI Nomor 14 A tahun 1980 dan Persetujuan Proyek antara Pemerintah RI dengan USA dalam Applied Agriculture Research Project (497 - 0302).
- KEMPAT** : Masa kerja Team Prakwalifikasi berakhir dengan ditanda tangannya Kontrak Kerjasama dengan perusahaan konsultan yang terpilih.
- KELIMA** : Segala biaya yang diperlukan dalam rangka pelaksanaan tugas Team Prakwalifikasi dibebankan pada anggaran Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID.
- KEENAM** : Surat Keputusan ini berlaku surut sejak tanggal 1 Februari 1981 dengan ketentuan segala sesuatunya akan diadakan perbaikan seperlunya bilamana dikemudian hari terdapat kekeliruan.

Ditetapkan di : Jakarta

Pada tanggal : 20 April 1981.



Kepala Badan Penelitian dan Pengembangan Pertanian,

[Signature]
Min. Gumintawikarta

NIP 080026199

SALINAN Surat Keputusan ini disampaikan kepada Yth. :

1. Menteri Keuangan ;
2. Menteri Pertanian ;
3. Ketua Badan Pemeriksa Keuangan ;
4. Direktur Jenderal Pengawasan Keuangan Negara, Departemen Keuangan ;
5. Direktur Jenderal Anggaran Departemen Keuangan ;
6. Sekretaris Jenderal Departemen Pertanian ;
7. Inspektur Jenderal Departemen Pertanian ;
8. Kepala Biro Keuangan Departemen Pertanian ;
9. Kepala Biro Perencanaan Departemen Pertanian ;
10. Kepala Kantor Perbandharaan Negara di Jakarta ;
11. Sekretaris Badan dan Para Kepala Pusat lingkup Badan Penelitian dan Pengembangan Pertanian ;
12. Pemimpin Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID ;
13. Yang bersangkutan untuk diketahui dan diundahkan.

LAMPIRAN : Surat Keputusan Kepala Badan Penelitian dan Pengembangan Pertanian

Nomor : 10 - AL7/1981

Tanggal : 20 Januari 1981

SUSUNAN TIM PRAKUALIFIKASI PERUBAHAN KONSULTAN
UNTUK SATUAN PELAKSANA PROYEK DARI PROYEK PENELITIAN
DAN PENGEMBANGAN PERTANIAN BANTUAN UGAID.

No.	N a m a	Jabatan dan Instansi	Tugas dalam Tim
1.	Dr Prabowo Tjitropranoto MSc	Kepala Pusat Perpustakaan Biologi dan Pertanian	Ketua, merangkap anggota
2.	Moehd. Baga Kalie	Utuf Bidang Tata Kerjasama Luar Negeri, Pusat Penyusunan Program Penelitian Pertanian	Sekretaris, merangkap anggota
3.	Ir M. Daryono	Kepala Bagian Tata Usaha Badan Litbang Pertanian	Anggota
4.	Dr Subijanto	Kepala Pusat Pengolahan Data dan Statistik	Anggota
5.	Ir B. Paransih Isbagio	Kepala Bidang Tata Kerjasama Luar Negeri, Pusat Penyusunan Program Penelitian Pertanian	Anggota
6.	Puad Cholik MBe	Staf Pusat Penelitian dan Pengembangan Perikanan	Anggota

Ditetapkan di : Jakarta

Pada tanggal : 20 April 1981.



Kepala Badan Penelitian dan Pengembangan Pertanian,

Sudikin Sumintawikarta

NIP. 080026199

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EVALUATION ITEM	F I R M N U M B E R															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<u>II. RELEVANT EXPERIENCE IN :</u>																
1. Handling contracts of Comparable size, complexity, and technical speciality.	2	3	3	2	1	1	3	2	1	3	1	1	3	2	2	
2. Performing services in the same field as in 1.	2	4	3	3	1	2	2	2	2	3	1	2	3	2	3	
3. Performing contracts under comparable conditions.	2	4	3	4	3	2	2	3	2	3	2	2	3	4	3	
4. Performing contracts in Indonesia	1	2	3	1	2	2	2	2	2	4	1	2	2	2	2	
<u>III. REPUTATION</u>																
1. Overall professional reputation.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
2. Known cases of prior performance.	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	
3. Relationship with clients.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
<u>IV. CAPACITY</u>																
1. Quality of the firm's proposal	1	3	3	2	1	2	2	2	2	3	1	1	1	2	2	
2. Understanding of services to be performed.	1	3	3	3	1	1	2	1	1	3	2	1	3	1	3	
3. Ability and intention to assign qualified personnel.	2	4	3	3	2	2	3	2	2	3	2	2	4	3	3	
4. In house staff with required expertise.	2	3	3	3	1	2	2	2	2	2	2	2	3	3	3	
5. Current work load relative to capacity.	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	

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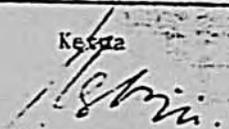
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Capacity to start work promptly	2	2	2	2	2	1	2	2	2	2	3	2	2	2	5	2
Ability to assist procurement	2	4	3	2	1	2	2	2	2	2	2	2	2	4	2	
Adequate financial strength.	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	
Absence of potential conflict of interest.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Special approaches or concepts proposed by firm.	1	2	3	2	1	1	3	1	1	2	1	1	2	1	2	
T O T A L	50		<u>44</u>		28		37		31		28		<u>41</u>		39	
		<u>46</u>		<u>39</u>		29		33		<u>43</u>		29		<u>43</u>		

Bogor, 23 Pebruari 1961.

Team Penilai


Pralowo Ijetropranoto

Ketua


Paronik Isbaglo

Anggota


Fuad Cholik

Anggota


Bagakalie

Sekretaris


Subyanto

Anggota

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REPUBLIC OF INDONESIA
MINISTRY OF AGRICULTURE
AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT

REQUEST FOR TECHNICAL PROPOSAL
FOR
APPLIED AGRICULTURAL RESEARCH PROJECT

MARCH 1981

A. REQUEST FOR TECHNICAL PROPOSAL (RFTP)

The Government of the Republic of Indonesia (GOI), through the Agency for Agricultural Research and Development (AARD), invites the following "shortlisted" firms to submit proposals for the provision of technical-assistance and other services for the Applied Agricultural Research Project .

1. Black & Veatch and Frederikson, Kamine and Associates
2. Resources Management International and Chemonics
3. IRI Research Institutes, Inc
4. Multinational Agribusiness Systems Inc. (MASI) & Associated Universities
5. South East Consortium for International Development (SECID).

These firms are requested to submit five copies of their proposals consisting of the information requested in Section BII of this RFTP no later than May 15, 1981 to the following address:

Mr. S.W. Sadikin
Director General
Agency for Agricultural Research and Development
Jl. Ragunan 29 - Pasar Minggu
Jakarta Selatan, Indonesia

One copy of the proposal should also be submitted to:

Mr. Walter C. Tappan
Agricultural Development Office
USAID BOX 4
APO San Francisco, Ca. 96356

Late proposals will not be accepted.

B. GENERAL INFORMATION

1. Background: The goal of Indonesia's economic development effort is a just and prosperous society. The strategy employed to achieve that goal is the development of a balanced economy in which industry is supported by a sound agricultural sector. The GOI has launched Five Year Development Programs called " Pelitas " as a mechanism to attain the national goal at a realistic rate and in an orderly manner.

The third Pelita, which began in April 1979, is guided by a Development Trilogy, namely 1) equal distribution of development and results, 2) a reasonable rate of economic growth, and 3) maintaining national stability.

Utilizing the available resources and working within the policy guidelines, the agricultural development effort is directed toward the solution of the following critical problems:

1. Increasing both the quantity and quality of food produced.
2. Increasing farmers' income.
3. Increasing employment opportunities.
4. Increasing the exportation and reducing the importation of agricultural commodities.
5. Supporting industries processing agricultural products.
6. Ensuring productive, sustainable use of natural resources.
7. Improving the quality of rural life.

Although the contribution of agriculture to the GDP and exports has declined during the last 15 years as a percentage, the rural sector continues to be of overwhelming importance to the vast majority of the people in terms of employment, income and food production. Some 80% of the population live in the rural areas, and agriculture is the largest single source of new employment, accounting for 46% of incremental employment over 1971-1976. Agriculture is dominated by smallholder production: There are some 14.4 million smallholders producing subsistence and cash crops on 14.2 million hectares of land. Thus in Pelita III, agriculture retains its position of highest priority.

The role of research in solving these critical problems is to provide guidance and support to the implementors of development programs. Guidance will be provided in the form of information which can be used in policy formulation. Support will be in terms of packages of technology which can be used by farmers under existing conditions and resources.

With the reorganization of the Agency for Agricultural Research and Development came the realization that : area specific agricultural research would be necessary to address the wide range of agro-climatic conditions. This was given impetus by the establishment of a research branch station of the Central Research Institute for Agriculture (CRIA) at Maros, S. Sulawesi in 1971. In 1977 USAID was requested to further support research in the outer islands, and the island of Sumatera was selected as the target area. This led to the design and implementation of the Sumatra Agricultural Research Project 497-0263, which will establish a network of nine research facilities throughout the island. Following on this project came an IBRD proposal which puts major emphasis on institution building through support to and strengthening of AARD research capacity. The AID proposed project complements the activities of all donor efforts in agricultural research throughout the archipelago.

The Project: The purpose of the Applied Agricultural Research Project, which is described in greater detail in Section E, is to improve agricultural research capability in Kalimantan, Sulawesi, Maluku, Nusa Tenggara Timur, Bali and West Java by expanding and strengthening a network of agricultural research facilities focusing on food crops, livestock, fisheries, industrial crops, and forestry. AARD's research findings will be transferred to the farmer through Research Subject Matter Specialists (RSMS) who will compile, package and translate research results and technology for use by Extension Subject Matter Specialists (PPS). RSMS maintains close liaison with PPS and ensures a two way flow of information.

In order to address problems peculiar to the varied agro-climatic zones within the above regions, the Project will improve or establish one Central Research Institute site, 3 Research Institute sites; 13 Research Stations, and 3 Experimental Farms, by: a) constructing physical facilities; b) providing laboratory, office and field equipment; c) providing 55 manmonths of short-term training for manpower specialization and

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general upgrading, and d) providing technical assistance for the above activities as well as research guidance and implementation at the stations until all become self-sufficient in trained personnel.

The end of project status will consist of: a) research being conducted on all project assisted stations; b) research findings being published and disseminated by the extension services to the farmers; c) the staff having linkages to Indonesian institutions of higher education; d) AARD maintaining close contact with international research centers; e) research strategies and priorities being set through consultation and coordination with provincial planning boards, extension agency, universities, concerned GOI offices, farmers and other people living in the rural areas.

3. Financing: The foreign exchange costs of the technical assistance will be paid by the United States Agency for International Development (USAID) from Grant No. 143-50-497-00-69-01. AARD will reimburse for the local currency costs of the contract. The foreign exchange costs for the rest of the Project (equipment, training, etc.) will be financed by AID Loan No. 497-T-064 and the local costs by GOI counterpart funds.
4. Schedule, Term of Work and Location: It is expected that the Contractor will have their first people in Indonesia within 6 weeks after a contract is signed. The duration of the contract is expected to be through September 30, 1985. The long term specialists will be stationed in Bogor (West Java), Banjarbaru and Balikpapan (South and East Kalimantan), Maros (S. Sulawesi), Gondol (Bali), and on Timor (Nusa Tenggara Timur). These specialists are expected to maintain regular and frequent contact with other research facilities associated with their home stations.
5. Implementation: The Agency for Agricultural Research and Development, within the Ministry of Agriculture, will be the implementing agency on

behalf of the GOI. Overall responsibility for general guidance and implementation will be with the Director General of AARD. He will be assisted by the Project Implementation Officer who will implement and supervise project activities on a day-to-day basis. The Contractor's Chief of Party will work with both the Project Implementation Officer and the Director General, AARD and will be headquartered at the AARD Offices in either Bogor or Jakarta.

AARD will select the Contractor with the concurrence of USAID, and USAID will approve the contract and certain other documents and activities during the implementation of the project. The agronomy Advisor in the Agricultural Development Office in Indonesia will be the AID liaison officer for the project.

Within 6 weeks of contract execution, the Contractor will provide the Chief of Party and Administrative Specialist. Appointment of other specialists are expected to begin in the middle of 1982, or as mutually agreed by AARD and the Contractor.

Within 6 months after execution of a contract, the Contractor's Chief-of-Party, in cooperation with the AARP Project Implementation Unit, will develop a five-year master plan of action and an annual work plan for the first year. Copies of these reports will be supplied to the Director General, AARD and to USAID for concurrence. In subsequent years, new annual work plans will be prepared and submitted to AARD and USAID. Also, the Chief of Party and other Contractor Specialists will be expected to assist with the preparation of a plan for the training of Indonesian staff and advise on the procurement of equipment and supplies.

In order to facilitate the implementation of the project, AARD has formed an AARP Advisory Group. Its overall function is to review progress, assist in the identification and removal of constraints in project implementation, and facilitate coordination of AARP activities with other programs of AARD.

The Group will be composed of the Directors of the 5 Central Research Institutes, the Director of the Center for Agricultural Research Programming, and the Contractor's Chief of Party. The Advisory Group will work closely with the existing provincial advisory boards to facilitate coordination with universities and extension agency and to help establish research priorities.

6. Reports and Evaluation: The Director General of AARD, USAID, the Contractor's Chief of Party and the Project Implementation Officer will carry out an annual review of the progress achieved under this Project, which will be conducted in the first, second and fourth year. Midterm review, as an in depth evaluation of the Project, will be held at the end of third year. The last review will be conducted six months before termination of the Project. The annual review may be attended by other AARD scientists, Contractor Staff, and USAID officials. The report of this review will be provided to USAID and the other concerned agencies of the Government. On the basis of this review, the next year's work plan will be updated and appropriate program changes will be introduced if necessary.

The midterm review team will include, in addition to the person implementing the Project, outside experts from USAID, and contract headquarters. The major focus of this review will be to determine if the Project is achieving the objectives for which it was implemented. The Project's progress evaluation will not be limited to, but will include the following major areas:

- ongoing problem-oriented research programs;
- training and manpower development;
- facilities including experiment station development;
- communication linkages with extension groups and universities;
- procurement of supplies and equipment.

The report of this in-depth evaluation should clearly state the major implications of its findings with a view to determining if the terms of reference should be revised.

The Contractor's chief of Party and Project Implementation Officer shall jointly submit quarterly reports to describe the progress made in all aspects of the Project including research, training, civilworks, procurement and expenditures. These reports shall also include the following, to the extent that such items are applicable to a particular reporting period:

- (a) Personnel arrivals, departures and end-of-quarter strength;
- (b) Major conferences, submissions, approvals, decisions and events; and
- (c) Major problem areas, current or foreseen, together with recommendations for their solutions.

Three copies of the report shall be submitted to AARD with three concurrent copies to USAID.

Upon completion of all the services called for in the Contract, the Contractor shall submit a completion report which shall summarize:

- (a) Personnel: U.S. and third-country nationals by name and job titles, arrival and departure dates, and period of service;
- (b) Sub-contracts: Purpose, starting and completion dates and brief evaluation of the work;
- (c) Problem areas in contract administration and suggestions for improvement; and
- (d) A brief evaluation of the accomplishments in relation to the objectives of the projects.

Five copies of the completion report shall be submitted to AARD with three concurrent copies to USAID.

All reports should be submitted in English.

7. Source and Origin: Only Contractors of U.S. source and origin (USAID Geographic Code 000) as specified in the Project Grant Agreement may be considered. Loan funded expenditure for goods and service require code 941 source and origin as defined in AID's Handbook 11. All Contractor long-term personnel are expected to be U.S. citizens. Most, if not all, the short term personnel are also to be U.S. citizens.

8. Personnel: The contractor shall provide qualified personnel, approved by AARD and USAID and shall be solely responsible for continuous and efficient management and coordination of all services described in the Terms of Reference. The specialists should be mature and well balanced senior scientists with at least four years in tropical agricultural research experience. Indonesian language capability is desirable, but not essential. The majority of key personnel comprising the Contractor's team in Indonesia should be drawn from the permanent staff of the Contractor or the Contractor's parent organisation. In addition to the direct supervision provided to the resident staff in Indonesia, the Contractor home office shall provide overall management and backstopping for its field staff, as well as other services described in the Term of Reference.

9. Type of Contract: The contract shall be a cost or a cost-plus-fixed-fee host country contract between AARD and the Contractor. All foreign exchange costs shall be reimbursed by USAID to the Contractor; all local currency costs will be reimbursed by AARD to the Contractor.

10. Logistical support: AARD will build and/or secure and completely furnish houses for the long term specialists at the sites of assignment. AARD will also furnish vehicles and drivers, office space, secretarial and translation services. Only limited medical and educational facilities are available at post. U.S. government facilities will not be available to the Contractor. AARD will provide limited logistic support for short term personnel.

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11. Contents of Proposal: The information requested in this section should be included in the proposal in English. The proposal should include the following as a minimum:
 1. The manner in which the Contractor will organize and execute the services. This section should include a work plan, graphics, etc.
 2. A detailed staffing plan by position identifying the personnel and possible alternatives which the Contractor proposes to assign to Indonesia on a long term basis, including qualifications of the proposed specialists. The scheduling of the arrival of long term specialists should be included.
 3. A statement describing the Contractor's capability to provide the necessary short term personnel and required home office support for all field personnel.
 4. Comments or suggestions from the Contractor for changes or additions to the terms of reference which might contribute to better obtaining project objectives.
 5. A statement of the Contractor's administrative capabilities in handling a project of this scope and nature, including training, commodity procurement, bookkeeping, personnel management etc.

12. Expenses: Any costs incurred in attending the pre-proposal conference, in the preparation of the proposal, including the cost of any visits to Indonesia for contract negotiation or other purposes, will be borne fully and exclusively by the Contractor.

13. References: To the extent such reference material is applicable to his services, the Contractor shall be guided by the following :
 - a. AID Handbook 11: Country Contracting, Chapter 1 (Procurement of Professional and Technical Services), Chapter 3 (Commodity Procurement) and Chapter 4 (Cost principles)
 - b. AID Handbook 10: Participant Training

- c. AARD Detailed Implementation Plan for AARP, December, 1980.
- d. Review of the Proposed Applied Agricultural Research Project by Dr. R.L. Lovvorn, et.al.
- e. Various other studies and reports for agricultural research stations in Indonesia.

C. SERVICES TO BE PROVIDED - TERM OF REFERENCE

1. Nature and Objectives of Contractor Participations: The Project will be administered by AARD on behalf of the Government of Indonesia. It will involve construction and renovation of physical facilities including office and laboratory buildings and staff houses, and development of experiment stations including land shaping, roads, fencing and layout of irrigation and drainage channels. AARD will directly handle the civil works with the assistance of a local design firm and the local public works office. The Contractor will advise on any special requirements for the buildings and on experiment station development.

The Contractor will provide internationally qualified staff in different areas of specialization for participation in the Project as members of local teams. Long term specialists will actively participate in the development of the research capability of AARD. The contractor's staff will provide on-the-job training and guidance, assist AARD in the selection of participants for short-term training abroad and in-country training, participate in ongoing research, and provide support to the academically qualified but as yet inexperienced newly returned participants. Contractor's staff will be headquartered in Bogor (W. Java), Banjarbaru and Balikpapan (S. and E. Kalimantan), Maros (S. Sulawesi), Gondol (Bali), and on Timor (Nusa Tenggara Timur), but will maintain regular and frequent contact with all stations, and are to be responsible to the Director General of AARD. They will also participate in the establishment/maintenance of linkages among research stations, universities and the extension agency.

The Contractor's staff will help plan, organize and implement multidisciplinary research programs on food crops, industrial crops, forestry, fisheries, and animal husbandry that are especially directed to production problems in Kalimantan, Sulawesi, Maluku, Bali, N.T.T. and W. Java. The transfer of technology from research stations to farmers' fields must be considered as a shared responsibility of research and extension organizations.

Specifically, the contractor will furnish technical assistance and training for implementation of the Project under the following categories.

- Long-term specialists
- Short-term specialists
- Short-term training and travel abroad.

2. Long-term Specialists: The Contractor will provide a multi-disciplinary team composed of the following :

<u>Specialist</u>	<u>Manyears</u>
Chief of Party	3.5
Administrative Specialist	3.0
Agricultural Economist	3.0
Tuber Crops breeder	3.0
Soil Scientist/Agronomist	3.0
Plant Protection Specialist	2.0
Agricultural Economist (for Maros)	3.0
Rice breeder	2.0
Pest management specialist	2.0
Soil scientist	2.0

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Agricultural Economist (for Banjarbaru)	2.0
Trop. Forest Silviculturist (for Balikpapan)	2.0
Trop. Forest Soil Scientist	2.0
Forest Engineer	2.0
Forest Economist	2.0
Trop. Forest Silviculturist (for Maros)	2.0
Animal pathologist	2.0
Parasitologist	2.0
Reproductive physiology/Fish Breeding specialist	2.0
Fish Nutritionist	2.0
Pasture Agronomist	2.0
Silviculturist savannah	2.0

The staffing pattern cited above reflects anticipated needs at this time. The duration of various assignments may require adjustments in order to enable the Contractor to perform the prescribed services in the most diligent, expeditious and effective manner. The contractor shall make necessary adjustments in consultation with AARD and with the concurrence of USAID. All two year assignments may be extended for 1 year.

3. Short-term Specialists: Short-term specialists for the equivalent of 24 manmonths will be provided to supplement the competencies of the Contractor's Resident Specialists and the Indonesian staff to solve specific problems. Consultancies may be necessary in areas such as facility construction and improvement, machinery and equipment requirements, installation and maintenance, improvement of support services including library, information, publications, statistical services and station management.

These specialists will be provided by the contractor at the request of the Director General of AARD after their necessity has been determined by the Project Implementation Officer and the Contractor's Chief of Party.

4. Short-term Training and Travel: Staffing requirements under the proposed project call for 25 PhD, 80 MSc degrees and sufficient BSc and high school graduates to complement this senior staff. Present and proposed degree holders are as follows:

	<u>Present</u>		<u>Proposed</u>	
	<u>Kalimantan</u>	<u>Sulawesi</u>	<u>Kalimantan</u>	<u>Sulawesi</u>
PhD	1	1	13	12
MSc	-	2	31	49
Ir/BSc	4	17	6	26

Manpower development has been given first priority in strengthening the institutional capabilities of the AARD by the Director General of that Agency. By 1985 AARD estimates that 1,900 research scientists will be needed to adequately staff its research network. This will require an expanded program of recruitment and graduate training, as well as short term training and general upgrading of present and recruited staff. New staff at the Ir., BSc, and high school diploma levels will be recruited from the many local and regional universities and agricultural high schools. It is believed that recruitment of sufficient staff to man the proposed facilities will not be a problem.

Graduate training at the PhD and MSc levels will be programmed through the National Agricultural Research II Project funded by an IBRD loan, to better coordinate AARD's requirements and provide a uniform participant training program. AARD will assign the returned participants to central and regional postings according to specific needs, including Kalimantan, Sulawesi, Maluku, Bali, Nusa Tenggara Timur and W. Java.

Short-term training for specialization and general upgrading, together with study tours, and provision for attendance at seminars and international conferences, will be provided through USAID assistance under the proposed project.

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Funding has been provided for 525 manmonths of short-term nondegree research and production type training at IRRI, ICRISAT, AVRDC and other research institutes. Training courses will last from one to six months.

Short-term travel grants will be awarded to senior research and administrative staff for study-cum-consultation tours and for participation in international seminars.

On-the-job training will also be organized in such areas as farm management and operations and field experimentation.

Selection of candidates for training will be made jointly by the Director General AARD, the Contractor's Chief of Party and the Project Implementation Officer. Besides AARD staff, deserving extension workers, university staff members, and other personnel directly involved in cooperative work under the Project will also be considered. In consultation with the General Director, AARD, the Contractor will make all necessary arrangements for training abroad, in conformance with USAID Handbook No. 10.

5. Specific Responsibilities of Contract Specialists: The contract staff (1) will actively participate in research programs and other activities associated with the development of research capability and technology transfer, (2) will cooperate with the Indonesian research administrators and senior research workers in developing, and maintaining a stimulating and productive research environment.

The specific term of reference for different contract Specialists are described:

1. Chief of Party: The contractor will provide an internationally experienced scientist with proven leadership capability to serve as Chief of Party. He will be the key individual for assisting the Project Implementation Officer and The Director General of AARD in project implementation. He will be a member of the AARP Advisory Group.

Specifically, he will advise and assist in the following areas:

- (a) Assist the Director General of AARD in his overall responsibility for project implementation and work closely with the Project Implementation Officer on day-to-day implementation.
- (b) Assist the Director General of AARD in assessing general production potential of the regions, identifying problems and priorities for research, and planning and programming research activities.
- (c) Assist the Project Implementation Officer (PIO) in planning for facility improvement and in developing general specifications of specialized facilities for each station.
- (d) Assist the PIO in developing requirements for research equipment, supplies, and library books and their procurement.
- (e) Participate in the review and, if necessary, revision of manpower requirement plan for each station and assist with implementation of the plan for different categories of training designed to build local staff capability.
- (f) Assist the PIO in identifying individuals for training in different areas and their placement in programs overseas.
- (g) Participate in the development of linkages and improved communications between research station and extension agencies and research stations and universities in the different provinces.
- (h) Assist the AARD in meeting all USAID requirements with respect to commodity procurement, approvals, fixed amount reimbursable (FAR) for construction and reporting.
- (i) Have overall administrative responsibility for all resident research specialists.

2. Administrative Specialist: He will work with the Chief of Party and the Project Implementation Officer and be responsible for overall administrative support for the Contractor team and financial accounting. He will handle personnel matters and assist with arrangements for Contractor staff travel, completion of formalities connected with training, and travel of Indonesian staff abroad. To the extent possible and if called upon to do so, the Administrative Specialist will also assist with improvement of local administrative procedures and support services.

3. Research Specialists:

1. Agricultural Economist:

- a. Major discipline : Agricultural Economics
- b. Specialization : Micro-economics
- c. Experience required : - Economic study of distribution of benefits from increased food crop production
- Economic relations governing the production, consumption and marketing of food crop.
- Economic constraints studies of food crop production
- d. Duration : 3 years (July '82 - June '84)
- e. Location/station of assignment : Bogor
- f. Other requirement : Ph.D with 4 years experience in the tropical developing countries.

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2. Tuber Crops Breeder

- a. Major discipline : Plant Breeding
- b. Specialization : Tuber Crops
- c. Experience required : - Breeding and varietal improvement of cassava, sweet potato, potato.
- Specific breeding problems in the tropics; resistance to cassava bacterial blight, mites and viral diseases of cassava, late blight resistance on potato, bacterial wilt resistance on potato and virus diseases on potato.
- d. Duration : 3 years (July '82 - June '84)
- e. Location/station of assignment : Bogor, West Java
- f. Other requirement : Ph.D with 4 years experience in tropical regions.

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3. Soil Scientist/Agronomist

- a. Major discipline : Agronomy
- b. Specialization : Soil fertility
- c. Experience required : - Soil-plant-water relationship and their response to variation in soil environment.
- Status and dynamics of nutrient in fertilizers and soils with special reference to factors involved in their utilization by plants.
- d. Duration : 3 years (July '82 - June '84)
- e. Location/station of assignment : Maros, South Sulawesi
- f. Other requirement : Ph.D. with 3 years experience in soil research in the tropical regions.

4. Plant Protection Specialist

- a. Major discipline : Plant Protection Specialist
- b. Specialization : Entomologist
- c. Experience required : - Identification and integrated control of major food crop insect encountered in the region.
- Interrelations of insects, vectors and host resistance, developing plant resistance to insect.
- d. Duration : 2 years (July '82 - June '84)
- e. Location/station of assignment : Maros, South Sulawesi
- f. Other requirement : Ph.D. with 3 years experience in entomological research in tropical regions.

5. Agricultural Economist

- a. Major : Agricultural Economics
- b. Specialization : Micro economics
- c. Experience required : - Economic study of distribution of benefits from increased food crop production.
- Economic relations governing the production, consumption and marketing of food crop.

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- Economic constraints studies of food crop production.

- d. Duration : 3 years (July '82 - June '84)
- e. Location/station of assignment : Maros, South Sulawesi
- f. Other requirement : Ph.D. with 4 years experience in the tropical developing countries.

6. Rice Breeder

- a. Major dicripline : Plant Beeding
- b. Specialization : Deep Water rice
- c. Experience required : - Breeding and varietal development of deep water rice
- Specific breedings problems: tolerance to organic soil problems: low pH, salinity and submergence tolerance, photo-period responses.
- d. Duration : 2 years (January '83 - December '84)
- e. Location/station of assignment : Banjarbaru, South Kalimantan
- f. Other requirement : Ph.D. with 3 years experience in rice breeding for tidal swamp areas.

7. Pest Management Specialist

- a. Major discipline : Pest management
- b. Specialization : Entomology
- c. Experience required : - Identification and integrated control of major food crops insects encountered in the region.
- Interrelations of insects, vectors and host resistance, developiug plant resistance to insects.
- d. Duration : 2 years (January '83 - December '84)
- e. Location/station of assignment : Banjarbaru, South Kalimantan
- f. Other requirement : Ph.D. with 3 years experience in entomological research in the tropics.

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8. Soil Scientist

- a. Major discipline : Agronomy
- b. Specialization : Soil fertility
- c. Experience required : - Soil-plant-water relationship and their responses to variations in soil environment.
- Status and dynamics of nutrient in fertilizers and soils with special reference to factors involved in their utilization by plants
- d. Duration : 2 years (January '83 - December '84)
- e. Location/station of assignment : Banjarbaru, South Kalimantan
- f. Other requirement : Ph.D. with 3 years experience in soil research in the tropical regions.

9. Agricultural Economist

- a. Major discipline : Agricultural Economics
- b. Specialization : Micro economics
- c. Experience required : - Economic study of distribution of benefits from increased food crop production.
- Economic relations governing the production, consumption and marketing of food crop.
- Economic constraints studies to food crop production.
- d. Duration : 2 years (January '83 - December '84)
- e. Location/station of assignment : Banjarbaru, South Kalimantan
- f. Other requirement : Ph.D. with 4 years experience in the tropical developing countries.

10. Trop. Forest Silviculturist

- a. Major discipline : Forestry
- b. Specialization : Forest Silviculture
- c. Experience required : - Have background in Tropical Rain Forest Silviculture.
- Have experience in dealing with tropical rain forest management

- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Balikpapan
- f. Other requirement : Ph.D. holder, preferably with specialization in Dipterocarp Silviculture.

11. Trop. Forest Soil Scientist

- a. Major discipline : Soil Science
- b. Specialization : Tropical Soil classification
- c. Experience required : - Have experience in dealing with tropical soil in relation to reforestation, particularly in the tropic.
- Have done research on tropical soil especially on land capability, land suitability and land use planning.
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Balikpapan
- f. Other requirement : Ph.D. holder

12. Forest Engineer

- a. Major discipline : Forestry
- b. Specialization : Forest Engineering
- c. Experience required : - Have experience in ergonomic
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/Station of assignment : Balikpapan
- f. Other requirement : Ph.D. holder

13. Forest Economist

- a. Major discipline : Agricultural Economics
- b. Specialization : Forest Economics
- c. Experience required : - Have experience in forest product marketing
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Balikpapan
- f. Other requirement : Ph.D. holder

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14. Trop. Forest Silviculturist

- a. Major discipline : Forestry
- b. Specialization : Forest ecology
- c. Experience required : - Have background in Tropical Rain Forest
- Working experience in reforestation
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Maros
- f. Other requirement : Ph.D. holder

15. Animal Pathologist

- a. Major discipline : Animal Science
- b. Specialization : Veterinary Pathology
- c. Experience required : - Have appreciable laboratory and investigative experience in gross histoclinical pathology
- d. Duration : 2 years (Sept. 83 - August '85)
- e. Location/station of assignment : Banjarbaru
- f. Other requirement : Ph.D. holder.

16. Parasitologist

- a. Major discipline : Animal Science
- b. Specialization : Veterinary Parasitology
- c. Experience required : - Have background tropical veterinary parasitology.
- Have experience in Helminthology, Protozoology and Entomology.
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Banjarbaru
- f. Other requirement : Ph.D. holder.

17. Reproductive physiologist/Fish Breeding Specialist

- a. Major discipline : Fishery
- b. Specialization : Reproductive Physiology
- c. Experience required : - Have experience in milkfish breeding

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- d. Duration : 2 years (Sept. '82 - August '84)
e. Location/station of assignment : Gondol, Bali
f. Other requirement : Ph.D. holder

18. Fish Nutritionist

- a. Major discipline : Fishery
b. Specialization : Fish Nutrition
c. Experience required : - Have experiences in research on fish nutritional requirements, formulation diets for fry and juveniles, and other nutritional problems, especially for milkfish.
d. Duration : 2 years (Sept. '82 - August '84)
e. Location/station of assignment : Gondol, Bali
f. Other requirement : Ph.D. holder.

19. Pasture Agronomist

- a. Major discipline : Pasture Agronomy
b. Specialization : Pasture Management, animal nutrition and livestock feeding
c. Experience required : - Have experience in doing research on tropical pasture agronomy in relation to nutritional requirements of live stock.
- Identification and management of existing ecosystems for pasture establishment
- Introduction, adaptation and seed production of potential species
- Specific pasture production constraints: tolerance to drought, diseases and insects.
d. Duration : 2 years (Sept. '83 - August '85)
e. Location/station of assignment : Timor (Nusa Tenggara Timur)
f. Other requirement : Ph.D. degree with 3 years experience in pasture management in the tropical savanna's

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20. Silviculturist Savannah)

- a. Major discipline : Forestry
- b. Specialization : Forest Management
- c. Experience required: - Have background in tropical forest or arid forest
- Have at least 2 year experience in reforestation of savannah or arid forest
- d. Duration : 2 years (Sept. '83 - August '85)
- e. Location/station of assignment : Timor
- f. Other requirement : Ph.D. holder

6. Home Office Participation: As needed to provide services to support all aspects of Project implementation.

7. Service to be Performed: To reiterate, the major responsibilities of the contractor are as follows:

- a. Technical Assistance: In addition to providing the long and short-term specialists described in Section C.5. above, the Contractor will advise and assist AARD on the design and operation of agricultural research facilities, and other aspects of research administration, including the establishment of research priorities, the transfer of research findings to the farmers, and the coordination of research with relevant international research centers. In carrying out these tasks, the Contractor will use on-the-job training, informal and formal short courses for AARD's staff and other applicable methods to assist AARD in developing fully functioning first class research facilities.
- b. Training - Short Term: After the contractor has commenced work he will collaborate with the Project Implementation Officer in the preparation of a tentative plan for short term training in Indonesia, the U.S. and third countries for AARD's personnel. The plan will be modified from time to time as AARD and the contractor gain experience with

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the project. The Contractor must make all arrangements for short term training outside Indonesia on behalf of AARD.

c. Commodity Procurement: The project includes the importation of laboratory, field and office equipment for the stations concerned.

The Contractor will make recommendations on equipment needs, and assist in preparing detailed lists and specifications. The Contractor may be required to act as procurement agent for AARD or to assist in the purchase of commodities in other ways. AARD may choose to procure on their own or through another sub-contractor. The Contractor will also assist AARD in meeting all USAID approval and other requirements for commodity procurement.

d. Constructions of Research Facilities and Site Development: AARD will locally contract for the design and construction of the research stations with the assistance of the provincial public works offices. The Contractor will not be expected to do design work or supervise construction. The Contractor will advise and assist AARD in determining any special requirements of the research station, buildings and experimental plots. The Contractor will also assist AARD in meeting all USAID approval and other requirements for construction.

e. On-going Research: The long term specialists will participate in and assist AARD's staff with their on-going research during the project period.

D. EVALUATION OF PROPOSALS:

AARD will evaluate all proposals against the following criteria :

	<u>weight</u>
a. General quality and responsiveness of proposal	10
b. Qualifications and experience of long term specialists	50
c. Approach to project management	20
d. Capability of home office to backstop the project with regard to administration, training, commodity procurement, etc.	20

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E. DETAILED DESCRIPTION OF PROJECT

The following pages from the AID Project Paper, September 1980, provide additional details of this project. The complete Project Paper will be given to the selected **firm** after a contract is negotiated.

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PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

Indonesia has a complex of farming systems dominated by small-holder production. Java, Madura and Bali are characterized by small farm units which average 0.4 ha with the major emphasis on rice production with other food crops playing a lesser but increasing role. While on the outer islands holdings may be as large as 5 ha, any holding larger than 1 ha must either utilize some degree of mechanization, or, more logically, involve a mixed farming system of food crops, perennial cash crops and, perhaps, livestock. It follows that these larger holdings are on less fertile soils and are usually rainfed, with little or no access to irrigation. Knowledgeably addressed, a mixed farming system has a great deal of potential and provides a buffer against misfortune befalling one or another of the crops.

GOI development plans include not only intensification of agricultural production (Java) but also expansion into new agricultural areas on the outer islands. To successfully implement these plans requires a continuous flow of pertinent and factual technical information. This can best be accomplished by strengthening the existing research facilities and establishing additional research stations in the different agro-ecological conditions. Since agricultural problems are location specific, the establishment of a network of research stations is necessary. While these stations will concentrate on the solution to local problems (pests and disease, adverse soil conditions, intercropping perennial with annual crops, etc.), their overall programs will be coordinated to minimize duplication. This approach should ensure the development of an integrated package of technology that smallholders can readily adopt.

Research strategies and priorities will be set through consultation and coordination with provincial planning boards, extension services, universities, concerned GOI offices, and agro-economic surveys of the farmers and people living in the rural areas. Agricultural activities in the provinces are coordinated by the inspector for agriculture, who is appointed by the Governor, and is usually the head of the most important subsector.

The agricultural extension services are responsible for maintaining a close relationship with the smallholder. This is accomplished through the field extension worker (PPL),

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working with contact farmers from 16-20 villages who in turn pass on the new technology to other farmers in the village unit. In the extension service organization, the PPL reports to a mid-level extension worker (PPM) who in turn reports to the extension subject matter specialist (PPS). The PPS maintains a constant liaison with the research subject matter specialist, and conducts fortnightly training classes for PPM and PPL.

Training is designed to provide practical information to be imparted to the farmer, and consist of lectures on new information and field practices in which the participants go through all steps of the recommended technology. Aside from the PPS's responsibility for training, they are obliged to identify farmers' problems and their solution. This organizational structure assures a two-way flow of information to and from the small holder.

Research station sites seldom exceed 10-20 hectares in size, which is sufficient only for conducting variety trials and closely controlled experiments. The majority of the research is conducted on farmers' fields, with the farmer's and field extension worker's participation. This has proved a most valuable and rewarding innovation; the farmer and his neighbors can readily compare his usual practices with those of the new technology, and he is quick to note any added gains.

With the reorganization of AARD came the realization of the necessity for location specific agricultural research in order to address the wide range of agro-climatic conditions. This was given impetus by the establishment of a research branch station of the Central Research Institute for Agriculture (CRIA) at Maros, S. Sulawesi in 1971. In 1977, USAID was requested to further support research in the outer islands, and the island of Sumatra was selected as the target area. This led to the design and implementation of Sumatra Agricultural Research Project 497-0263, which will establish a network of nine research stations throughout the island. Following on this project came an IPRD proposal which puts major emphasis on institution building through support to and strengthening of AARD research capacity. The AID proposed project complements the activities of all donor efforts in agricultural research throughout the archipelago.

This PP has been developed jointly by USAID and AARD in collaboration with responsible authorities and agencies at both the national and the provincial level. A four-man consulting team, under contract to MASI, was brought to Indonesia from 23 January to 9 March 1980 to assess and verify, or make recommendations, concerning the feasibility of the project. After visiting the proposed station sites the consultants established a priority ranking of sites for development and endorsed the proposed project.

B. Detailed Description

1. Introduction

The project will further strengthen national agricultural research capability by expanding and improving the network of regional research stations, designed to address particular agro-climatic factors peculiar to the conditions extant on the islands of Kalimantan, Sulawesi, Maluku, Bali, West Timor and the Province of West Java, focusing of food crops livestock, fisheries, industrial crops, and forestry. AARD's research findings will be transferred to the farmer through Research Subject Matter Specialists (RSMS) who will compile, package and translate research results and technology for use by Extension Subject Matter Specialists (PPS). RSMS maintains close liaison with PPS and ensures a two way flow of information.

2. Sector Goal

The broad sector goal is increased agricultural production of five commodity groups through the development of area specific crops tailored to fit precise farming conditions and in this manner attain the increases in agricultural production called for in the National Development Plan (Repelita). To achieve this goal will require the active participation of the extension and information services, continued investments in agricultural technology and rural development, farmer (fisherman) acceptance and employment of new technology, and the necessary supporting agencies (BRI, BIMAS, BJLOG, etc.) providing credit and market facilities to handle increased production.

3. Project Purpose

The purpose is to expand and improve agricultural research to address agro-climatic factors peculiar to Kalimantan, Sulawesi, Maluku, Bali, West Timor and West Java.

The end-of-project status will consist of: a) research being performed at the research institute, sub-station and experimental farm sites (16) on the designated geographic areas; b) research findings being published and disseminated by the extension services to the farmers; c) the staff having linkages to Indonesian higher education institutions, d) AARD maintaining close communications with international research centers; e) research strategies and priorities being set through consultation and coordination with provincial planning boards, extension services, universities, concerned GOI offices and agro-economic surveys of the farmers and people living in the rural areas.

When the end-of-project status is reached in six years, there will be a definite linkage between the purpose and goal as future research findings are adopted by the farmers and their increased food production, income and employment contribute toward the project (and GOI) goal.

4. Outputs

The expected outputs include:

- a) All physical facilities, equipment, vehicles, etc. completed or delivered for one Central Research Institute site, 2 Research Institute sites, 10 Research Sub-station sites and 3 Experimental Farm sites.
- b) Number of BS degree level graduates increased by about 50 percent; number of agricultural high school graduates increased by about 30 percent; on-the-job training and short-term training provided. (Advanced degree holders (25 PhD and 80 MSc) trained under the IBRD loan and posted to duty stations.)
- c) General staff upgrading by short-term observation training trips to such places as the Philippines, Malaysia, Thailand and Taiwan to learn how research is conducted in other Asian countries; attendance at regional conferences, and short-term training at international research centers. Research continues at the existing stations (Bogor, Maros, Handil Manarap, Bontobili, Lanrang, and Mariri) and begins at new station sites as their construction is completed and nucleus staff becomes available.

There is a definite linkage between the outputs and the project purpose since analysis has shown that the additional physical facilities and additional trained personnel listed above will be sufficient to conduct the type, quality and quantity of research needed to achieve the project purpose. The linkages between AARD and the Indonesian universities, agricultural extension services, and international research centers will result from the personnel receiving training at many different universities,

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from short-term observation training trips, and from working closely with nearby universities--making land and facilities available for university staff and students for research, by AARD staff lecturing at universities and extension training centers, etc.

The major assumptions for obtaining the stated outputs include: a) adequate budget, b) provincial public works willing and capable to assist in design/construction of physical facilities, c) IBRD loan will successfully provide long-term academic training, and required number of trained staff posted to stations, d) adequate number English-Speaking qualified students for graduate training abroad, and e) BSc and high school graduates available and provided by AARD. Each of these assumptions is discussed in the technical analysis and shown to be valid.

5. Inputs

The inputs from AID include grant to finance the technical assistance and loan to finance the foreign exchange costs of short-term training, vehicles, equipment and commodities, and some local currency costs of construction.

The GOI contribution includes finance a portion of the costs of construction of the physical facilities, training, etc. In addition, AARD will be contributing leadership and nucleus staff for the project and staff for training, hiring additional personnel, and conducting on-going research. The provinces will provide land for the station sites, and land will not be included in total project costs.

The magnitude of the inputs should be sufficient to achieve the expected outputs. The technical assistance will enable research to continue at the stations, will provide on-the-job training and guidance for long-term training, commodity procurement, etc. Reasonable allowance was made for contingency and inflation. See the Financial Plan for complete details.

The major assumptions concerning the inputs include: a) AID's loan and grant are authorized at the figures recommended, b) the GOI provides adequate funds for AARD, c) the provinces provide all needed land, d) AARD is authorized to hire additional staff, and e) the Indonesian universities are willing to work with AARD. All assumptions appear valid based on discussions elsewhere in this PP.

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IMPLEMENTATION PLANNING

A. Administrative Arrangements

1. GOI

The project will be implemented by the Agency for Agricultural Research and Development (AARD). AARD is capable of implementing this project, having had considerable experience with AID, IBRD and other donors, and will receive technical assistance and staff upgrading by this project.

Overall responsibility for general guidance and implementation will be with Mr. Sadikin Soemintawikarta, Head, Agency for Agricultural Research and Development, who will be assisted by an AARD team consisting of the Directors of the Central Research Institutes. Day-by-day implementation will be under the general guidance of the Directors of the respective Research Institutes, who will be assisted by the consultant's chief of party

The Public Works office in each province will aid in the contracting for and supervision of design and construction of the physical facilities in its province. Since all construction is of a simple, uncomplicated nature, no difficulty is expected with design and construction. AARD, with the assistance of the consultant, will give the Public Works office the general size, shape, and requirements for each structure. Public Works will be responsible for ensuring that the buildings are designed and built according to AARD's general specifications

2. AID

The project officer will be the Research Advisor. He will be assisted, as needed, by a capital development officer, the legal advisor, an engineer, and other Mission personnel.

AARD's headquarters are in Bogor, 60 km from Jakarta. Both transportation and telephone connections between USAID and AARD are good. The Research Institutes in S. Kalimantan and S. Sulawesi are near to provincial capitals, which are serviced by several daily flights between the two and Jakarta. Telephone connections between the two institutes and Bogor is satisfactory.

Connections with the Sub-stations and Experimental Farms are good, by air, road and waterways, but at present do not include telephone connections. In some instances, particularly the Sub-stations, a radio system would ease communications.

Disbursements for foreign exchange costs will be by the usual letter of commitment method. The Fixed Amount Reimbursement (FAR) method probably will be used for all local currency costs.

The project should present no unusual or difficult implementation problems for the Mission.

B. Implementation Plan

1. Technical Assistance: This will be provided under a host country contract between AARD and a qualified U.S. consulting firm. The firm and contract will be approved by USAID. Grant funds may be used to finance travel to the U.S. of one or two AARD officials to interview short-listed firms.
 2. Land: Public land in the provinces is generally owned, and/or controlled, by the provincial government or local authorities with individual agencies and offices permitted by the provincial government to use the land. AARD has documents providing indefinite use of the land where it already has stations. The governors of those provinces in which new stations will be sited have provided land, thus rights to all needed amounts of land have already been acquired or confirmed.
 3. Construction: All construction will be through contracts with private contractors within the province selected through competitive bidding following the GOI normal contracting procedures. Since all construction is uncomplicated, work can be performed by experienced qualified local contractors. The provincial public works offices will assist AARD in contracting and supervising construction. The USAID Mission Engineering Office will approve (a) cost estimates, (b) specifications, (c) plans prior to bidding. However, USAID will not review or approve the contracts or contractors. USAID will inspect all completed buildings and other works after completion and prior to reimbursement.
- 1/15

4. Commodities: All imported commodities (laboratory instruments and equipment, field equipment, etc.) will follow Handbook 11 (Chapters 1 and 3) procedures for procurement. Procurement will be limited to Code 941 countries, with most items coming from the U.S. Procurement under this project will be undertaken by the selected contractor in accordance with applicable AID regulations and good commercial practice.

It is anticipated that the selected contractor will, in consultation with SER/COM and AARD, select and subcontract with a qualified U.S. procurement agent for transacting all U.S. source procurements under the project. Such designation will be made as soon as possible and under no condition later than 30 days after signing of the basic contract with the selected contractor.

A preliminary procurement list has been prepared for the project. The contractor will be required to review this list with SER/COM before transmittal to the selected procurement agent for procurement action. Purchase awards will be made by the contractor on the basis of recommendations of the procurement agent, subject to concurrence of AARD and USAID/Jakarta.

The contractor's agreement with the procurement agent will stipulate the services to be rendered including arranging purchases and consolidations and setting up delivery to designated points as well as payment terms for equipment and the agents's service fees.

The above conditions will be incorporated in the contractor's service contract and will be considered an integral part of the services to be rendered.

5. Training (Overseas): Short-term overseas training will be administratively handled by the Consultant on behalf of AARD, with the Consultant paying all costs for training (except the student's regular salary and allowances as an AARD employee) and being reimbursed by AID on its monthly vouchers. All overseas training will be limited to Code 941 countries. AARD will select all students, and the training facility with the advice and assistance of the Consultant. USAID will approve the selected participants, nature of the training and cost estimates prior to beginning of travel for the training.
6. Training (In-Country): For short-term training in country, AARD will cooperate with the Agency for Agricultural Education, Training and Extension, of the Department of Agriculture.

DAFTAR PENGADAAN PERALATAN KANTOR

Nomor	Jenis Barang	Jumlah
1.	Meja tulis (1 biro), bahan kayu jati	10 (sepuluh) buah.
2.	Meja tulis ($\frac{1}{2}$ biro), bahan kayu jati	20 (duapuluh) buah.
3.	Kursi staf sandaran tinggi beroda bahan imitasi leer	10 (sepuluh) buah.
4.	Kursi biasa model kursi sidang dengan tangan, kaki besi	30 (tigapuluh) buah.
5.	Lemari buku merk Daiichi 2 pintu	10 (sepuluh) buah.
6.	Rak meja kayu jati ukuran : 120 x 40 x 75 cm.	20 (duapuluh) buah.
7.	Brandkast merk Delica type M.D type 507	2 (dua) buah.
8.	Filling Cabinet merk Daiichi 4 laci	10 (sepuluh) buah.
9.	Zitje Tamu	2 (dua) stel.
10.	Tirai plastik kantor berikut pemasangan	40 (empatpuluh) meter.
11.	White board ukuran: 90 x 120 cm	4 (empat) buah
12.	Planning board (1 unit lengkap, ukuran: 300 x 150 cm.	1 (satu) unit.
13.	AC merk Carrier: $1\frac{1}{2}$ & $2\frac{1}{2}$ pk berikut pemasangan dengan Kartu garansinya	2 (dua) buah.
14.	Ex haustfan merk SANYO 12 inch berikut pemasangan	3 (tiga) buah.
15.	Jam dinding SEIKO Quart dengan tanggal	2 (dua) buah.
16.	Alphone berikut pemasangan	10 (sepuluh) unit.
17.	Pesawat telpon	5 (lima) buah.

TOTAL AND AVERAGE SCORE

Attachment 15.

CRITERIA	I. R. I.		N. V. I.		SECTD		R. V. I.	
	Total	Average	Total	Average	Total	Average	Total	Average
A. General quality and responsiveness of proposal								
1. Does the proposal address in a knowledgeable manner all tasks outlined in RFP? (5 points)	24,5	4,92	21,5	4,32	21	4,2	26	4,33
2. Is the proposal innovative well thought out, applicable to local condition, and does it cover all commodity in questions, very well done etc. These 5 points give evaluator chance to express his overall opinion of the proposal. (5 points)	24,5	4,92	19,5	3,9	22	4,4	26	4,33
B. Qualifications and experience of local term specialists.								
a. Chief of party (6 points)	20,5	3,42	12,3	2,05	11	1,83	29	4,83
b. Administrative specialist (4 points)	10,25	1,71	7,5	1,25	7,5	1,25	17	2,79
c. Specialist (45 points)	136	22,33	111,35	18,56	108,35	18,06	126	21,00

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CRITERIA	I. A. I.		B. V. I.		S2019		R. M. I.	
	Total	Average	Total	Average	Total	Average	Total	Average
C. Approach to project management								
a. The general approach or methodology of the contractor to addressing project requirements (Comprehensiveness applicability, etc.) (10 points)	30	3,33	30	6,5	43	7,17	52	3,66
b. The specific plan proposed by the contractor to achieve the interrelated project objectives (10 points)	44	7,33	54	5,9	35	5,93	50	3,33
D. Home office support capability								
a. Administration (5 points)	26	4,17	22	3,5	20,5	3,17	27,5	4,53
b. Training (5 points)	25	4,17	22	3,33	22	3,66	21,5	3,52
c. Ability to supply short-term personal (5 points)	25	4,17	21	4,5	21,5	3,52	12	3,66
d. Ability to assist in commodity current (5 points)	25	4,17	20,5	3,42	20	3,33	24	4,00
T o t a l (100 points)	302,75	54,12	322,55	54,24	330,25	55,13	421	70,13
		II		IV		III		I

Jakarta, 1 Juni 1961

Tim Prekualifikasi Perusahaan Konsultan.

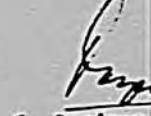

1. Prabowo
Ketua


2. Moehd, Sava-ralla
Sekretaris


3. Subianto
Anggota


4. Paramih Isbagio
Anggota


5. Fandi Cholih
Anggota


6. Sarjono
Anggota.

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INDIVIDUAL MEMBER SCORE

Criteria	I R I							B V I						
	I	II	III	IV	V	VI	To	I	II	III	IV	V	VI	To
A.a	3.5	5	3	5	4	4	24.5	2.5	5	2	5	3	3	20.5
b.	3.5	5	3	5	4	5	24.5	2.5	4	2	5	3	3	19.5
C.a.	2.5	4	3	3.5	4	3.5	22.5	1.5	2.5	1	3	1	3	12.5
b.	1.25	1.5	2	1.5	2	2	10.25	1.5	1.5	1	1	1	1.5	7.5
c.	23	14	19	26.5	23.25	26.25	134	18.35	19	14.5	22	20	12.5	111.35
C.a.	7	10	6	10	8	9	50	5	10	2	10	6	6	39
b.	7	5	5	10	8	9	54	5	8	2	10	6	6	34
D.a.	3	5	4	5	4	5	26	2	5	3	5	3	3	21
b.	3	5	3	5	4	5	25	3	5	4	5	3	3	23
c.	3	5	3	5	4	5	25	3	5	4	3	3	3	21
d.	3	5	3	5	4	5	25	2.5	5	2	5	3	3	20.5
To.	59.75	65.5	54.0	81.5	69.25	79.75	408.75	47.15	66	37.5	74	52	53	327.65
Av.							68.12							54.54
Date							11							14

Note : I - IV : water's symbol.

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Criteria	S E C I D							R M I						
	I	II	III	IV	V	VI	To	I	II	III	IV	V	VI	To
A.a.	3	5	2	5	3	3	21	4	5	4	5	4	4	26
b.	3	4	3	5	3	3	21	4	5	4	5	4	4	26
B.a.	2	2	1.5	2	1.5	2	11	3	4	3	3	4	4	29
b.	2	1.5	1	1	1	1	7.5	3	3	3	3	2.5	2.5	17
e.	18.5	21	14.25	19.75	13.5	16.5	108.25	23.5	23.5	21.5	21	19	18.5	126
C.a.	6	10	5	10	6	6	43	8	10	8	10	3	3	52
b.	6	5	4	10	6	4	35	8	10	8	8	4	8	50
D.a.	2.5	5	3	5	3	2	20.5	4.5	5	4	5	4	5	27.5
b.	3	5	4	5	3	2	22	3.5	5	3	2	4	4	21.5
c.	3.5	5	3	4	3	3	21.5	3	5	3	3	3	5	22
d.	3	5	2	5	3	2	20	4	5	2	3	3	5	24
To	53.35	68.5	42.75	71.75	51	44.5	330.85	70.5	82.5	66.5	72	62.5	68	421
Av.							55.14							70.16
Rate							III							I

Jakarta, 1 Juni 1981

Tim Penyalidikan Perusahaan Konsultan.

1. Prabowo
Ketua

2. Noehd. Soem Kalia
Sekretaris

3. Suhjanto
Anggota

4. Paransih Tabagio
Anggota

5. Fuad Cholikh
Anggota

6. Harjono
Anggota

28/1

DEPARTEMEN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
 (AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT)

- Jln. Ragunan 29--Pasar Minggu
 Jakarta Selatan
 - Jln. Salek 18, Bogor

Telepon : 782202, 782514
 Telex : 44246, 44332
 Kawat : LITTANI JAKARTA

Jakarta, February 24, 1981

Mr. Hurdus
 USAID Jakarta

Dear Mr Hurdus,

The Evaluation Committee of the Applied Agricultural Research Project (AARP) has considered the prequalification submissions of 15 organizations during the last 4 weeks. After careful analysis we have decided to invite 5 organizations to submit technical proposals to assist AARD in the implementation of the project. The proposed five "short - listed" groups are as follows :

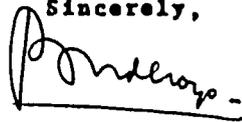
1. SECID (South East Consortium for International Development)
2. Black & Veatch/Frederikson, Kaminsc and Associates
3. IRI Research Institute Inc.
4. RMI (Resources Management International)/Chemonics
5. MASI (Multi Agribusiness System Incorporated + Associated Groups.

We have considered all submissions carefully and believed that the above groups are best suited for the task.

We would like to request USAID's concurrence with the above list so that we can move ahead as scheduled with the contractor selection process.

Thank you.

Sincerely,



Budhoyo Sukotjo

Cc : Kepala Badan Penelitian
 dan Pengembangan Pertanian

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DEPARTEMEN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
 (AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT)

Jln. Ragunan 29 - Pasar Minggu
 Jakarta Selatan

Telepon : 782202, 782214
 782265, 782276
 Faksimil : 782213, 782216

Bogor, June 15 1981

No. : 18/AARP/6/1981

Mr. Alan R. Hurdus

USAID, American Embassy
 Medan Merdeka Selatan 5
J A K A R T A .-

Dear Mr. Hurdus

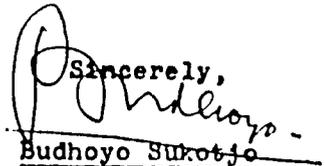
The Applied Agricultural Research Project Evaluation Committee has evaluated the technical proposals submitted by Black & Veatch International (B & V.I.), IRI - Research Institute (IRI), Resources Management International (R.M.I.) and South East Consortium for International Development (SECID) in response to the RFTP of the AARP dated March 1981. After careful consideration of all proposals the Committee has ranked the firms in the following order ;:

(1) R.M.I. (2) I.R.I. (3) SECID (4) B & V.I.

We are attaching the Committee's evaluation summary for your perusal. Please note that the proposal of MASI was received one week after the deadline for proposal submission and was therefore not considered for evaluation.

Based on our evaluation, the AARP would like USAID's concurrence to begin negotiation with RMI for the technical assistance portion of the Project. Should negotiations with RMI break down, we would then open up negotiations with IRI.

Thank you.

Sincerely,

Budhoyo Sukotjo

Project Leader AARP

Cc. :
 Kepala Badan Penelitian dan
 Pengembangan Pertanian.

Bd/Ed.-



UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
AMERICAN EMBASSY
Jakarta, Indonesia

Letter No. *E/697*

MAR 6 - 1981

Mr. Budhoyo Sukotjo
c/o Balai Penelitian Bogor
Jl. Taman Kencana No. 1
Bogor

Dear Mr. Budhoyo:

This is in response to your letter of 24 February concerning the selection of "shortlisted" firms for submission of proposals for the provision of technical assistance and other services for the Applied Agricultural Research Project.

USAID concurs with AARD's selection of SECID (South East Consortium for International Development), Black and Veatch/Frederikson, Kamine and Associates, IRI Research Institute Inc., RMI (Resources Management International)/Chemonics, and MASI (Multinational Agribusiness Systems Inc)/and associated universities.

We look forward to taking part in the upcoming pre-proposal conference.

Sincerely,

Alan R. Hurdus

Alan R. Hurdus
Agronomy Advisor (Research)



UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

Attachment 19

AMERICAN EMBASSY
JAKARTA, INDONESIA

Letter No. II/1726

JUN 18 1981

Mr. Budhoyo Sukotjo
Head
Applied Crop Research
c/o Balai Penelitian Bogor
Jl. Taman Kencana No. 1
Bogor

Dear Mr. Budhoyo:

This is in response to your letter of 15 June, 1981 concerning the selection of Resources Management International, Inc (RMI) for contract negotiation for the provision of technical assistance and other services for the Applied Agricultural Research Project (497-0302).

USAID concurs with AARD's selection of RMI for contract negotiation and with the selection of IRI Research Institute, Inc. as a back-up in case negotiations with RMI fail.

With kind personal regards.

Sincerely,

A handwritten signature in cursive script, reading 'Alan R. Hurdus', is written over the typed name.

Alan R. Hurdus
Agronomy Advisor (Research)

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DEPARTEMEN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
JALAN RAGUNAN 29 PASAR MINGGU
JAKARTA

Attachment 20

SURAT KEPUTUSAN
KEPALA BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN

Nomor : 24 - TL10/1981

Tentang

Pembentukan Team Negosiasi dengan Perusahaan Konsultan
Terpilih Resources Management International INC

KEPALA BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN,

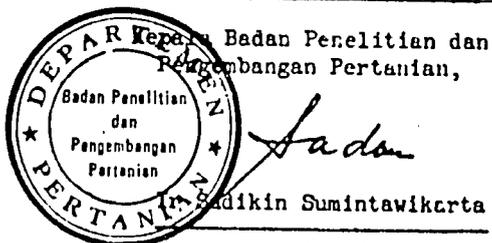
- Menimbang** : bahwa dengan terpilihnya perusahaan konsultan Resources Management International Inc. sebagai pengelola bantuan teknik dalam rangka kegiatan Proyek Penelitian dan Pengembangan Pertanian RI - USAID, dipandang perlu untuk membentuk Team Negosiasi dengan perusahaan konsultan tersebut.
- Mengingat** : 1. Keputusan Presiden RI No. 44 dan 45 tahun 1974 ;
2. Keputusan Presiden RI No. 47 tahun 1979 ;
3. Keputusan Presiden RI No. 14 A tahun 1980 ;
4. Surat Keputusan Menteri Pertanian No. 453/Kpts/Org/6/1980 ;
5. Surat Keputusan Kepala Badan Penelitian dan Pengembangan Pertanian No. 10 - AL7/1981.
- M E M U T U S K A N**
- Menetapkan** :
PERTAMA : Menunjuk dan mengangkat anggota team negosiasi dengan perusahaan konsultan yang terpilih Resources Management Inc untuk mengelola bantuan teknik dalam rangka kegiatan Proyek Penelitian dan Pengembangan Pertanian RI - USAID yang selanjutnya disebut Team Negosiasi dengan susunan keanggotaan seperti yang tercantum dalam lampiran surat keputusan ini.
- KEDUA** : Team Negosiasi bertugas untuk bersama-sama dengan Pimpinan Proyek Penelitian dan Pengembangan Pertanian RI - USAID mengadakan negosiasi dalam rangka membuat kontrak kerjasama dengan perusahaan konsultan Resources Management International Inc.
- KETIGA** : Dalam melaksanakan tugas tersebut pada diktum KEDUA, Team Negosiasi harus mentaati pedoman dan ketentuan yang ditetapkan dalam Keputusan Presiden RI No. 14 A tahun 1980 dan Persetujuan Proyek antara Pemerintah RI dengan USA dalam Applied Agriculture Research Project (497 - 0302).
- KEEMPAT** : Masa kerja Team Negosiasi berakhir dengan ditanda tangani kontrak kerjasama dengan perusahaan konsultan Resources Management International Inc.
- KELIMA** : Segala biaya yang diperlukan dalam rangka pelaksanaan tugas Team Negosiasi dibebankan pada anggaran Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID.

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KEENAM : Surat Keputusan ini berlaku surut sejak tanggal 5 Juli 1981 dengan ketentuan segala sesuatunya akan diadakan perbaikan seperlunya bila-mana dikemudian hari terdapat kekeliruan.

Ditetapkan di : Jakarta

Pada tanggal : 15 Juli 1981



NIP. 080026199

SALINAN Surat Keputusan ini disampaikan kepada Yth. :

1. Menteri Keuangan ;
2. Menteri Pertanian ;
3. Ketua Badan Pemeriksa Keuangan ;
4. Direktur Jenderal Pengawasan Keuangan Negara, Departemen Keuangan ;
5. Direktur Jenderal Anggaran Departemen Keuangan ;
6. Sekretaris Jenderal Departemen Pertanian ;
7. Inspektur Jenderal Departemen Pertanian ;
8. Kepala Biro Keuangan Departemen Pertanian ;
9. Kepala Biro Perencanaan Departemen Pertanian ;
10. Kepala Kantor Perbendaharaan Negara di Jakarta ;
11. Sekretaris Badan dan Para Kepala Pusat lingkup Badan Penelitian dan Pengembangan Pertanian ;
12. Pimpinan Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID ;
13. Yang bersangkutan untuk diketahui dan diindahkan.

LAMPIRAN : Surat Keputusan Kepala Badan Penelitian dan Pengembangan Pertanian

Nomor : 24 - TL10/1981

Tanggal : 15 Juli 1981

Susunan Team Negoosiasi Dengan Perusahaan Konsultan
Terpilih dalam Rangka Proyek Penelitian dan
Pengembangan Pertanian Bantuan USAID

No.	N a m e	Jabatan dan Instansi	Tugas dalam Team
1.	Dr Prabowo Tjitropranoto, MSc	Kepala Pusat Perpustakaan Biologi dan Pertanian	Ketua, merangkap anggota
2.	Ir Paransih Isbagyo	Kepala Bidang Tata Kerjasama Luar Negeri, Pusat Penyiapan Program Penelitian Pertanian	Sekretaris, merangkap anggota
3.	Fuad Cholik, MSc	Staf Pusat Penelitian dan Pengembangan Perikanan	A n g g o t a
4.	I. Nyoman Arde, MSc	Staf Biro Perencanaan Departemen Pertanian	A n g g o t a
5.	Dra Hinu	Staf Biro Kerjasama Ekonomi Luar Negeri Bappenas	A n g g o t a

Ditetapkan di : Jakarta

Pada tanggal : 15 Juli 1981



Kepala Badan Penelitian dan Pengembangan Pertanian,

Soedjatin Sumintawikarta

NIP. 080026199

Daftar Nama Peserta
Lokakarya Metodologi Penelitian Agro Ekonomi

Attachment 21

Nomor Urut	N a m a C a l o n	Alamat dan Instansi Tempat Bekerja	Pendidikan dan Keahlian
1.	Ir Suprijadi T.	Balai Penelitian Tanaman Industri (BPTI) Jl. Industri Timur 36, Malang	Fakultas Pertanian Univ. Brawijaya; Sosial Ekonomi, 1980.
2.	Ir Ny. Sukoadi W.	Balai Penelitian Tanaman Industri (BPTI) Jl. Industri Timur 36, Malang	Fakultas Pertanian Univ. Gadjah Mada; Sosial Ekonomi; 1975
3.	Teger Basuki B.Sc.	Balai Penelitian Tanaman Industri (BPTI) Jl. Industri Timur 36, Malang	Fakultas Pertanian Univ. Brawijaya; Sosial Ekonomi; 1978
4.	Ir Moorginayuwati, GM	Balai Penelitian Tanaman Pangan (BPTP) Jl. May. Jen. Sutoyo No. 1134 A, Kotak Pos 1, Banjarmasin	Fakultas Pertanian Univ. Lambung Mangkurat; Sosial Ekonomi; 1980
5.	Ir Danu Ismadi Saderi	Balai Penelitian Tanaman Pangan (BPTP) Jl. May. Jen. Sutoyo No. 1134 A, Kotak Pos 1, Banjarmasin	Fakultas Pertanian Institut Pertanian Bogor; Ekonomi Pertanian 1981
6.	Ir Sabarman D.	Balai Penelitian Tanaman Industri (BPTI), Jl. Flamboyan 10 A, Manado - Sulawesi Utara	Fakultas Pertanian Universitas Sumatera Utara; Ekonomi Pertanian; 1981
7.	Ir Mustapa Djafar	Balai Penelitian Tanaman Industri (BPTI), Jl. Flamboyan 10 A, Manado - Sulawesi Utara	Fakultas Pertanian Universitas Sam Ratulangi; Ekonomi Pertanian; 1981
8.	Sientje R. Sigarlaki B.Sc.	Balai Penelitian Tanaman Industri (BPTI), Jl. Flamboyan 10 A, Manado - Sulawesi Utara	Fakultas Pertanian Universitas Sam Ratulangi; Ekonomi Pertanian; 1978
9.	Ir Adhi Santika, MS.	Balai Penelitian Tanaman Pangan (BPTP) Lembang, Bandung	Fakultas Pertanian Universitas Padjadjaran; SPS - IPB; Sosial Ekonomi; 1978, 1981.

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No Urut	Nama Calon	Alamat dan Instansi Tempat Bekerja	Pendidikan dan Keahlian
10	B u h a r m a n B.	Balai Penelitian Tanaman Pangan (BPTP) Sukarani, Bandar Buat PO Box 34 Padang	Fakultas Pertanian Universitas Andalas; Sosial Ekonomi; 1977.
11.	Ir Nasrul Hosen	Balai Penelitian Tanaman Pangan (BPTP) Sukarani, Bandar Buat PO Box 34 Padang	Fakultas Pertanian Universitas Andalas; Agro Ekonomi; 1980.
12.	Ir Trisulo Wahjudi	Balai Penelitian Tanaman Pangan (BPTP) Jl. Wilis 10 Malang, Jawa Timur	Fakultas Pertanian Universitas Brawijaya; Sosial Ekonomi
13.	Ir Ali Susmiadi	Balai Penyelidikan Perusahaan Perkebunan Gula (BP3G) Jl. Pahlawan No.25 Pasuruan, Jawa Timur	Fakultas Pertanian Institut Pertanian Bogor Sosial Ekonomi; 1979.
14.	Ir Atang Sumantri	Balai Penyelidikan Perusahaan Perkebunan Gula (BP3G) Jl. Pahlawan No.25 Pasuruan, Jawa Timur	Fakultas Pertanian Universitas 1979.
15.	Ir Nahdodin	Balai Penyelidikan Perusahaan Perkebunan Gula (BP3G) Jl. Pahlawan No.25 Pasuruan Jawa Timur	Fakultas Pertanian Universitas Gajah Mada; Sosial Ekonomi; 1979.
16.	Drs Rusman Amin	Balai Penelitian Tanaman Pangan, Maros, Ujung Pandang, Sulawesi Selatan.	Sarjana Ekonomi Umum
17.	Ir Achmad Djauhari	Pusat Penelitian Agro Ekonomi Jl. Ir. H. Juanda 20, Bogor	Fakultas Pertanian Universitas Negeri Jember; Sosial Ekonomi; 1981.

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Nomor Urut	Nama Calon	Jabatan dan Instansi Tempat Bekerja	Pendidikan dan Keahlian
18.	Ir Rud. S. Rivai	Pusat Penelitian Agro Ekonomi Jl. Raya i. Juanda 11, Bogor	Fakultas Pertanian Universi Pajajaran; Ilmu Tanah; 1981
19.	Richard Lungan	Pusat Pengolahan Data dan Statistik, Badan Penelitian dan Pengembangan Pertanian Jl. Ragunan no.29, Pasar Minggu	
20	J.T. Jithono BSc.	Balai Penelitian Tanaman Pangan Tanjung Karang, Jl. Gajah Mada no. 87. P.O.Box 72, Tanjungkarang	

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JADWAL LOKAKARYA
METODOLOGI PENELITIAN ASRO EKONOMI

Hari/ Session	No. Mata ajaran	M a t e r i	Pengajar/ Pembimbing
(1)	(2)	(3)	(4)
Senin, 28-9-1981			
I	-	MINGGU I P e m b u k a a n	Ka Badan Litbang
II	101	Latar Belakang diselenggarakannya lokakarya	Dr. S. Baharsjah
III	102	Kedudukan bagian Sosek dan peranan Puslit Agro Ekonomi dalam organisasi Badan Litbang	Ir. S. Tjakrawordaja
Selasa, 29-9-1981			
I	103	Masalah Penduduk dan Pangan di Indonesia	Prof.Dr.Ir.I.G.B.Teken
II	103	Masalah Penduduk dan Pangan di Indonesia	Prof.Dr.Ir.I.G.B.Teken
III	105	Konsep saling hubungan Biologist dan Ekonomist dalam penelitian pertanian.	Dr. H. Nataatmadja
Rabu, 30-9-1981			
I	104	Sumbangan Sektor pertanian dalam perekonomian Indonesia	Dr. R. S. Sinaga
II	104	Sumbangan Sektor pertanian dalam perekonomian Indonesia	Dr. R. S. Sinaga
III	201	Teori Ekonomi dan penerapannya dalam penelitian pertanian	Dr. I. Soejono
Kamis, 31-9-1981			
I	201	Teori Ekonomi dan penerapannya dalam penelitian pertanian	Dr. I. Soejono
II	201	Teori Ekonomi dan penerapannya dalam penelitian pertanian	Dr. I. Soejono
III	203	Statistike Terapan dalam penelitian pertanian	Prof. A. Anwar
Jum'at, 2-10-1981			
I	201	Statistika Terapan dalam Penelitian pertanian	Dr. I. Soejono
II	203	Statistika Terapan dalam penelitian pertanian	Prof. A. Anwar
III	203	Statistika Terapan dalam penelitian pertanian	Prof. A. Anwar

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(1)	(2)	(3)	(4)
Sabtu, 3-10-1981			
-	-	Quiz I 103, 104, 105	S t a f .
Senin, 5-10-1981		MINGGU II	
I	202	Tataniaga Pertanian	Drs. Z. Azaino, M.Sc.
II	202	Tataniaga Pertanian	Drs. Z. Azaino, M.Sc.
III	204	Metoda Penarikan Contoh dalam Penelitian Pertanian	Dr. Barizi
Selasa, 6-10-1981			
I	204	Metoda Penarikan Contoh dalam Penelitian Pertanian	Dr. Barizi
II	204	Metoda Penarikan Contoh dalam Penelitian Pertanian	Dr. Barizi
III	401	Orientasi latihan lapangan I	Ir. A. H. Taryoto, MS.
Rabu, 7-10-1981			
-	-	Ke lapangan (pedesaan)	S t a f .
Kamis, 8-10-1981		L i b u r	---
Jum'at, 9-10-1981			
I	312	Proses perencanaan penelitian Badan Litbang Pertanian	Dr. I. Manwan
II	311	Konsep dasar perencanaan penelitian	Ir. A. H. Taryoto, MS.
III	313	Pendekatan "farming system" dalam perencanaan penelitian agro ekonomi	Ir. A. Suryana, MS.
Sabtu, 10-10-1981			
-	-	Quiz II 201, 202	S t a f
Senin, 12-10-1981		MINGGU III	
I	332	Pemilihan lokasi penelitian dan pengumpulan data dasar	Ir. A. H. Taryoto, MS.
II	332	Pemilihan lokasi penelitian dan pengumpulan data dasar	Ir. A. H. Taryono, MS.
III	331	Perencana Proposal	Ir. Hermanto
Selasa, 13-10-1981			
I	331	Perencana Proposal	Ir. Hermanto
II	321	Penetapan Parameter-parameter dalam penelitian agro ekonomi	Ir. A. Suryana, MS.
III	321	Penetapan Parameter-parameter dalam penelitian agro ekonomi	Ir. A. Suryana, MS.

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(1)	(2)	(3)	(4)
Rabu, 14-10-1981			
I	323	Analisa Investasi Proyek	Ir. Kuntjoro
II	323	Analisa Investasi Proyek	Ir. Kuntjoro
III	321	Analisa Investasi Proyek	Ir. A. Suryana, MS
Kamis, 15-10-1981			
I	325	Analisa resiko pengambilan keputusan	Ir. A. H. Taryoto, MS.
II	325	Analisa resiko pengambilan keputusan	Ir. A. H. Taryoto, MS.
III	323	Analisa resiko pengambilan keputusan	Ir. Kuntjoro
Jun'at, 16-10-1981	-	Work sessions pembuatan proposal	S t a f.
Sabtu, 17-10-1981	-	Quiz III 203, 204	S t a f.
Senin, 19-10-1981		MINGGU IV	
I	-	Quiz IV 321, 323	S t a f.
II	325	Quiz IV 321, 323	Ir. A. H. Taryoto, MS.
III	322	Penetapan parameter dalam penelitian agro ekonomi	Ir. A. Suryana, MS.
Selasa, 20-10-1981			
I	322	Penetapan parameter dalam penelitian agro ekonomi	Ir. A. Suryana, MS.
II	322	Penetapan parameter dalam penelitian agro ekonomi	Ir. A. Suryana, MS.
III	326	Evaluasi Kelayakan teknologi I	Ir. T. Sudaryanto, MS.
Rabu, 21-10-1981			
I	326	Evaluasi Kelayakan teknologi I	Ir. T. Sudaryanto, MS.
II	333	Perencanaan kuesioner	Ir. A. Suryana, MS.
III	333	Perencanaan kuesioner	Ir. A. Suryana, MS.
Kamis, 22-10-1981		Work session pembuatan kuesioner	S t a f

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(1)	(2)	(3)	(4)
Jum'at, 23-10-1981	-	Work sessions pembuatan kuesioner	S t a f
Sabtu, 26-10-1981	-	Quiz V. 325, 322	S t a f.
Senin, 26-10-1981		MINGGU V	
I	327	Evaluasi kelayakan teknologi II	Ir. T. Sudaryanto, MS.
II	327	Evaluasi kelayakan teknologi II	Ir. T. Sudaryanto, MS.
III	324	Analisa ekonometrik sederhana	Ir. A. Pakpahan, MS.
Selasa, 27-10-1981			
I	324	Analisa ekonometrik sederhana	Ir. A. Pakpahan, MS.
II	324	Analisa ekonometrik sederhana	Ir. A. Pakpahan, MS.
III	328	Analisa dan penyajian tabulasi	Ir. T. Sudaryanto, MS.
Rabu, 28-10-1981			
I	328	Analisa dan penyajian tabulasi	Ir. T. Sudaryanto, MS.
II	324	Analisa dan penyajian tabulasi	Ir. T. Sudaryanto, MS.
III	324	Analisa dan penyajian tabulasi	Ir. T. Sudaryanto, MS.
Kamis, 29-10-1981			
I	-	L i b u r	
Jum'at, 30-10-1981			
I	401	Orientasi latihan lapangan II	Ir. T. Hanafiah, MA.
II	334	Pelaporan Hasil Penelitian	Ir. Hermanto
III	334	Pelaporan Hasil Penelitian	Ir. Hermanto
Sabtu, 31-10-1981			
I	-	Quiz VI 324, 328	
II		Orientasi Latihan Lapangan III	Ir. A. H. Taryoto, MS.
Senin, 2-11-1981 s/d		MINGGU VI	
Jum'at, 6-11-1981		di lapang	S t a f.
Sabtu, 7-11-1981		Work sessions pengolahan data	S t a f.
Senin, 9-11-1981		MINGGU VII	
		Work sessions pengolahan data	S t a f.
Selasa, 10-11-1981 s/d			
Kamis, 12-11-1981		Work sessions penulisan laporan	S t a f.
Jum'at 13-11-1981		Work sessions: Seminar hasil lapangan	S t a f.
Sabtu, 14-11-1981		Penutupan	

DEPARTEMEN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN

Jalan Ragunan 29
 Pasar Minggu
 Jakarta Selatan

Telepon: 782202 (4 saluran)
 Kawat : LITTANI JAKARTA

Nomor : 140/AARP/RE /81.

Jakarta, 7 Oktober 1981

Lampiran : 1 (satu) berkas.

Perihal : Laporan bulanan Proyek
 Penelitian dan Pengem-
 bangan Pertanian
 Bantuan USAID Bulan :
 September 1981
 Tahun Anggaran 1981/82.

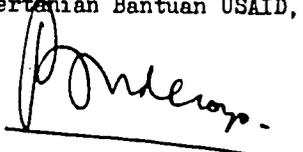
Kepada Yth.:

1. Sdr. Sekretaris Jenderal
 Departemen Pertanian
2. Sdr. Inspektur Jenderal
 Departemen Pertanian
3. Sdr. Kepala Badan Penelitian
 dan Pengembangan Pertanian
4. Sdr. Gubernur DKI Jaya oq.
 Ketua Bappeda
5. Sdr. Kepala Kantor Wilayah
 Departemen Pertanian DKI Jaya
6. Sdr. Kepala Pusat Penyiapan
 Program Penelitian Pertanian

Bersama ini disampaikan dengan hormat Laporan Bulanan Perkembangan
 Proyek Penelitian dan Pengembangan Pertanian Bantuan USAID (m.a.: 15.2.
 02.375557.18.06.01) Tahun 1981/1982 bulan September 1981.

Demikian untuk diketahui dan dapat dipergunakan seperlunya.

Pemimpin Proyek
 Penelitian dan Pengembangan
 Pertanian Bantuan USAID,


 Ir. Budhoyo Sukotjo

NIP. 080013777

LAPORAN KEMAJUAN PELAKSANAAN PEMBANGUNAN LIMA TAHUN KE III
1980/1981 - 1983/1984

I. DATA UMUM

1. Laporan bulanan/tahunan : September 1981
2. Nama Program : Penelitian Pertanian dan Pengairan
3. Nama Proyek : Penelitian dan Pengembangan Pertanian Bantuan USAID.
4. No. Kode Proyek : 15.2.02.375557.18.08.01
5. Lokasi Proyek : Jakarta; Bogor; Kalimantan Selatan; Sulawesi Selatan; Sulawesi Utara; Kalimantan Tengah; Kalimantan Barat; Kalimantan Timur; Maluku; NT
6. Instansi Pelaksana : Badan Penelitian dan Pengembangan Pertanian.
7. Pemimpin Proyek : Ir. Budhoyo Sukotjo.
8. Alamat lengkap : Jalan Ragunan No.29 Pasar Minggu.
9. Jumlah Anggaran dalam DIP : Rp. 1.200.000.000,--
10. Bantuan Luar Negeri : US \$ 1.477.000 (Rp. 923.125.000)
11. Posisi Keuangan :
 - a. Dana Dalam DIP : Rp. 1.200.000.000,--
 - b. SPMU yang diterima s/d bulan laporan : Rp. 161.307.152,--
 - c. SPJP yang dikirim s/d bulan laporan : Rp. 123.068.927,--
 - d. Sisa dana DIP s/d bulan laporan : Rp. 1.038.692.848,--
 - e. Saldo Bank Akhir bulan ini : Rp. 26.808.210,-- *)
 - f. Saldo Kas akhir bulan ini : Rp. 337.665,--
 - g. Saldo Persekot s/d bulan ini : Rp. 11.092.350,--

*) Termasuk SPM Nihil Rp. 18.120.000,--

II. DATA KEGIATAN FISIK

12. Kemajuan Pelaksanaan Fisik menurut jenis pekerjaan tolok ukur.

No.	TOLOK UKUR	Target Satu tahun		Target s/d bulan ini		Realisasi s/d bulan ini	
		Vol. Fisik	Bobot (%)	Fisik (%)	Ttb. (%)	Fisik (%)	Ttb. (%)
I.	OPERASIONAL PROYEK						
	1. Perencanaan Proyek Perjalanan Dinas Konstruksi - Perencanaan Bcgor	974 Hok	2.07	49,21	1,02	37,42	0,77
	- fase I	macam2	4.43	5,00	0,22	7,00	0,31
	- Topografi, dll.	macam2	8.23	27,00	2,22	0,00	0,00
	Lain-lain - Biaya rapat, dll.	macam2	0,20	50,00	0,10	21,86	0,04
	2. Pembinaan Tenaga Lain2 Latihan Met. Agro Ekon.	40 Hok	2.33	100,00	2,33	40,00	0,94
	3. Pembinaan Program Perjalanan dinas Ratek di NTT & Ambon	240 Hok	1.25	50,00	0,62	0,00	0,00
	Lain2 Ratek di NPT & Ambon	macam2	1.25	50,00	0,63	0,00	0,00
	JUMLAH I =	macam2	19.76		7.14		2.06
II.	PENGADAAN SARANA						
	1. Tanah, 17 lokasi	1360 ha	25.98	55,00	14,29	45,00	11,69
	2. Peralatan Kantor	macam2	1.56	100,00	1,56	79,88	1,25
	3. Kendaraan	2 buah	1.22	100,00	1,22	0,00	0,00
	4. Konstruksi (USAID: 40%)	macam2	41.80	0,00	0,00	0,00	0,00
	JUMLAH II =	macam2	70.56		17,07		12,94
III.	PEMBINAAN ADMINISTRASI PROYEK						
	1. Gaji dan Upah	840 bok +					
		macam2	2.74	42,94	1,17	41,79	1,15
	2. B a h a n	macam2	0,40	50,00	0,20	49,83	0,20
	3. Perjalanan Dinas	1344 Hok	2.45	50,00	1,23	18,99	0,46
	4. Lain2 : - Expl. Kendaraan	48 bbk	0,49	50,00	0,24	28,69	0,14
	- Laporan & Sekretariat	macam2	0,65	50,00	0,33	33,81	0,22
	- Local Cost TA	macam2	1.75	56,00	0,98	0,00	0,00
	- Pengangkutan Kenda- raan	24 buah	1.20	64,00	0,77	0,00	0,00
	JUMLAH III =	macam2	9.63		4.92		2.17
	JUMLAH I II III	macam2	100,00		29,13		17,17

Ttb = tertimbang

H ok = hari orang kerja

Bok = bulan orang kerja

bbk = bulan buah kendaraan

1, 2, 3, 4 dan 5 lihat masalah

7/98

III. LAPORAN KEMAJUAN KEUANGAN

13. Kemajuan Pelaksanaan Keuangan menurut jenis pekerjaan tolok ukur.

No.	TOLOK UKUR	Target Satu tahun		Target s/d bulan ini		Realisasi s/d bulan ini	
		Anggaran (Ribuan)	Bobot (%)	Keuang an (%)	Ttb. (%)	Keuang an (%)	Ttb. (%)
I.	OPERASIONAL PROYEK						
	1. Perencanaan Proyek						
	Perjalanan Dinas	24.830	2.07	49,21	1,02	37,42	0,77
	Konstruksi - Perencanaan						
	Bogor Fase I	53.124	4.43	0,00	0,00	0,00	0,00
	- Topografi, dll.	98.720	8.23	57,80	4,46	0,00	0,00
	Lain2 - Biaya Rapat, dll.	2.400	0.20	50,00	0,10	21,86	0,04
	2. Pembinaan Tenaga						
	Lain2 - Latihan Met. Agro						
	Ekon.	28.000	2.33	100,00	2,33	20,00	0,47
	3. Pembinaan Program						
	Perjalanan Dinas Ratek						
	di NTT & Ambon	15.000	1.25	50,00	0,62	0,00	0,00
	Lain2 Ratek NTT & Ambon	15.000	1.25	50,00	0,63	0,00	0,00
	JUMLAH I =	237.074	19.76		9,16		1,28
II.	PENGADAAN SARANA						
	1. Tanah, 17 lokasi	311.750	25.98	30,39	7,89	21,35	5,55
	2. Peralatan Kantor	18.765	1.56	100,00	1,56	79,88	1,25
	3. Kendaraan	14.600	1.22	100,00	1,22	0,00	0,00
	4. Konstruksi	501.541	41.80	0,00	0,00	0,00	0,00
	BANTUAN USAID	(334.360)					
	JUMLAH II =	846.656 (334.360)	70.56		10,67		6,80
III.	PEMBINAAN ADMINISTRASI PROYEK						
	1. Gaji dan Upah	33.060	2.74	42,74	1,17	41,79	1,15
	2. B a h a n	4.800	0.40	50,00	0,20	49,83	0,20
	3. Perjalanan Dinas	29.360	2.45	50,00	1,23	18,99	0,46
	4. Lain2 - Expl. Kendaraan	5.850	0.49	50,00	0,24	28,69	0,14
	- Laporan & Sekretariat	7.800	0.65	50,00	0,33	33,81	0,22
	- Local Cost TA	21.000	1.75	100,00	1,75	0,00	0,00
	- Pengangkutan Kendaraan	14.400	1.200	100,00	1,20	0,00	0,00
	JUMLAH III =	116.270	9.68		6,12		2,17
	JUMLAH I + II + III	1.200.000 (334.360)	100.00		25,95		10,25

IV. MASALAH - MASAJAH :

14. Masalah-masalah yang menghambat pelaksanaan :

- 1) Menunggu penyelesaian perencanaan design menyeluruh untuk BPTP Bogor yang diperkirakan selesai akhir tahun 1981.
- 2) Ratek di NTT ditunda sampai bulan Februari 1982 setelah Rapim Departemen Pertanian.
- 3) Peralatan mesin kantor dan kendaraan diselesaikan sesuai dengan Keppres No.10 Tahun 1980, sampai saat ini belum datang.
- 4) Tenaga ahli belum datang.
- 5) Kendaraan belum diterima.

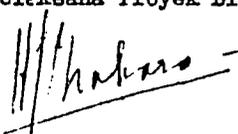
15. Usul pemecahan masalah dan tindak lanjut yang diperlukan :

- 1) Mempercepat penyelesaian Surat Perintah Kerja (Supplement Perjanjian Induk) dengan Konsultan Perencana.
- 3) Untuk mempercepat pengadaan peralatan ini telah dibuat surat No.62/-AARP/Pr/81 tanggal 25 Juni 1981.
- 4) Kontrak Negosiasi dengan Konsultan Terpilih (RMI) direncanakan akhir Oktober 1981.

V. PELAKSANAAN PENGISIAN FORMULIR

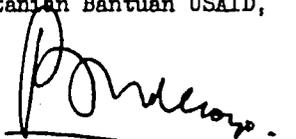
Diisi oleh : Ir. Hafni Zahara. (NIP.: 080016516)

Jabatan : Peleksana Proyek Bidang Evaluasi dan Pelaporan.

Tanda tangan : 

Tanggal : 6 Oktober 1981.

Pemimpin Proyek
Penelitian dan Pengembangan
Pertanian Bantuan USAID,



Ir. Budhoyo Sukotjo

NIP. 080013777

Rencana biaya Proyek AARP DIP Tahun Anggaran 1981/1982
serta Realisasi Keuangan dan Fisik
sampai bulan September 1981

No.	I N P U T S	Biaya (ribuan rupiah)	Realisasi		Realisasi Fisik (%)
			Biaya	%	
I.	OPERASIONAL PROYEK				
	1. Perencanaan Proyek Perjalanan Dinas	24.830	9.291.550	37,42	37,42
	Konstruksi - Perencanaan Bogor Fase I	53.124	-	0,00	7,00
	- Topografi, dan lain-lain	98.720	-	0,00	0,00
	Lain-lain - Biaya Rapat, dan lain-lain	2.400	524.700	21,86	21,86
	2. Pembinaan Tenaga Lain-lain - Latihan Met. Agro Ekon.	28.000	5.600.000	20,00	40,00
	3. Pembinaan Program Perjalanan Dinas Ratek di NTT & Ambon	15.000	-	0,00	0,00
	Lain-lain Ratek NTT & Ambon	15.000	-	0,00	0,00
	JUMLAH I =	237.074	15.416.250		
II.	PENGADAAN SARANA				
	1. Tanah, 17 lokasi	311.750	66.560.152	21,35	45,00
	2. Peralatan Kantor	18.765	14.990.000	79,88	79,88
	3. Kendaraan	14.600	-	0,00	0,00
	4. Konstruksi	501,541	-	0,00	0,00
	BANTUAN USAID (334.360)	(334.360)			
	JUMLAH II =	846.656 (334.360)	81.550.152		
III.	PEMBINAAN ADMINISTRASI PROYEK				
	1. Gaji dan Upah	33.060	13.817.650	41,79	41,79
	2. B a h a n	4.800	2.392.250	49,83	49,83
	3. Perjalanan Dinas	29.360	5.576.800	18,99	18,99
	4. Lain-lain - Expl. Kendaraan	5.850	1.678.475	28,69	28,69
	- Laporan & Sekretariat	7.800	2.637.350	33,81	33,81
	- Local Cost TA	21.000	-	0,00	0,00
	- Pengangkutan Kendaraan	14.400	-	0,00	0,00
	JUMLAH III =	116.270	26.102.525		
	JUMLAH I + II + III	1.200.000 (334.360)	123.068.927		