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AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT  
MINISTRY OF AGRICULTURE

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

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# APPLIED AGRICULTURAL RESEARCH PROJECT

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### ATTACHMENT :

1. Organizational Structure for Project Implementation Unit ( PIU ) of AARP.
2. Location of Research Facilities for AAPP by Groups.
3. Location of Research Facilities for AARP.
4. Masterplan for Administrative Staffing for AARP.
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6. Phases of Construction for AARP.
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8. Technical Assistance Program for AARP.
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10. Detailed Vehicle Procurement Plan for AARP.
11. Vehicle Procurement by USAID and GOI.
12. Steps in Vehicle Procurement Through USAID.
13. Short Term Training for AAPP.
14. Projected AARP Disbursement Schedule.
15. Development Implementation Schedule for AARP.

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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 AARD 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.

### Assignment of Consultant Personnel

Fifty two and a half man years of long term and 24 man months of short term technical assistance is planned under the proposed \$ 6.5 million grant. The IPC re-checked technical assistance requirements with the directors or the representatives of each of the institutes involved. The IPC also requested and received prioritized listings of the disciplines required.

The attached Detailed Technical Assistance Plan (Attachment 8) sets forth an activity schedule for the selection of the prime consultant group which will act on AARD's behalf in the procurement of most technical assistance. The plan also schedules the assignment of consultant personnel by location and discipline over the life of the project. This schedule is based on the availability of counterparts and the construction of research facilities and housing.

### Procurement Schedule

Project inputs include some \$ 8.2 million for laboratory, field and miscellaneous information equipment and vehicles. The IPC has prepared two detailed plans, one for the procurement of equipment (Attachment 9), and the other for vehicle procurement (Attachment 10). We have separated the two plans because vehicles will be purchased locally while the pre-

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.

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 (497-0263), 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 NAR II. This facility will be constructed under NAR 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

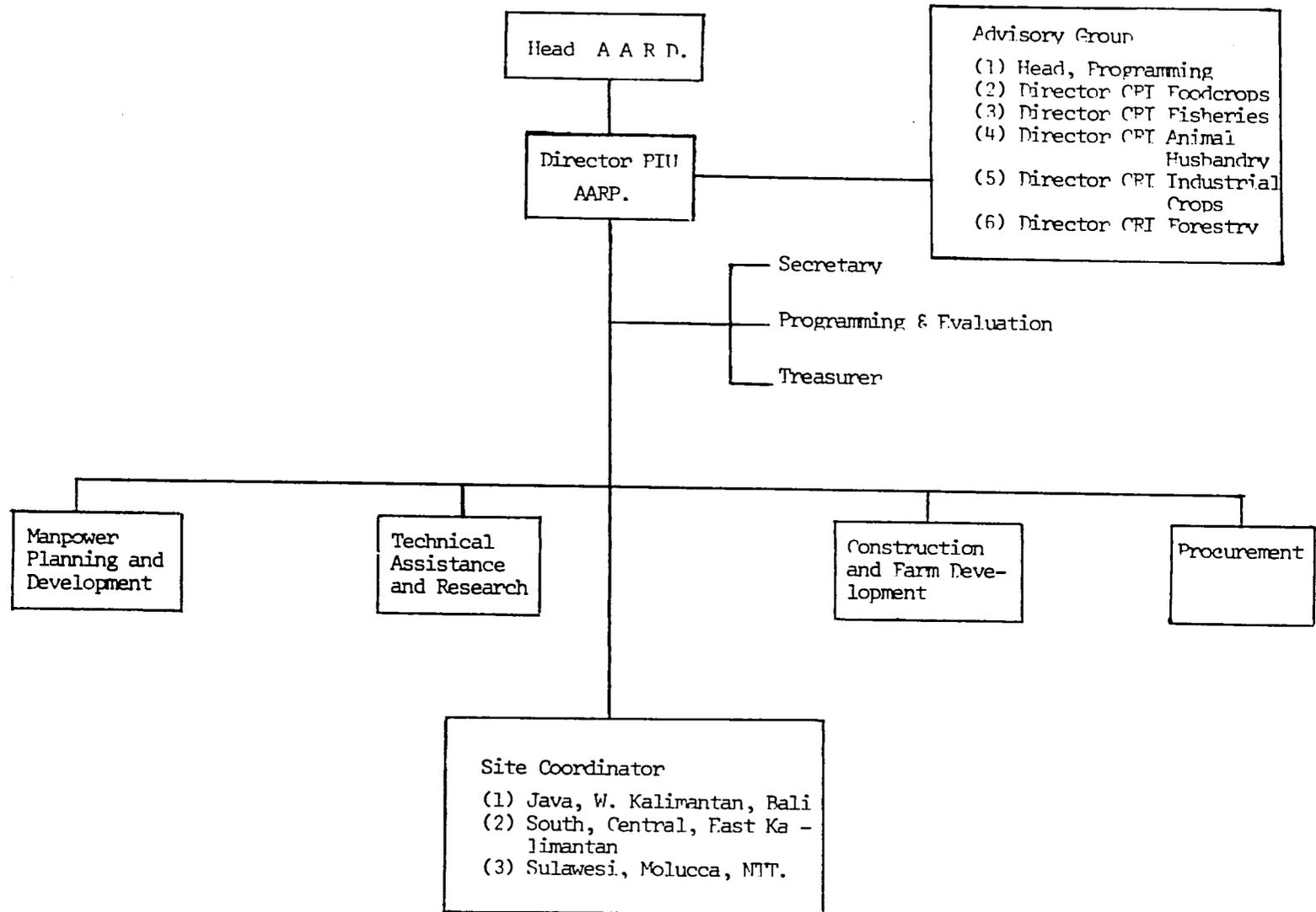
The AARP disbursement schedule (Attachment 14), based on all the information contained in this detailed implementation plan, is the best projection to date of the phasing of project expenditures. We have tailored this schedule to the Indonesia fiscal year, which runs from April through March. The disbursement 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



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LOCATION OF RESEARCH FACILITIES FOR AARP  
BY GROUPS

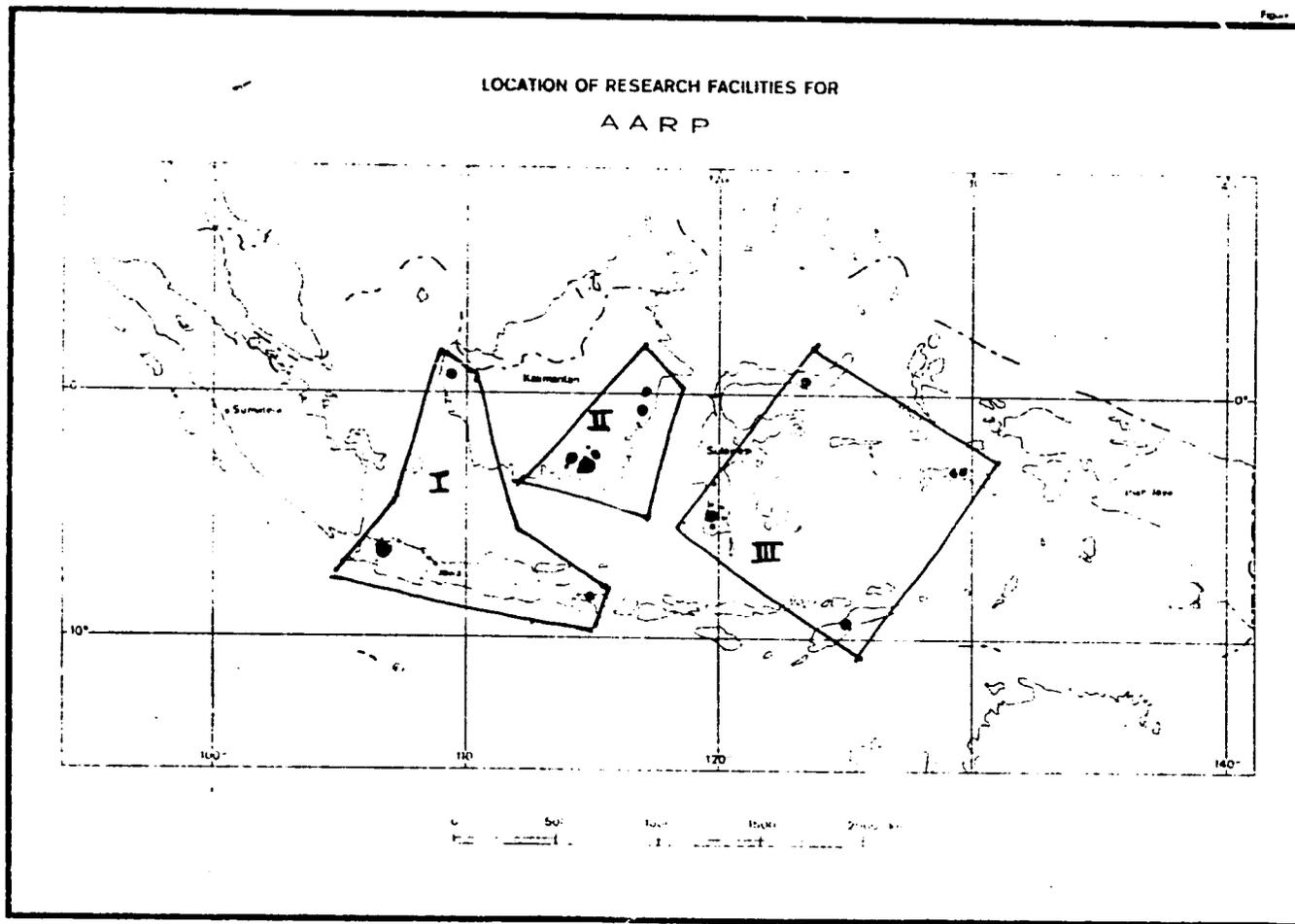
Groups / location	Status	Area / Commodity	Total US \$
<b>Group I: Java - Bali - West Kalimantan</b>			
1. Bogor	CRI	Foodcrops )	5,856,540
2. Bogor	RI	Foodcrops	
3. Anjungan	RS	Industrial Crops	1,002,900
4. Gondol	RS	Inland Fisheries	<u>1,472,400</u>
			8,331,840
<b>Group II: South Kalimantan- Central Kalimantan- East Kalimantan</b>			
1. Banjarbaru	RI	Foodcrops	3,865,025
2. Handil Manarap	RS	Foodcrops	816,650
3. Kuala Kapuas	EF	Foodcrops	256,450
4. Lempake	EF	Foodcrops	344,950
5. Balikpapan	RS	Forestry	2,269,350
6. Banjarbaru	RS	Animal Diseases	<u>1,615,490</u>
			9,167,915
<b>Group III: Sulawesi - Molucca - Kupang / NTT.</b>			
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. Jeneponto	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	Foodcrops, Forestry Animal Husbandry	<u>2,981,092</u>
			10,651,092
			<u>28,161,747</u>

CRI = Central Research Institute

RI = Research Institute

RS = Research Station

EF = Experimental Farm



## MASTERPLAN FOR ADMINISTRATIVE STAFFING FOR AARP

Institute & Location	PhD/Dr		M.S		Ir/Drs		B.S		SLTA		Total	
	E	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. Jeneponto RS	-	-	-	-	-	1	-	7	-	2	-	10
10. Mariri RS	-	-	-	-	-	1	-	7	-	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	8	1	12
<b>TOTAL</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>4</b>	<b>24</b>	<b>13</b>	<b>95</b>	<b>92</b>	<b>233</b>	<b>110</b>	<b>356</b>

Note: E = Existing

P = Planned

\*) Staff for Animal Husbandry

MASTERPLAN FOR ACADEMIC TRAINING AND STAFFING FOR AAPP  
RESEARCH STAFF

Institute & Location	Ph.D/Dr.		M.S.		Tr/Drs.		B.S.		SPMA / SIA		TOTAL	
	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned
<u>WOOD CROPS</u>												
1. Bogor CPI	-	-	-	-	-	-	-	-	-	-	-	-
2. Bogor PI	9	4A, 4B, 1E, 2F, 2P = 15	18	7A, 5B, 6E, 3F, 5P, 2S, 2T = 30	110	110	34	72	103	144	274	371
3. Banjarbaru PI	1	7	1	7	15	40	6	20	8	50	31	124
4. Maros PI	2	8	4	21	39	48	2	51	47	67	94	195
5. Handil Manarap RS	-	-	-	3	-	3	-	5	1	10	1	18
6. Kalase PS	-	-	-	1	4	5	2	8	2	8	8	22
7. Makariki PS	-	-	-	1	1	8	-	10	2	8	3	27
8. Lanrang RS	-	-	-	1	-	9	-	10	3	7	3	27
9. Jeneponto RS	-	-	-	1	1	8	-	10	-	10	1	29
10. Mariri PS	-	-	-	1	1	8	-	10	5	5	6	24
11. Kuala Kapuas EF	-	-	-	-	-	1	-	2	-	6	-	9
12. Lempake EF	-	-	-	-	-	1	-	2	-	6	-	9
13. Pontobili EF	-	-	-	-	-	1	-	2	-	6	-	9
14. Kupang / MTI	-	-	-	-	-	1	-	5	4	6	4	12
- Forestry	-	-	-	-	-	IFS, 1S, 1M = 3	-	3	-	4	-	10
- Animal Husbandry	-	1	-	2FA, 2N, 2R, 2B = 8	-	1HS, 1S, 1M = 3	-	1	-	20	-	32
<u>INDUSTRIAL CROPS</u>												
15. Anjungan RS	-	-	-	-	-	2A, 1B, 1F, 1P, 1T = 6	-	-	-	6	-	12
16. Makariki RS	-	-	-	-	-	2A, 1B, 1F, 1P, 1T = 6	-	-	-	6	-	12
<u>FORESTRY</u>												
17. Balikpapan RS	-	-	-	1S=1	1	1B, 1M, 1FS, 2S, 1MG, 1FB, 1FE, 2FG = 12	-	3	2	23	3	39
18. Maros PS	-	-	-	1S=1	-	1PS, 1S, 1M = 3	-	2	-	13	-	19
<u>ANIMAL VET. + HUSB.</u>												
19. Banjarbaru PS	-	1PT, 1FR, 1M = 3	-	1PT, 1FR, 1M = 3	-	1PT, 1FR, 1M = 3	-	3	-	8	-	20
<u>INLAND FISHERIES</u>												
20. Gondol PS.	-	1PT, 1FR, 1FN = 3	1	1RP, 1FD, 1'F, 1PH, 1CH = 5	3	6F, 4F = 10	1	4	2	20	7	42
	12	36	24	81	175	288	45	221	179	427	435	1063

FOOD CROPS + INDUSTRIAL CROPS

- A = Agronomist
- B = Breeder
- E = Entomologist
- F = Fitopatologist
- S = Socio-Economist
- T = Technologist/Post Harvest

FORESTRY

- FE = Forest Engineer
- FC = Forest Economist
- FS = Forest Soil Management
- S = Silviculturist
- W = Wild Life Management
- B = Botanist
- AG = Agroforester
- FB = Forest Biometrician

FISHERIES

- RP = Reproductive Physiologist
- FM = Farm Management
- FN = Fish Nutritionist
- M = Marine Ecologist
- PH = Phycozoologist
- CH = Chemist
- F = Fish Aquaculturist
- B = Biologist

ANIMAL DISEASES

- PT = Pathologist
- PP = Parasitologist
- M = Microbiologist

ANIMAL HUSBANDRY

- PA = Pasture Agronomist
- N = Nutritionist
- R = Ruminant Reproductive Physiologist
- B = Breeder
- HS = Health Supervisor
- S = Socio Economist
- TN = 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. Jenepono	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

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## 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. AAPF headquarter	4	-	3			5
II. <u>Foodcrops</u>						
2. Bogor CPI	4	4				
3. Bogor RI						
4. Banjarbaru PI	6	2	1		1	3
5. Maros RI	6	5	2		2	2
6. Handil Manarap RS	1	1				
7. Kalase RS	2	2				
8. Makariki RS	2	4				
9. Lanrang RS	1	1				
10. Jeneponto RS	2	2				
11. Mariri RS	2	2				
12. Kuala Kapuas RS	-	-				
13. Lempake EF	1	1				
14. Bentobili EF	-	1				
15. NTT / Kupang	3	2		1		
III. <u>Industrial Crops</u>						
16. Anjungan RS	2	1				
17. Makariki RS	2	1				
IV. <u>Forestry</u>						
18. Balikpapan RS	4	2				
19. Maros RS	3	-			1	
V. <u>Animal Disease</u>						
20. Banjarbaru RS	4	1				
VI. <u>Inland Fisheries</u>						
21. Gondol RS	3	-				1
<b>TOTAL</b>	<b>52</b>	<b>32</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>12</b>

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STEPS IN VEHICLE PROCUREMENT THROUGH USAID

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

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SHORT TERM TRAINING FOR AARP

Institute & location	Total mm	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
<u>I. Headquarter</u>																					
1. A A R D	40	2	2	2	1	1	2	2	2	2	-										
<u>II. Foodcrops</u>																					
2. Bogor CRI )	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 Manarap RS																					
7. Kalase RS																					
8. Makariki RS																					
9. Lanrang RS																					
10. Jenepono RS																					
11. Mariri RS																					
12. Kuala Kapuas RS																					
13. Lempake EF																					
14. Bontobili EF																					
15. Kupang / NTT (Forestry)	18								2					2							
<u>III. Industrial Crops</u>																					
16. Anjungan RS																					
17. Makariki RS																					
<u>IV. Forestry</u>																					
18. Balikpapan RS	28		2				1		2					2			2	1			
19. Maros RS	25		2						3				1					2	2	2	
<u>V. Animal Disease</u>																					
20. Banjarbaru RS	56	-	-	-	-	-	-	2	2	2	2	-	-	2	2		2	2	2	1	1
<u>VI. Inland Fisheries</u>																					
21. Gon-hi RS	19			1				2	3												
<b>Total persons</b>	<b>199</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>9</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>22</b>	<b>15</b>	<b>11</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>4</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>5</b>
<b>Total man months</b>	<b>559</b>	<b>20</b>	<b>28</b>	<b>22</b>	<b>18</b>	<b>18</b>	<b>36</b>	<b>48</b>	<b>66</b>	<b>45</b>	<b>33</b>	<b>24</b>	<b>36</b>	<b>54</b>	<b>48</b>	<b>24</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>5</b>

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PROJECTED AARP DISBURSEMENT SCHEDULE

( THOUSAND U.S \$ )

INFUTS	IFY '80/'81			IFY '81/'82				IFY '82/'83				IFY '83/'84				IFY '84/'85				IFY '85/'86				ALL COSTS
	USATP			USAID		ODI		USATP		ODI		USATP		ODI		USAID		ODI		USAID		ODI		
	Loan		Grant	Loan		Grant		Loan		Grant		Loan		Grant		Loan		Grant		Loan		Grant		
	FX	LC	FX	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	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	13128 11,963
Farm Development	-	-	-	-	-	-	790	-	-	-	790	-	-	-	790	-	-	-	796	-	-	-	-	3166
Lab Equipment	-	-	-	240	-	-	-	1125	-	-	183	1077	-	-	175	-	-	-	-	-	-	-	-	2800
Field Equipment	-	-	-	160	-	-	-	836	-	-	-	428	-	-	-	-	-	-	-	-	-	-	-	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	1833
Contingency (+ 10%)																							3073	
Inflation (+ 30%)																							3077	
TOTAL																							8944	
																							42745	

2517  
1936  
387  
4840

27

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																																																												
Phase I	preparation, detailed plan and tender document																																																											
Phase II	Preparation, detailed plan and tender document												Bogor CRJ, Bogor RI, Maros RS, Kalasey RS, Makariki RS, Lanrang RS, Jenepono RS, Mariri RS, Bontohilli FF.												Liability period												Banjarbaru RS, Handil Manarap RS, Kualakanuas FF, Lemake FF, Balikpapan RS, Gunung RS, Makariki RS, Banjarbaru RS, WTP RS												Liability period											
3. Technical Assistance	Preparation, evaluation and selection of prime consultant group																																																											
	2 man-years												22,5 manyears												8 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 man months																																																											
	150 manmonths																																																											
	118 manmonths																																																											
	90 manmonths																																																											
6. Vehicles	Request I												Request II												Request III																																			
	12J+19P+5T+7S												21J+5P+T+5S+3B												19J+8P+4T																																			

Best Available Document