

Agricultural Development Planning and Administration Project in Indonesia

Final Report

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FINAL REPORT

AGRICULTURAL DEVELOPMENT PLANNING
AND ADMINISTRATION (ADPA) PROJECT

April 17, 1979 - September 30, 1984

Host Country Contract between
IOWA STATE UNIVERSITY
AMES, IOWA, USA

and

MINISTRY OF AGRICULTURE
REPUBLIC OF INDONESIA

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GLOSSARY OF ACRONYMS

AARD	- Agency for Agricultural Research and Development, MOA
ADPA	- Agricultural Development, Planning and Administration project
AETE	- Agency for Education, Training and Extension, MOA
AID	- Agency for International Development (United States), also known as USAID at the country level
AIT/T	- Asian Institute of Technology in Thailand
BAPPENAS	- National Planning Agency, GOI
BIMAS	- Agency for rice intensification programs
BFC	- Bureau of Foreign Cooperation, also known as KLN, MOA
BOA	- Bureau of Administration, MOA
BOF	- Bureau of Finance, MOA
BOM	- Bureau of Material, MOP
BOP	- Bureau of Planning, MOA
BULOG	- Bureau of Logistics, GOI
CADP	- Central for Agricultural Data Processing, MOA
CAER	- Center for Agricultural Economic Research, MOA
DG	- Directorate or Director General
GOI	- Government of Indonesia
HIS	- Honeywell Information Service
IDRC	- International Research and Development Center (Canada)
IG	- Inspector General, MOA
IPB	- Agricultural Institute (university) at Bogor
ISU	- Iowa State University
KLN	- Bureau of Foreign Cooperation, also known as BFC, MOA

- KPA - Key Policy Area
- MOA - Ministry of Agriculture, also referred to as the Department of Agriculture
- MPS/X - Mathematical Programming System - extended
- NCI/P - National Computer Institute in Philippines
- SAS - Statistical Analysis System
- SPSS - Statistical Package for Social Scientists
- U of I - University of Indonesia
- UGM - University of Gajah Mada

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FINAL REPORT
AGRICULTURAL DEVELOPMENT PLANNING
AND ADMINISTRATION (ADPA) PROJECT

I. PROJECT DESCRIPTION

Purpose of the Agricultural Development Planning and Administration (ADPA) Project was to upgrade the policy, planning, and programming capability of the Indonesian Ministry of Agriculture (MOA) by helping institutionalize within the MOA the ability to conduct effective agricultural policy analysis and the capability to design and evaluate appropriate developmental programs and project alternatives. For implementation purposes, the project was divided into two sub-projects: (1) improvement in the capability of the MOA in policy and project planning and administration and (2) improvement of the data management and administrative system.

Improvement of the policy and planning capability was accomplished through: (1) technical assistance for policy, planning, and data analysis; and (2) long- and short-term academic and short course training of MOA personnel in selected U.S., third country, and Indonesian universities and institutions. Improvement of the data management system was attained by (1) centralizing the data processing functions within the Agency for Agricultural Research and Development (AARD), (2) purchasing and installing the needed data processing equipment, (3) contracting for software development for the agricultural data base, and (4) improving the data processing functions through technical assistance and on-the-job training.

The total amount initially budgeted for the five-year project was \$10,400,000. Financing of the project consisted of a Government of Indonesia (GOI) contribution of \$4,100,000 and an AID loan of \$5,000,000 accompanied by an AID grant of \$1,300,000 for technical assistance. An additional \$500,000 in AID grant funds and GOI counterpart support contributions was subsequently added to finance the fifth year of technical assistance.

Implementation of the technical assistance and U.S. training aspects of the ADPA project was provided by a Host Country Contract between the Ministry of Agriculture and Iowa State University signed on June 9, 1979. The contract, as amended, provided \$1,458,474 of grant funds for technical assistance and \$1,079,660 of loan funds for long- and short-term training in the United States. Technical assistance functions of the contract ended April 12, 1984, while training aspects continued through September 30, 1984.

II. PROJECT BACKGROUND

Initial conceptualization of the ADPA project occurred in 1975. Early planning stages were based on the premise that all agricultural policy, planning, and data management functions would be centered in one location at the Bureau of Planning in the Ministry of Agriculture. When the Agency for Agricultural Research and Development became operational, it assumed primary responsibility for long-run agricultural economic policy analysis at the Center for Agricultural Economics Research (CAER) and data processing services at the Center for Agricultural Data Processing. Subsequent project development planning shifted the data

processing function and related technical assistance activities to the CADP of AARD, but left the agricultural policy analysis and planning function and related technical assistance assigned to the Bureau of Planning. This program planning change separated the institutional and physical sites of the two major sub-component parts of the ADPA project and increased the complexity of implementing the project as an integrated whole. In addition, MOA assignment of the long-run agricultural policy research function to the CAER raised a number of doubts and uncertainties concerning the future role of the Bureau of Planning in agricultural policy analysis and research. With the recent changes in the administrative leadership within the Ministry, the role of the BOP in policy analysis and planning and its relationship to other agencies and departments has been under active review and clarification. Further delineation and institutionalization of policy and planning roles within the Ministry, and particularly with respect to the Bureau of Planning, will be beneficial for future program development and implementation.

Initial planning for the ADPA project further envisioned sending several advanced degree participants to third countries for training. However, when the advanced degree training was ready for implementation, in-country educational institutions were able to provide quality advanced degree training in agricultural policy and planning areas equal or superior to the training available in most third country institutions with the added advantage that training could be done in the Indonesian language with dissertation research more directly related to local problem issues. Given the difficulties encountered in achieving satisfactory English

language skill levels for potential external participants, this local in-country training alternative proved to be a major benefit for the project. ADPA project managers recognized the increased training capabilities and benefits of in-country educational institutions and were able to adjust advanced degree training accordingly.

III. PROJECT MILESTONES

The ADPA project had its roots in a report prepared by Bolton and Clark in June of 1975, "Agricultural Planning in Indonesia." Additional reports prepared two years later in 1977 provided additional background on development of the project proposal. While the project agreement was signed in September of 1977, signing of the loan agreement did not occur until April of 1978. Major project implementation was delayed until the spring of 1979 when a host country contract was signed with Iowa State University to provide technical assistance services to the project. During the four-year project gestation period from 1975 to 1979, several structural and institutional changes occurred within the Ministry of Agriculture, which had implications for implementation of the ADPA project. These changes are described in a project background section.

Iowa State University responded quickly to project requirements once the selection award for technical assistance was announced in October of 1978. Within a month from the award announcement, a high level ISU contract negotiation team visited Indonesia to work out contractual details for implementation of a host country contract with the Ministry of Agriculture. Even before the contract was officially signed, ISU placed a senior professional in Indonesia to develop implementation procedures for

the training program and to sign the contract in-country once it was completed. The same month the contract was signed, two senior ISU officials arrived in Jakarta to set up the administrative and financial functions for the project and to make recommendations on agricultural policy research and data processing facilities and equipment. Dr. Gary Vocke arrived in Jakarta one month after the contract was signed to assume the position of Chief of Party and Agricultural Planning Specialist. Selection of a computer specialist was delayed somewhat as various candidates' qualifications were evaluated and reviewed. Dan Peterson was finally selected to fill the computer specialist position based on a USAID request and recommendation. He initiated work in October of 1979. A third long-term systems analyst position was added to the contract in 1981. This position was filled by Mr. Al Brown in August of 1981.

Significant milestones subsequent to signing of the technical assistance host country contract for the ADPA project in June of 1979 include the following:

- (1) initiation of long-term degree training in both the United States and Indonesia in September of 1979;
- (2) initiation of short-term non-degree training in Indonesia in December of 1979;
- (3) initiation of mid-term third country professional training programs for CADP staff in the spring of 1980;
- (4) installation of the Honeywell data processing equipment at Pasor Minggu in June of 1981;

- (5) extension of the Project Assistance Completion Date initially for one year through April 12, 1984, and later through September 30, 1984;
- (6) data base design project completed in August of 1982;
- (7) publication of a basebook analysis of Indonesian agricultural growth and equity policy conditions in August of 1982;
- (8) extension of the ISU technical assistance contract April 12, 1984 and subsequent extension of the training aspects only through September 30, 1984;
- (9) final workshop of second phase in-depth growth and equity agricultural policy analysis study in May of 1984;
- (10) installation of scientific and technical IBM computer in Ministry of Agriculture facilities at Bogor in June 1984; and
- (11) completion of implementation phase of agricultural data base project during summer of 1984.

A more detailed summary of ADPA project milestones is shown in Table 1.

Table 1. ADPA project milestones from project formulations through completion of project

Activity	Date
1. Project formulation, Bolton and Cook report	June 11, 1975
2. Project proposal development -- various reports by Cline Gray, Alan Strout, H. van de Wetering, and W. McMillan	March-July, 1977
3. Project authorized	September 15, 1977
4. Project agreement signed	September 29, 1977
5. Loan agreemer signed	April 12, 1978
6. ISU contract negotiators in Jakarta	November, 1979
7. ISU contract representative in Jakarta	April-June, 1979
8. Host Country contract between Ministry of Agriculture and ISU signed (effective April 17, 1979)	June 9, 1979
9. ISU Chief of Party arrives in Jakarta	July, 1979
10. First participants start long-term degree training in United States and Indonesia	September, 1979
11. Computer specialist initiates work	October, 1979
12. First participants start short-term training in Indonesia	December, 1979
13. Contract for Honeywell computer signed	October, 1980
14. Data base design initiated	April, 1981
15. Honeywell computer installed	June, 1981
16. Systems analyst joins ISU staff	August, 1981
17. Loan PACD extended until April, 1984	April, 1982

Table 1. Continued

Activity	Date
18. Growth and equity agricultural policy basebook published	August, 1982
19. Agricultural data base design project completed	August, 1982
20. Host Country contract between MOA and ISU extended until April 12, 1984	March, 1983
21. Agricultural data base implementation study initiated	June, 1983
22. Training activities of HCC between MOA and ISU extended through September 30, 1984 (effective April 12, 1984). ISU technical assistance in-country activities completed as of April 12, 1984	April 24, 1984
23. Final workshop of second phase in-depth growth and equity agricultural policy analysis	May, 1984
24. Scientific and technical IBM computer installed at Bogor	June, 1984
25. Agricultural data base implementation study completed	Summer, 1984
26. Host Country contract between MOA and ISU completed	September 30, 1984

IV. PROFESSIONAL RESOURCE DEVELOPMENT

A major professional resource development and training program was implemented under the ADPA project. More than 900 participant programs were completed or are in the final stages of completion. Eighty long-term degree programs were initiated under the ADPA project, another 28 mid-term professional training programs for CADP staff members were completed, and nearly 800 short-term training programs were conducted. Training activities were performed in the United States, the Philippines, Thailand, and Indonesia. All major training targets of the ADPA project were met or surpassed. A summary of all training activities under the ADPA program is shown in Table 2.

A. Degree Training - External

Nineteen M.S. and Ph.D. degree training programs were initiated at universities outside of Indonesia. Degree training in the United States was and/or is being performed at Cornell University, Iowa State University, New Mexico State University, Southern Illinois University, and Oklahoma State University in agricultural economics, computer science, statistics, econometrics, and rural sociology. One M.S. program in statistics was completed at the University of the Philippines.

Project target for degree training in the United States was 15 degree programs with six completions at the Ph.D. level and nine degree completions at the M.S. level. If all degree programs are successfully completed, ten M.S. and eight Ph.D. programs will be completed in U.S. universities for an overall implementation level of 120 percent. Fourteen different participants are, or have been, involved in the 18 U.S.

Table 2. Summary of all training in agricultural policy, planning, project evaluation, data processing, and related fields

Type of training	No. of participants/ training programs
1. Long-term training, degree programs	
a. United States	18
b. Philippines	1
c. Indonesia	<u>62</u>
Sub-total degree programs	81
2. Mid-term professional training, data processing	
a. NCI-Philippines	17
b. AIT-Thailand	5
c. HIS-United States	<u>6</u>
Sub-total professional programs	28
3. Short-term non-degree training	
a. USDA, United States	33
b. Policy and planning, Indonesia	
U of I	120
UGM/FA	96
UGM/FE	42
IPB	<u>94</u>
Sub-total	352
c. Data processing, Indonesia	
Applications - UGM	57
Languages - Masrida, Dassad, and Binocipta	<u>207</u>
Sub-total	264
d. Short courses and seminars, Indonesia	
Personnel Management - Bogor	30
Food and Nutrition - Malang	4
- Lampung	27
- Soropadan	27
Management Skills - Punchak	19
- Bogor	<u>14</u>
Sub-total	121
e. English language, Indonesia	
British Council	<u>28</u>
Sub-total short-term participants	798
4. Total number of participant programs	907

degree programs. A summary of external long-term degree participant programs is found in Table 3.

Nine M.S. degree programs have been completed in external universities to date. These have included four programs in agricultural economics, two in statistics, two in computer science, and one in rural sociology. The degree program in rural sociology focused primarily on diffusion and adoption of new technology for developing nations. Two of the ADPA participants received cum laude and/or superior ratings in the completion of their M.S. degree programs. Four of the participants who completed M.S. degree programs are continuing on to Ph.D. programs. With the completion of the ADPA project, these program continuations will be funded from alternative World Bank sources. A summary of ADPA participants who have completed degrees to date outside of Indonesia is shown in Table 4.

Constraints encountered in implementing external degree programs included English language proficiency levels and AID policies concerning funding for dependent travel of Ph.D. level participants. English language proficiency is required for all external degree training. While English language training was provided in-country, difficulties were encountered in achieving language levels required by some external universities. A few external candidates indicated that it was difficult for them to devote sufficient time to English language study because of office workload demands. English language proficiency levels of ADPA

Table 3. ADPA long-term degree participants, external

Name	Department	University	Program	Period	Degree M.S. Ph.D.*	
1. Nanu Sanusi	BOP	Cornell	Ag Econ	09/79-12/81	X	
2. Wahyudi Sugianto	BOP/CAER	ISU "	Ag Econ "	09/79-12/81 01/82-	X	P
3. Hardono T.K.	BOP	ISU	Ag Econ	02/80-05/83	X	
4. Wardhani M.A.	FC/CAER	ISU	Ag Econ	02/80-	X	
5. Rantetana M.H.	CADP	ISU "	Comp Sci "	05/80-12/83 01/84-	X	P
6. Napitupulu, Togar	CADP	ISU/SIU SIU	Comp Sci "	05/80-12/83 08/84-	X	P
7. Simatupang, Pantjar	CAER	ISU	Ag Econ	08/81-		P
8. Abdurachman, Edi	CADP	ISU "	Stat "	08/81-05/83 06/83-	X	P
9. Muslim, Ahmad (Cum Laude)	BOP	MSU/NMSU	Ag Econ	05/81-12/83	X	
10. Noer, Widarya (Superior Rating)	Forestry	ISU	Rural Soc	08/82-05/84	X	
11. Sosroharsono H.	Food Crops	ISU/NMSU	Ag Econ	08/82-		P
12. Hardjanto S.S.	Food Crops	ISU/NMSU	Ag Econ	08/82-		P
13. Basri, Tjuk H.	CADP	U. Phil.	Stat	01/83-12/83	X	
14. Nainggolan, K.	CADP	OKSU	Econometrics/ Ag Econ	08/83-		P
15. Suprato, Ato	CADP	OKSU	Econometrics/ Ag Econ	08/83-		P
Total degree programs					11	8

*Ph.D. participants programmed by ADPA project but funded in part from alternative World Bank sources. "P" indicates completion of degree is pending.

Table 4. ADPA participants who completed M.S. degrees outside Indonesia as of September 30, 1984

Name	Department	University	Program	Completion Date
1. Nanu Sanusi	BOP	Cornell	Ag Econ	12/81
2. Wahyudi Sugianto	BOP	ISU	Ag Econ	12/81
3. Hardono T.K.	BOP	ISU	Ag Econ	05/83
4. Abdurachman, Edi	CADP	ISU	Stat	05/83
5. Rantetana, Marellus	CADP	ISU	Comp Sci	12/83
6. Napitupulu, Togar	CADP	ISU/SIU	Comp Sci	12/83
7. Muslim, Ahmad (Cum Laude)	KLN	MTSU/NMSU	Ag Econ	12/83
8. Basri, Tjuk	CADP	U. Phil.	Stat	12/83
9. Noer, Widarya (Superior Rating)	FOR	ISU	Rur Soc	05/84

external participants ranged from 490 to 540 as measured by TOEFL pre-admittance test scores. Several U.S. universities now require English language proficiency levels of 550 for admission, while others usually establish a minimum level of at least 500 for full admittance without a language waiver. Some potential participants, who were unable to meet the language requirements, were reprogrammed for in-country or alternative training. Others with higher but minimum TOEFL scores found their options were restricted to universities that would accept lower language proficiency levels or grant waivers contingent upon taking additional language training along with degree courses. Because of English language difficulties, the number of possible candidates for external training was constrained and delays were experienced by some participants who found it necessary to take additional language training as part of their degree programs. It would be helpful in future programs if potential external degree participants could devote full time to their language training in-country and/or make use of special training programs in English language and academic review as offered by the Economics Institute at Boulder, Colorado.

External training at the Ph.D. level frequently requires from four to five years of absence from the home country. AID funded training programs currently do not fund travel by participants' dependents. Separation of participants from their families for long periods of time results in a severe hardship on both the participant and the family members. Alternative funding sources, which do provide funding of dependents' travel for Ph.D. participants, can sometimes be substituted for AID funded

training. In addition, timing considerations can also constrict funding of Ph.D. programs from AID sources. Typical AID project lifespans are from three to five years. If participants enter Ph.D. training mid-way through a project, their training span will probably exceed the life of the project and thus, they will not be eligible for AID funded training. In the case of Ph.D. participants programmed under the ADPA project, alternative funding sources were substituted for both family and project timing reasons. All eight of the remaining ADPA programmed Ph.D. participants have now been transferred to alternative training funding sources. Given the family travel support and timing factors included in Ph.D. programs, it might be desirable for future AID funded training programs to concentrate their degree training emphasis on shorter term M.S. degree programs and allow longer training programs to be implemented by alternative funding sources.

B. Degree Training - Indonesia

Long-term degree training in Indonesia is being conducted at the Agricultural Institute at Bogor (IPB) and at the University of Gadjah Mada in Yogyakarta. Sixty-two degree programs were initiated under the ADPA project. Only one of the participants involved in the advanced degree programs withdrew for a dropout rate of less than 2 percent. Of the remaining 61 degree programs, 49 are at the M.S. level and the remaining 12 are at the Ph.D. level. Fifty-six participants are involved in the in-country degree programs with five continuations from M.S. to Ph.D. programs being carried out based on excellence of performance at the M.S.

level. A summary of long-term degree training showing participants, universities, programs and degree levels is found in Table 5.

Eighteen M.S. degree programs had been completed in Indonesia by March 31, 1984. All of the Ph.D. degree programs were still in progress. Ph.D. candidates at IPB are required to pass written preliminary qualifying examinations prior to proceeding to dissertation research. Passing these qualifying exams has delayed some participants. At the University of Gadjah Mada, the University Professional Senate must approve each candidate's dissertation proposal. This may take as much as a year before the dissertation proposal is approved by Senate members who come from widely varied disciplines. Those ADPA participants who have completed degree programs at Indonesian universities are shown in Table 6. Most of degree completions to date have been by participants from regional locations in Sulawesi, Kalimantan, Java, Sumatera, and Riau. Other degree completions were by participants from the central organizations such as the Bureau of Planning and Food Crops.

Distribution of in-country degree participants showed a slight weighting in the form of participants from regional locations with about 60 percent of the degree programs being carried out by participants from regional locations. Most prominently represented regional areas included South Sulawesi with 11 degree programs, West Java with 6 and Riau with 5 advanced degree programs. Central organizations were most prominently represented by the Food Crops with 8 degree programs, the Secretary General's office with 7 and the former Directorate General of Forestry with 6 in-country degree programs.

Table 5. ADPA long-term degree participants in Indonesia

Year	University	Participant	Program	Ph.D.	M.S.		
1979	IPB	Ali Sastrohoetomo	Ag Econ	X			
		Y. M. Lubis	Ag Econ	X	X		
		Uu Suhadi	Ag Econ		X		
	UGM	G. Panggabean	Ag Econ		X		
		Murasa Sarkaniputra	Ag Econ	X			
		Sri Harti Murasa	Ag Econ	X			
		Soedjarwo	Ag Econ	X			
1980	IPB	Sjahrial Sjam	Reg Devel		X		
		Wagner Nasution	Reg Devel	X	X		
		Manuarang Marpaung	Reg Devel		X		
		Priyatna Akasah	Reg Devel		X		
		Deddy Ma'um	Reg Devel		X		
		Prabowo Pudjowidodo	Ag Econ	X	X		
		Ruchijat Padmakusuma	Nat Resources		X		
		M. Rosichon	Ag Econ		X		
		H. Suryatman	Ag Econ		X		
		Kusmiba Kadjad	Reg Devel		X		
	UGM	Soeparno Soehadi	Nat Resources		X		
		Isman Abu	Ag Econ		X		
		1981	IPB	Tom E. Napitupulu	Dev Planning	X	X
				Hery Purwanto	Res Mgt		W*
Suatmodjo	Res Mgt				X		
Soesanto	Ag Econ				X		
Saefullah	Res Mgt				X		
Aos Rosidin Kusjdi	Ag Econ				X		
Jafar Hafisah	Dev Planning			X	X		
Mohamad A. Sawidak	Dev Planning				X		
Ambiar Boer	Sociology				X		
Anran Samiran	Dev Planning				X		
UGM	Harry Santoso		Dev Planning	X	X		
	Soedjatmiko		Res Mgt		X		
	Sinis Manadar		Ag Econ	X			
	Riyadi A. Somantri		Ag Econ		X		
	Iskandar A. Nuhung	Ag Econ		X			
	Inuserah Mesatam	Reg Devel		X			
	T. M. Kasner Turnip	Reg Dev		X			
	Cosmas S. Birana	Ag Econ		X			
	Taswa Sukmadinata	Ag Econ		X			
	Ilmi Senawan	Ag Econ		X			

*Withdrawn from program. Dropout rate less than 2 percent.

Table 5. Continued

Year	Unive sity	Participant	Program	Ph.D.	M.S.	
1982	IPB	M. Littik	Nat Resources		X	
		Ilsyas Kasim	Nat Resources		X	
		Abdul Rachim	Nat Resources		X	
		Agus Sriyanto	Nat Resources		X	
		Frans Sitorus	Nat Resources		X	
		Dachlan Noor	Dev Planning		X	
		Subrota Sudarga	Dev Planning		X	
		Saharudin	Dev Planning		X	
	UGM	Ilaryono Soeroso	Nat Resources			X
		Jacob Ampang	Ag Econ			X
		Sumartono	Ag Econ			X
		Soewarno Budianto	Ag Econ			X
		Rubimin Wibisono	Ag Econ			X
		Made Antara	Ag Econ			X
		Soepeno	Ag Econ			X
		Amir Hanzah	Ag Econ			X
		I.G.K. Swastika	Ag Econ		X	
		TOTAL		12	49	

Table 6. ADPA participants who completed M.S. degree programs in Indonesia as of March 31, 1984.

Name	Department	University	Program
1. G. Panggabean	BOP	IPB	Ag Econ
2. Uu Suhadi	BOP	IPB	Ag Econ
3. Wagner Nasution	Food Crops	IPB	Reg. Devel.
4. Dedi Ma'mun	West Java	IPB	Reg. Devel.
5. Rosichon	South Kalimantan	IPB	Ag Econ
6. Suparno Soehadi	West Kalimantan	IPB	Nat. Resource
7. Isman Abu	South Sulawesi	UGM	Ag Econ
8. Kasner Turnip	North Sumatera	UGM	Reg. Devel.
9. Iskandar A. Nuhune	South Sulawesi	UGM	Ag Econ
10. Syahrial Syam	Food Crops	IPM	Reg. Devel.
11. Ruchiyat Padmakusuma	Jakarta	IPB	Nat. Resource
12. Saefullah	West Java	IPB	Resource Mgt.
13. Ilmi Senawan	Riau	UGM	Ag Econ
14. Cosmas S. Birana	South Sulawesi	UGM	Ag Econ
15. Kusmiba Kadjan	West Kalimantan	IPB	Reg. Devel.
16. Taswa Sukmadinata	East Java	UGM	Ag Econ
17. Inuserah Mesatum	South Sulawesi	UGM	Reg. Devel.
18. Suryatman	East Kalimantan	IPB	Ag Econ

C. Professional Computer Training - External

Professional mid-term training for staff members of the Center for Agricultural Data Processing was carried out at the Asian Institute of Technology in Thailand, the National Computer Institute in the Philippines, and at Honeywell Information Systems in the United States. Training at AIT in Thailand focused primarily on computer programming languages, while training at the NCI in the Philippines was broader based and encompassed computer systems in addition to programming languages. Training at the NCI proved to be particularly effective for developing the types of professional skills needed by CADP staff members. Training at HIS provided specialized instruction in systems analysis and operation of Honeywell computers. It proved to be very valuable for applications related to use of the Honeywell computers of the CADP. Of the 28 mid-term professional training programs completed, 17 were at the NCI, 5 at AIT and the remaining 6 at HIS facilities in the United States. A summary of the professional computer training carried out is included in Table 5A of the Appendix. Training for CADP staff members is also treated in a later section of this report.

D. Non-degree Training - External

External short-term, non-degree training was conducted in the United States in collaboration with USDA training programs. Thirty-three participants attended USDA short courses for an implementation rate of 103 percent. Short-term USDA participants were drawn mainly from central MOA offices in Jakarta and the surrounding areas. Constraints in achieving

ALIGU Level II English language proficiency levels established the need for additional English language training and further USAID language testing. Problems in obtaining language training in the regions and in arranging travel to Jakarta for language testing made it difficult for potential regional applicants to meet the requirements of this type of training. Only five out of the 33 participants came from regional locations.

ADPA participants in USDA short-term training programs received many worthwhile benefits in addition to the uniformly excellent training. Participants were able to observe cultural attributes, work patterns, learn something of U.S. administrative procedures and share development experiences with other participants from around the world. ADPA participants agreed that international exchanges of ideas were mutually beneficial. Some felt, however, that field trips to U.S. development sites were not closely applicable to problem areas of their own country. Core studies of projects in developing countries were proposed as one alternative to the U.S. field visits.

Six CADP staff members received professional computer training at Honeywell Information Systems in Wellesley, Massachusetts. Computer training for these staff members was implemented under the United States portion of the ADPA project, but training activities are reported under a separate section of this report.

A summary of short-term training in the United States is shown in Table 4A of the Appendix.

E. Non-degree Training - Indonesia

Some 765 participants completed short-term non-degree training programs in Indonesia in the following subject areas: project evaluation, development administration, rural development planning, personnel management, management skills, food and nutrition planning, computer packages, computer programming languages and English language training. The huge task of administering the enrollment, travel and financing of such a large number of participants would not have been possible without the experience and dedication of Drs. Hendes Soewarno and his staff, Dr. Sampe Tonapa, Dr. Subiyanto and Mr. Kaman Nainggalan. Global totals of short-term training are shown in Table 2. More detailed summaries of the training programs and participants are found in Appendix Tables 8A through 16A.

Training in project evaluation, development administration and rural development planning was held at the University of Gadjah Mada, University of Indonesia and the Agricultural Institute in Bogor. Distribution of the participants was fairly evenly divided with slightly less than half of the participants from central offices and slightly more than half from regional and decentralized offices.

Experience gained under the ADPA project should be useful for future program development. Dr. Irlan Suyono and Dr. Barizi conducted an evaluation of ADPA training programs in November of 1983. Based on their review of the ADPA training program, they were able to make several constructive observations with relevance for future short-term training courses. Improvements in the selection process of short-term participants

could facilitate having the right man for the right training. They recommend placing additional emphasis on the capability and academic interest of proposed candidates as a criteria for selection. They further suggest giving high priority to including practical and ready-for-use analytical techniques and procedures as a greater part of course content and suggest the case study approach as an appropriate media for developing practical course illustrations. Greater consistency between course outlines and actual classroom teaching and field trips would also be beneficial according to Dr. Suyono and Dr. Barizi. They further emphasized the importance of using more standardized planning and evaluation practices, approaches and terminologies which could be quickly passed on to participants, colleagues and places of work. This would, of course, require a greater consensus among course organizers (UI, IPB and UGM), the project manager, and the directors of the Ministry offices most closely concerned with the training programs. These observations and others could be extremely helpful in future project design and implementation.

Complementary short courses and seminars were also carried out at interim locations in management skills, training, personnel management and food and nutrition planning. The management skills training was particularly valuable for professional and administrative staff involved in the management of the ADPA project, because the training focused directly on skills needed for project implementation.

F. Selection and Distribution of Participants

Prior to initiation of the training aspects of the ADPA project, a long-run training program was developed by Ministry officials with the assistance of ISU short-term consultant Dr. Dudley Lockett. The training plan was designed to identify types of training required to achieve the objectives of the ADPA project, specify where training should take place, and determine what parts of the training should be of a degree or non-degree nature. Criteria for selection of participants were also developed. Factors considered included: (1) graduation from a state university or equivalent; (2) achieving an average grade of at least 6.25 at the university; (3) service of at least one year with the MOA and formally appointed as a government employee; (4) concurrence from the supervision; (5) capability and interest of the candidate for continuing study; and (6) a maximum age of 40 years. In addition to the above general requirements, minimum English language proficiency levels were also set for external training based on ALIGU test scores (Level II) for short-term participants and TOEFL test scores (500) for long-term participants. Admittance to a graduate program of an acceptable university was also established as a pre-requisite for ADPA training support for degree participants.

In the absence of a Ministry of Agriculture manpower study with specific professional needs established by individual Ministry departments and sections, the general focus of ADPA training program became quite broad based with participants nominated and selected from many different bureaus, departments, sections and location levels of the Ministry.

Candidates for long-term degree training programs were actively recruited during the initial period of the ADPA project. ADPA officials held numerous seminars and conferences throughout Indonesia to explain the purposes and opportunities of training available under the new project. A pool of potential participants was developed from responses to these informational conferences and seminars which served as a basis for selection of qualified long-term degree candidates. Opportunities for short-term training were further disseminated throughout the Ministry with notices of course openings and subject matter content sent to all major offices and levels of the Ministry. Selection of short-term participants was made from nominations submitted by the supervision of the various bureaus, departments and sections contacted. In the case of short-term participants, an excess of qualified candidates, for certain courses necessitated a final selection process. Candidates for computer training were evaluated on the basis of written proficiency tests, while candidates for policy and planning training were evaluated on the basis of information contained in their application forms and recommendations from their supervisors. Additional information on the selection process for ADPA participants is contained in the "Evaluation of ADPA Training Programs" report by Dr. Suyano and Dr. Barizi of November 1983.

The ADPA training program was broadly based with participants coming from many different directorates, bureaus, centers and spatial levels from within the Ministry. In those cases in which an English language proficiency was required, participants were drawn primarily from central organizations where language training was more readily available. In

other instances involving in-country training without an English language requirement, participants came from both central and regional locations with regional locations representing slightly more than half of the participants. All long-term external degree training participants came from central offices, primarily because of the language requirement but also taking into consideration the central focus of the project on most of the offices represented. Short-term external training was also heavily weighted toward the central office locations for similar reasons with only five out of 33 of the short-term external participants coming from regional locations. Long-term degree participants in Indonesia were more heavily weighted toward regional representation with about 60 percent of the degree programs from regional offices and the remaining 40 percent from central offices. When all external and internal degree programs are combined, the representation from central and regional offices is more equally divided with about half of the participants coming from each spatial level. Short-term training at Indonesian universities also was fairly evenly distributed with slightly less than half of all participants coming from central offices and slightly more than half coming from regional offices. A summary of ADPA in-country training participants at Indonesian universities containing a regional and central office distribution breakdown is found in Table 7. South Sulawesi is most heavily represented in internal degree training with about 18 percent of all degree programs. Regional areas most heavily represented in in-country short-term training included Yogyakarta, East Java, West Sumatera and South Sulawesi. The Office of the Secretary General was the

most frequently represented central organization in both long- and short-term training held in Indonesia.

During the five-year life of the ADPA project, a major human resource development program was implemented with over 900 degree and non-degree programs implemented in four different countries. Participants were drawn from both central and regional offices with about equal representation from each. As noted previously, the training program was carried out without the guidelines of a Ministry-wide manpower study which could have helped pinpoint specific subject matter and organizational areas which might have needed particular emphasis. The previously cited report of Dr. Suyono and Dr. Barizi contains the following comment concerning the broad-based focus of the training:

Admittedly, this is quite an achievement. But when one looks into the distribution of the training participants, the impression is that increased capabilities and knowledge were spread too thinly over the various offices, covering all agencies in the center and a few regional offices.

Based on experience gained during the ADPA project, it appears that a Ministry-wide, or at least project-wide, manpower study of skill areas needed and training requirements to achieve these skills would be very beneficial for the design and implementation of future projects involving agricultural development planning.

The broad-based focus of the ADPA project did provide some benefits for possible future efforts to strengthen integrated agricultural planning activities within the Ministry. The provinces of South Sulawesi, West Java and Riau have significantly strengthened their professional resource base in agricultural policy analysis and planning. ADPA regional office

Table 7. Distribution of in-country long- and short-term policy and planning participant training programs at Indonesian universities

Department/Region	Short-term participants	Long-term participants	Total
MOA Central:			
	IPB/UGM/UI	IPB/UGM	
1. Secretary General	51	7	50
2. Inspector General	6	-	6
3. AETE	12	1	13
4. AARD	21	-	21
5. BIMAS	3	-	3
6. D.G. Forestry	5	6	11
7. D.G. Livestock	10	1	11
8. D.G. Fisheries	10	-	10
9. D.G. Food Crops	20	8	28
10. D.G. Estate Crops	25	1	26
11. Other	2	-	2
	<u>165</u>	<u>24</u>	<u>189</u>
S.T. Percent	47%	39%	46%
MOA Regional:			
1. Jakarta	10	2	12
2. West Java	6	6	12
3. Central Java	5	-	5
4. East Java	14	2	16
5. Yogyakarta	14	2	16
6. Bali	6	1	7
7. West Nusa Teng.	1	-	1
8. East Nusa Teng.	5	-	5
9. East Timor	-	-	-
10. Lampung	9	-	9
11. South Sumatera	8	2	10
12. West Sumatera	13	-	13
13. North Sumatera	6	1	7
14. Aceh	6	-	6
15. Jambi	3	-	3
16. Riau	7	5	12
17. Bengkulu	7	1	8
18. Maluku	3	-	3
19. South Sulawesi	15	11	26
20. Central Sulawesi	6	-	6
21. Southeast Sulawesi	8	-	8
22. North Sulawesi	7	-	7

Table 7. Continued

Department/Region	Short-term participants	Long-term participants	Total
23. West Kalimantan	3	2	5
24. Central Kalimantan	7	1	8
25. East Kalimantan	8	2	10
26. South Kalimantan	5	-	5
27. Irian Jaya	4	-	4
	186	38	224
S.T. Percent	53%	61%	54%
Total Participants	351	62	413

participants have also developed professional ties and linkages with participants from central Ministry offices. Thus, participants trained under the ADPA project provide an excellent professional base for developing a more effective integrated agricultural planning effort in the future.

V. AGRICULTURAL POLICY ANALYSIS

Agricultural policy and planning analysis was approached in two stages. The first stage involved a basebook analysis of growth and equity policy consideration in Indonesian agricultural development. The two-year study from 1980 to 1982 concluded with the publication of a soft-covered book, which was distributed to participants of the XVIIIth International Conference of Agricultural Economists held in Jakarta during the late summer of 1982. A second stage, more in-depth, agricultural policy and planning analysis was initiated immediately thereafter to draw on the work of the basebook study and to expand the areas of research, policy analysis and planning recommendations. This second stage policy and planning analysis study was in the final stages of completion when the contractor's technical assistance activities came to an end in April of 1984.

A. Basebook Agricultural Policy Research

Initial discussions concerning the carrying out of an agricultural policy and planning research analysis on growth and equity considerations in Indonesian agricultural development began in 1980. By 1981, the agricultural policy and planning research outline was finalized, participating research professionals were identified, and the first of several policy workshops on Indonesian agricultural growth and equity considerations was held. Growth and equity policy research collaborators were drawn from the most experienced agricultural research analysts within the university and government communities. These senior Indonesian policy researchers were assisted throughout the study by ISU policy research

consultants. Senior Indonesian policy researchers who made major contributions to the growth and equity basebook policy analysis are shown in Table 8. They were assisted by several other Indonesian researchers who also made significant contributions to the policy research effort. Many of the senior Indonesian researchers also served as major professors or committee members for ADPA in-country degree participants, thereby establishing a close link between the research and training elements of the project.

Agricultural policy research consultants who collaborated in the basebook policy research study included the following Iowa State University consultants: (1) Dr. E. O. Heady; (2) Dr. Willi Meyers; (3) Dr. Walt Butcher; (4) Dr. Lee Fletcher; (5) Dr. H. Van de Wetering; (6) Dr. Gary Vocke; and (7) Dr. Randall Hoffmann. Dr. Chuck Howe, a Rockefeller Visiting Professor at Gajah Mada University from the University of Colorado, also assisted in the study.

Individual basebook policy research manuscripts were completed in February of 1982 and were subsequently edited by Professor Mukyarto with assistance from ISU policy research consultants. Publication of the basebook policy analysis results in a soft-covered book was completed in the summer of 1982 and was formally presented at the XVIIIth International Conference of Agricultural Economists. Reactions to the agricultural policy basebook were uniformly complimentary. Unsolicited comments from widely known international agricultural economists included the following:

Table 8. Principal contributors, "Growth and Equity in Indonesian Agricultural Development," Yayasan Agro Ekonomika, Gadjah Mada University Press, 1982

Contributor	Position
1. Aceh Partadiredja	Professor of Economics, Gadjah Mada University; M.S. and Ph.D., University of Wisconsin, 1962 & 1966.
2. Affendi Anwar	Professor of Agricultural Economics - Bogor Agricultural University; Ph.D., Montana State University, 1974.
3. A. T. Birowo	Director, Bureau of Planning, Ministry of Agriculture (Presently Advisor to Minister of Agriculture); M.S., Iowa State University, 1961, and Ph.D., Uppsala University, 1964.
4. Dibyo Prabowo	Lecturer in Resource Economics, Gadjah Mada University (also Advisor to Junior Minister of Estate Crops); M.S., University of Philippines, 1970, Ph.D., Washington State University, 1977.
5. Djoko Budiarto	Staff, Agency for Agricultural Research and Development; Ph.D., University of Geissen, West Germany, 1979.
6. Faisal Kasryno	Professor of Agricultural Economics, Bogor Agricultural University and Staff, Agro Economic Survey (presently Head, Center for Agro-Economic Studies, AARD); Ph.D., Iowa State University/University of Nebraska, 1979.
7. Herman Soewardi	Professor of Rural Sociology, Pajajaran University, Bandung; Ph.D., Pajajaran University, 1972.
8. Mubyarto	Professor of Economics, Gadjah Mada University; M.A., Vanderbilt University, 1962; Ph.D., Iowa State University, 1965.

Table 8. Continued

Contributor	Position
9. N. A. Sanusi	Staff, Bureau of Planning, MOA; M.S., Cornell University, 1981.
10. Sajogyo	Professor of Rural Sociology, Bogor Agricultural University; Ph.D., University of Indonesia, 1957.
11. Syarifudin Baharsyah	Professor of Agricultural Economics, Bogor Agricultural University, and Head, Center for Agro-Economic Studies, AARD (presently Secretary General, MOA); M.S., University of Kentucky, 1969, Ph.D., North Carolina State, 1973.
12. Soetatwo Hadiwigeno	Senior Lecturer and Dean of Faculty of Economics, Gadjah Mada University (presently Director of Bureau of Planning, MOA); M.A., University of Colorado, 1969, and Ph.D., University of Illinois, 1974.
13. I. B. Teken	Professor of Agricultural Economics and Dean of Agriculture, Bogor Agricultural University (presently also Advisor to the Minister of Agriculture, MOA); M.S., University of Kentucky, 1962, and Ph.D., Purdue University, 1971.
14. Sedonio M. P. Tjondronegoro	Professor of Rural Sociology, Bogor Agricultural University; Lecturer, Department of Sociology & Southeast Asian History, University of Amsterdam, 1967-1971.

- (1) David Penney, "a marvelous contribution to the conference...worthy of very careful study."
- (2) Don Hedley, "even five years ago a book like this would have been nearly impossible," (referring to the growing strength of the agricultural economics profession in Indonesia).
- (3) Bruce Johnson, "extremely interesting, enlightening and useful."
- (4) Don Paarlberg, "my compliments...for the excellent basebook that has been prepared for us."
- (5) H. W. Arndt, "most authoritative, comprehensive and thoughtful account of Indonesian agricultural development at present available."

Many other additional constructive comments and questions were presented during the conference, which have provided useful input for continued agricultural policy and planning research.

A note of appreciation was included in the preface to the growth and equity basebook recognizing the contributions of the ISU consultants. A summary of this note of appreciation is as follows:

...are very thankful for the encouragement and generous assistance from a group of consultants from Iowa State University under the leadership of Professor Earl O. Heady. These consultants were attached to the Department of Agriculture, Republic of Indonesia and funded by US-AID. The consultants helped outline the contents of this book and aided the monthly workshops in Jakarta in discussing the various drafts of the book. The team of consultants included Lehman B. Fletcher, Earl O. Heady, Randall Hoffmann, Willi Meyers, Hylke Van de Wetering all from Iowa State University and Walt Butcher from Washington State University.... (Note of Appreciation, Preface, "Growth and Equity in Indonesian Agricultural Development," page vii).

B. In-depth Policy Analysis

The second stage in-depth agricultural policy and planning analysis research effort began in early 1982 following completion of the initial basebook key policy area manuscripts. Planning and organizational meetings were held in the spring of 1982. New research support funds were approved by the Canadian International Research and Development Center (IDRC) as well as obtaining a commitment for continued ISU consultant support and supplementary Indonesian consultant support from the AID funded ADPA project. A final assessment and planning meeting between IDRC representatives and Department of Agriculture officials was held during the first week of September, 1982. Additional policy researchers were added to the policy research group and the original six key policy areas were expanded to include a seventh area on agricultural policy synthesis, evaluation and recommendations. Advanced ADPA degree participants were incorporated into the research study group as associate researchers to include relevant aspects of their dissertation research and to provide them with valuable experience in on-going policy research. A summary of the second stage in-depth agricultural policy and planning analysis senior policy researchers, consultants, support staff and ADPA participant associate researchers is provided in Table 9.

Table 9. Growth and equity agricultural policy researchers and support staff

Name	Organization
1. Dr. A. T. Birowo	MOA/UGM
2. Dr. Sjarifuddin Baharsyah	MOA/IPB
3. Dr. Soetatwo Hadiwigeno	MOA/UGM
4. Dr. Faisal Kasryno	MOA/IPB
5. Dr. Djoko Budianto	MOA
6. Ms. Ratna Djuwita Wahab, M.S.	BAPPENAS
7. Dr. I. G. B. Teken	IPB/MOA
8. Dr. Affendi Anwar	IPB
9. Dr. Sayogyo	IPB
10. Dr. M. P. S. Tjondonegoro	IPB
11. Dr. Ace Partadiredja	UGM
12. Dr. Achmad Sumitro	UGM
13. Dr. Dibyo Prabowo	UGM/MOA
14. Dr. Gunawan	UGM
15. Dr. Loekman Sutrisno	UGM
16. Dr. Nopirin	UGM
17. Dr. Mubyarto	UGM
18. Dr. Herman Soewardi	Univ. Pajajaran
19. Dr. Walt Butcher	ISU/ADPA
20. Dr. L. B. Fletcher	ISU/ADPA
21. Dr. R. A. Hoffmann	ISU/ADPA
22. Dr. Willi Meyers	ISU/ADPA
23. Dr. H. Van de Wetering	ISU/ADPA
24. Mr. Nanu Sanusi, M.S.	MOA
25. Mr. G. Panggabean, M.S.	MOA
26. Ms. Metrawinda Tunus, Ir.	MOA
27. Ms. Ning Pribadi, Ir.	MOA
28. Ms. Sri Widayati, Ir.	MOA
29. Ms. Ratna Siregar	MOA
30. Drs. Hendro Soewarno	MOA/ADPA
31. Drs. Rusminto Wibowo	MOA
32. Mr. Atifah Thaha, MSC	MOA
33. Mr. Deddy Ma'mum, M.S.	ADPA/IPB
34. Mr. H. Suryatman, M.S.	ADPA/IPB
35. Mr. Murasa Sarkaniputra, ABD	ADPA/UGM

Both macro and sector economic models were developed and analyzed for specific policy analysis topics of the second-stage policy research effort. Macroeconomic model analysis was carried out by Dr. Faisal Kasryno, Dr. Djoko Budianto, and ADPA participants Deddy Ma'mum and H. Suryatman with the collaboration of ISU consultant Dr. H. Van de Wetering. A food crop sector model was developed and analyzed by Dr. I. G. B. Teken and Dr. Willi Meyers with the collaboration of Mr. Ratna Djuwite Wakot and Dr. Randall Hoffmann. These models provide valuable information for current policy analysis in addition to providing a basis for continuing and expanding research.

The last policy analysis workshop in which ISU policy consultants participated was in January of 1984. At that time, four of the key policy areas had made excellent progress and were nearing the completion of their manuscript preparation. Two additional key policy areas had made some progress. However, the last section on synthesis and policy conclusions was lagging behind waiting for completion of all KPAs. A final agricultural policy workshop was held during the first week of May 1984. Because ISU technical assistance to the ADPA project ended on April 12, the contractor's consultants were not able to participate in this final workshop session. If all key policy areas were covered sufficiently in the final May presentations, it would be advisable to proceed with the editing and publishing of the complete version of the policy analysis study, even though some areas might be stronger than others. If, on the other hand, there were significant deficiencies in one or more areas, it might be necessary to allow independent publication of finished section

manuscripts and postpone final publication of the complete policy study until such time as the deficient areas are brought up to a reasonable level.

One of the most significant accomplishments of the ADPA project has been the formation of a professional cadre of agricultural policy researchers under the auspices of the growth and equity policy research studies. As shown in Table 9, 18 of the most knowledgeable and highly respected Indonesian agricultural policy specialists were brought together to share and integrate their research experiences and to serve as a forum for the review of alternative agriculture policies. Most of these policy analysts have been together since inception of the ADPA policy analysis research effort in early 1981 and have actively participated in the growth and equity workshops as well as other agricultural policy reviews. Several have recently assumed high level positions as administrators or consultants within the Ministry of Agriculture where they can utilize their research experiences with the growth and equity studies to make significant contributions to Indonesian agricultural policy decision making in the future. ADPA advanced degree participants joined the growth and equity research group for the second study and benefited greatly from their interactions with the senior policy researchers.

The professional research experience and interactions gained by the group of high level Indonesian policy analysts is a very positive foundation that merits consideration for continuation and expansion of policy research efforts in future project development.

VI. DATA MANAGEMENT AND PROCESSING

A. Background

Preliminary project design viewed the ADPA project as a single integrated program with agricultural policy, planning and data processing functions all centered at the Bureau of Planning located at the Secretary General's office complex on Iman Bonjol in central Jakarta. Subsequent GOI organizational and functional changes and related project reformulation assigned the data management and processing function to the Center of Agricultural Data Processing (CADP) of the newly created Agency for Agricultural Research and Development (AARD). The newly formed CADP was given Ministry-wide responsibility for processing of agricultural data. A former library building at the MOA Pasar Minggu complex was remodeled to provide temporary accommodations for CADP staff and project acquired computer hardware. The CADP remained in the temporary converted facilities for approximately four years while permanent building facilities were being constructed at the MOA Ragunan campus in the outskirts of Jakarta. The CADP staff and hardware moved to the permanent Ragunan campus location in November of 1983 where excellent building facilities and space are currently available.

B. Current Status

The Computer Center of the CADP has been operational for four years and is currently serving all first echelon levels of the MOA with the exception of the Directorate General of Animal Husbandry. Services offered consist of the following: (1) data key entry; (2) computer processing time; (3) computer programming assistance; (4) development

and/or acquisition of specialized software packages; (5) management of computer user training; (6) provision of informational seminars on data processing; and (7) advisory consultations for other ministry equipment acquisitions. The computer center is open from 08:00 a.m. to 15:00 p.m. from Monday through Thursday, 08:00 a.m. until 11:00 a.m. on Friday and 8:00 a.m. until 14:00 p.m. on Saturday. Major utilization of the central processing unit consists of production jobs, program development and software package conversion.

The Computer Center is organized as a Bidang within the Center for Agricultural Data Processing under the Agency for Agricultural Research and Development. It is divided into four sub-Bidangs which include the following functional areas: (1) operations, (2) systems analysis and programming, (3) programming and data base management and (4) training and technical assistance. The current computer center staffing pattern includes: (1) fourteen systems analyst/programmers trained at the NCI; (2) seven junior programmers trained locally; (3) one data base manager with NCI and HIS training; (4) one systems programmer also trained at NCI and HIS; (5) six computer operators; (6) ten data entry operators; and (7) one disk, tape and reference material library specialist. Four systems analysts and computer application specialists are currently completing Ph.D. programs in the United States at Iowa State University, Southern Illinois University and Oklahoma State University.

Hardware facilities, currently operational at the Computer Center MOA campus complex, consist of a Honeywell Level 6, Model 53, 16 bit, 1 megabyte internal memory minicomputer with six on-line terminals and a

Texas Instruments 990/10 data entry system with six on-line terminals. Both of these systems were acquired from project loan funds. A second Honeywell-Bull Mini 6, Model 43, 16 bit minicomputer with 192 KB internal memory and eight on-line terminals is located in Bogor where it serves a dual purpose for data entry and data processing of limited size applications. This Honeywell-Bull equipment was purchased from GOI funds as supporting equipment for the main installation. More recently an IBM 4331, 32 bit, entry level main frame computer has been acquired using project funds for data entry and processing of scientific and technical information in support of the national farm survey and other scientific research projects. The IBM equipment was installed during the summer of 1984 in a temporary location at the Agro Economic Survey building complex in Bogor. It should be fully operational by the fall of 1984.

The Computer Center maintains a library with over 30 text references on computer systems, program languages, systems analysis, data base design, statistical methods and survey design. Copies of professional journals and computer application magazines are also available at the library.

Computer services are available to MOA users at no cost during normal working hours subject to the priority processing system established by the Computer Center. When overtime is required to complete a job, the user is billed for the overtime expenses incurred.

C. Data and Information Processing Hardware

One of the major activities of the ADPA computer sub-project concerned the development of specifications, bid tendering, contract

negotiations, installation inspection, and operational approval of data and information processing hardware acquisitions. This was an extremely time consuming and tedious task as all conditions of AID, as the loan agent on the majority of the equipment, and the Government of Indonesia, as the purchaser, had to be met. A total of four different data and information processing hardware acquisitions were made under the ADPA computer sub-project. These included: (1) a Honeywell minicomputer for use as the principal data base management and processing equipment of the CADP; (2) a Texas Instruments data entry system; (3) an IBM entry level main frame computer for scientific and technical data analysis; and (4) a Wang information processing system for improving office management and administration functions of the Secretary General's office.

Specifications for the main data base management and processing equipment of the CADP were developed by a specially constituted ADPA committee in early 1980. Hardware configurations tendered included a 16 bit Honeywell Level 6 minicomputer, a 16 bit Perkin Elmer minicomputer, and a 32 bit IBM 4331 entry level main frame computer. The Honeywell Level 6 was chosen based on a low cost bid with the purchase contract signed in October of 1980. The equipment was installed at the Pasar Minggu location in June of 1981. A three-year service maintenance contract was subsequently signed with the supplier of the Honeywell Level 6 equipment. As of April of 1984, the Honeywell Level 6 system had the following configuration: 1 megabyte of internal memory, 750 megabytes of on-line disk storage, 4 magnetic tape drives, one 600 lines per minute

printer, one 300 lines per minute printer, eight on-line terminals, four on-line serial dot matrix printers and a 300-cards-per-minute card reader.

The MOA using DIP money acquired a Honeywell-Bull Mini 6, Model 43, 16 bit, minicomputer system to provide support assistance in data entry and data processing activities. To meet the needs and data processing demands of research stations and institutes in the Bogor area, this equipment was subsequently transferred from Pasar Minggu to Bogor. Configuration of the Honeywell-Bull Mini 6 includes: 192 KB of internal memory, 10 megabytes of on-line disk storage, one magnetic tape drive, one on-line serial dot matrix printer and six on-line terminals.

With the realization that the Honeywell-Bull Mini 6, Model 43, could be better used for data processing and related data entry in Bogor rather than as a primary data entry system in Jakarta, a need for a new key entry data system was created. This need was filled through creation of a tender and selection of a supplier to provide a Texas Instruments 990/10 data entry system. The data entry system was installed during the summer of 1982 and currently has the following configuration: 512 KB of internal memory, 10 megabytes on-line disk storage, one on-line serial dot matrix printer, 1 magnetic tape drive and eight on-line terminals. This equipment is also installed at the MOA building complex in the Ragunan area.

Completion of the data base activities will require that the Honeywell Level 6 and Texas Instruments 990/10 computer configurations be expanded to provide adequate on-line disk storage, expended internal memory and data entry facilities to maintain the data base information

available at all times for immediate reference by the users. Expansion of the main unit Honeywell Level 6 minicomputer will require additional internal memory, disk drives, terminals and controller units. A contract to provide part of this expansion was awarded to P. T. Komputer Media in the spring of 1984. In order to partially meet the keying requirements of data needed to load the data bases, the Texas Instruments 990/10 data entry system will also need to be expanded to extend the number of key entry terminals from 8 to 20. This expansion was in the planning stages for delivery before the close of fiscal year 1984 subject to available funding.

Research activities of the Center for Agricultural Economics have expanded significantly since initiation of the ADPA project. The CAER is also currently involved in an extensive national farmer survey, PATANAS. The expanded research and survey activities created a need for scientific technical data processing equipment that could process data and provide appropriate analysis of economic models and survey data. Based on this need for scientific and technical data processing facilities, it was determined that an IBM 4331 computer could most adequately fulfill this data processing and analysis requirement. The IBM 4331 computer and related support equipment were purchased from loan funds and scheduled for delivery and installation in Agro Economics Survey building facilities at Bogor in June of 1984. The IBM 4331 is a 32 bit entry level main frame computer with considerable expansion capability for adding additional internal processing memory, terminals and related peripheral equipment.

It is also capable of running major full-sized scientific data analysis software programs such as SAS, SPSS and MPS-X.

In order to facilitate the management of administrative operations within the Office of the Secretary General of the MOA, several office management systems were reviewed. A determination was made that a Wang office management system with capabilities for word processing, file management and report generation would most closely fit the needs of the Secretary General's office and staff. An initial system with four terminals was in the process of being acquired in the spring of 1984. Subject to successful completion of purchase requirements, it should be installed and fully operational by the fall of 1984.

With these four major equipment acquisitions and related expansions, the major computational and information processing needs of the Ministry of Agriculture have been met for the short-term future. Further expansions and up-dates will be required, but the main installations are in place. Major remaining activities in this area revolve around the effective utilization of this equipment. This is primarily a management function and has implications for organization, administration, procedures and standards, user awareness and application training, and timely throughput of job requests. Appropriate, effective and timely utilization of existing equipment should receive major attention during the initial phase of any project continuation.

D. Data Processing Software

A shortage of usable software programs caused an initial constraint to expanded user utilization of the Honeywell Level 6 minicomputer.

Initial efforts of Computer Center staff and consultants focused on development of software processing programs for specific purpose analysis as well as the conversion of public domain professional computer analysis programs to meet the hardware and operating system specifications of the Honeywell minicomputer. The following special purpose programs were developed for use on the Honeywell Level 6 minicomputer: (1) time series analysis; (2) simple regression; (3) factorial analysis; (4) split plot and split/split plot analysis of variance; (5) Wilcoxon signed rank test; (6) Mann Whitney "U" test; (7) Spearman rank-order correlation analysis; (8) contingency coefficient analysis; and (9) simplex linear programming. A COCENTS statistical tabular program was successfully converted to run on the Honeywell Level 6 as well as a DESFLEX fertilizer distribution system program and GOAL linear programming. A statistical tabular and analysis routine, MINITAB, was also converted to run on the Honeywell Level 6, but utilization has been constrained because of the limited internal memory of the computer. The following software programs are still in the process of being converted to the Honeywell Level 6 computer: (1) P-Stat; (2) BMDP; (3) Economic Simulation; (4) Geographical Information Retrieval Systems; and (5) the ISIS library documentation system.

Recent availability of two programs, SCSS and LINDO, has helped to make the Honeywell Level 6 more useful for Ministry professionals. SCSS is an interactive, small size version of the well-known statistical package for social scientists, SPSS. This version operates with 192 K of internal memory and should be usable on both the Honeywell Level 6 and an expanded Honeywell-Bull Mini 6. A parallel version of this small-scale,

interactive statistical program is also available for use on the IBM/XT personal computer as well as several other brands of similar desktop computers.

The linear programming package supplied by the Honeywell vendor had several limitations. Because of these limitations, no attempt was made to translate the French language manual to either English or Bahasa Indonesia. Within the last year, an integer linear programming package by the name of LINDO has been acquired. This has been successfully compiled on the Honeywell Level 6 and should be of some assistance where integer linear programming applications are required. Attempts are currently being made by CADP staff to modify LINDO so that it can also handle the more common non-integer linear programming applications.

A further constraint to successful software development and package conversion was the co-existence of two separate and distinct Honeywell operating systems, GCOS 400 and GCOS 600. The GCOS 400 operating system was a simplified and limited version which could be run on both the Honeywell and Honeywell-Bull computers. GCOS 600, on the other hand, was a more complete and sophisticated operating system that was acquired for the Honeywell Level 6 minicomputer and could not be used on the Honeywell-Bull minicomputer. Initial versions of GCOS 600 had computer glitches and bugs. Updates were difficult to obtain. Honeywell has since discontinued development of the two different versions and has developed a new operating system which combines aspects of both of the original systems. The two different operating systems, program bugs and

difficulties in obtaining updates seriously handicapped conversion of large scale computer packages to the Honeywell equipment.

Recent acquisition of the IBM 4331, 32 bit, mainframe computer should provide a positive alternative for computer application utilization and further software development. Nearly all major application programs are available for the IBM including such frequently used applications as full-sized SPSS (Statistical Package for Social Scientists), SAS (Statistical Analysis System), MPS-X (Mathematical Linear Programming System, Extended) and other commonly used analytical computational programs.

E. Data Base Systems

A major activity of the data processing sub-project has been the initial development, monitoring, assistance and guidance of the administrative, technical and material data bases. The administrative and technical data base development has been supported by ADPA project funds, while the material data base was added as a complementary activity using Ministry DIP funds.

The administrative and technical data bases are being approached in a three-phase development approach; design, implementation and loading. Design of these two data bases was carried out by a local software company, P.T. Masrida. This process involved determination and consensus concerning the component data and interrelationships that would be included in the data bases. The software company was selected by an open tender and the contract let in April of 1981. The design phase was subsequently completed in August of 1982. The initial plan for carrying

out the implementation phase of the data base design was to have the same company perform the implementation development. Internal problems within the company made this impossible and a decision was made to tender the implementation project. P. T. Dassad won the tender bid and initiated work in June of 1983. Although work was scheduled to be completed in April of 1984, a four- to six-month extension will probably be necessary in order to complete data base implementation work. This phase concentrates on linking the data base information and reports arrived at during the design phase to the data base management and query system of the Honeywell computer system with emphasis on most rapid and efficient procedures for extracting information from the data base and making it available in user formats either as screen summaries or hard copy printouts.

The initial design of the administrative data base included all aspects of administration except material. A review of Ministry needs indicated that most organizations within the Ministry would benefit from the implementation of the material system. Based on this assessment, the CADP, using DIP funds, established a tender, received bids and selected a contractor to design and implement the system. The system design and implementation are being monitored and guided by CADP staff members to insure that it meets contract standards and the needs of the Ministry of Agriculture.

Carrying the data base concept through to its final utilization stage is a very ambitious undertaking in terms of both human resource and financial needs. Timing of this activity will necessarily extend well

into the current five-year development plan and beyond the time period of the initial ADPA project. If this activity is to be carried forward into future project development, several basic and interrelated determinations will need to be answered: (1) Is the present Honeywell/TI hardware capable of fulfilling the data processing needs of the data base system? (2) Will the data base system be implemented across the board or on a component by component basis? and (3) Will the data key entry be performed at a central location such as the CADP or decentrally at each of the pertinent Ministry units? The October 1983 consultation and report by Sandra Rowland and Bill Stuart provides some insight into the first determination. A seminar chaired by Mike Morfitt of the USAID Program Office on February 22, 1984, and the subsequent summary paper provides some guidance for the second determination. This seminar brought together several consultants and users who had worked with implementing data bases in Indonesia. The discussion brought out the advantages of proceeding on a step-by-step basis to allow testing and redesign as implementation proceeded. The third determination will depend partly on the previous second decision. An across the board data key entry effort would involve massive outlays of capital for key entry equipment as well as many key entry operators and probably could not be done in one central location. These are difficult determinations which will nevertheless need to be addressed.

F. Staff Development and Training

The Center for Agricultural Data Processing initiated its activities without a core group of trained staff. A two-pronged approach was used

for computer training. The main group of staff members, who would become systems programmers and analysts, was sent to medium-term training programs in the Philippines and Thailand. Selected staff were also chosen to pursue long-term degree programs in the United States in computer science and related programs.

The medium-term training provided by the National Computer Institute in the Philippines was particularly effective in training staff for needs of the CADP. The training at the NCI is offered in segments with an average total program requiring between 9-12 months of training. Returnees from this training program were well prepared and well satisfied with the NCI training program.

Two CADP staff members were initially selected for long-term training in computer science in the United States. These participants have completed their M.S. degrees and have initiated or will initiate Ph.D. programs in computer science. Training sites for these two initial long-term participants are Iowa State University and Southern Illinois University. Two additional long-term participants were programmed by the ADPA project for Ph.D. level training in computer applications and related fields. Because of the short time remaining under the ADPA project, they were funded from alternative World Bank funding sources. These participants are currently studying at Oklahoma State University, where one earned a straight A average during his first year of training.

Preparing staff members of the various units within the Ministry for transition to computerized data processing was another major task of the Center for Agricultural Data Processing. User training has involved

training large numbers of personnel in computer packages and computer languages. Computer package training was provided at the University of Gadjah Mada while computer language training was held in Jakarta at private training institutes. Although the basic plan called for training 250 users in computer packages and languages, this target was more than met with 264 users having been trained to date under the ADPA project. A summary of computer training for CADP staff and MOA users is shown in Table 10. About 300 participants have received computer training under the ADPA project to date.

In addition to the formal training activities, some ten informational awareness seminars were presented on the use of computers, activities of the CADP and system development. The seminars were presented in Jakarta, Bogor, Yogyakarta and Medan for both Ministry of Agriculture and related user organizations. Additional related training activities have included two management seminars for CADP staff and attendance at a seminar in data base control and audit in Singapore.

While considerable success has been achieved in computer training to date, additional effort in professional staff development and computer usage will be required in the future. Not only will the needs of the Ministry for trained staff expand, but competing demand from within and without the Ministry will place considerable pressure on professional staff of the CADP for outward movement for job promotion or higher remuneration. For future user training, it would be helpful if user trainees could be selected based more on individual needs and then training offered to match these needs.

Table 10. Summary of computer training for C/DP staff and MOA users

Type of training	No. participants/ training programs
1. Long-term professional training	
a. Computer Science; I.S.U. & S.U.I.	4
b. Statistics, I.S.U.	2
c. Statistics; Univ. Philippines	1
d. Econometrics/Ag. Econ.; OK.S.U.	2
Sub-total	<u>9</u>
2. Mid-term professional training	
a. National Computer Institute, Quezon, Philippines	17
b. Asian Institute of Technology Bangkok, Thailand	5
c. Honeywell Information Services Wellesley, Massachusetts	6
Sub-total	<u>28</u>
3. Short-term user training	
a. Computer applications, University of Gadjah Mada	57
b. Computer languages Masrida, Dassad, Binacipta	207
Sub-total	<u>264</u>
4. Total	301

Staff development and training at the computer center are also discussed in other sections on professional resource development and training.

G. Professional Status and Remuneration for CADP Staff

If the full potential of the CADP is to be realized, a trained and experienced staff will need to be retained. This will require a technical advancement career path be created for CADP programmers and analysts. To the contrary, programmer/analyst staff will find it necessary to leave their technical field and enter administrative positions in order to advance in terms of responsibilities and pay grade within the Ministry or accept alternative employment opportunities outside of the Ministry. Development of a career path for CADP programmers/analysts should receive major attention during any new or follow-on project. To date, the only GOI organization known to have a computer technical field is the Central Bureau of Statistics. Attempts should be made during future projects to model the technical advancement requirements after those authorized for the CBS in hopes of strengthening possibilities of obtaining the required monetary, administrative and professional recognition. This will require creating position descriptions with educational and experience requirements for each job and a testing or evaluation procedure for advancing to the next higher rank.

In addition to the technical career path, both overtime and incentive pay is needed for technical staff. Investigations have shown that most computer organizations within the government have authorized incentive pay for their computer staff in order to retain them in government and to keep

their morale at a level where they give their best effort. A major emphasis should be placed on obtaining funds to provide CADP staff incentive and overtime pay. Overtime pay will be needed when a second or third shift becomes necessary at the computer center.

VII. PROJECT STAFF

The original contractor's proposal to the Ministry of Agriculture recommended that the in-country technical assistance staff include two agricultural economists/planning specialists and one computer specialist. This was later reduced to one agricultural economist/planning specialist and one computer specialist during contract negotiations because of anticipated budget limitations. Subsequent needs for expanded assistance in the data processing activity resulted in the contract being amended to incorporate a third long-term position of systems analyst to provide assistance in the development and conversion of computer software programs for the Honeywell Level 6 minicomputer at the CADP. With the inclusion of the systems analyst, a total of 135 person months of long-term technical assistance was provided to the ADPA project. As shown in Table 11, 60 person months of Chief of Party/Planning specialist time and 75 person months of computer specialist and systems analyst time were included in the total long-term in-country technical assistance provided to the different components of the ADPA project.

Table 11. Long-term ISU resident staff in Indonesia

Position	Staff member	Period	P/M
1. Chief of Party/ Ag. Planning Spec.	Dr. Gary Vocke	07/79-08/81	25
	Dr. R. A. Hoffmann	06/81-04/84	35
2. Computer Specialist	Mr. Dan Peterson	10/79-01/84	52
3. Systems Analyst	Mr. Al Brown	08/81-06/83	23
	Total person months		<u>135</u>

Short-term technical assistance to the ADPA project was provided in the following areas: (1) training program development; (2) computer installation design; (3) data processing; (4) agricultural policy analysis; (5) statistical survey design; and (6) professional and administrative project review. About 27 person months of short-term technical assistance was provided to the various aspects of the ADPA project. Major focus of the short-term consulting assistance was in the area of agricultural policy analysis and planning. In addition to the professional services of Project Director Dr. E. O. Heady, a core group of senior agricultural policy analysts was drawn together to provide continuing assistance to the agricultural policy activity during the last three years of the project life. This short-term agricultural policy group included Professors Walt Butcher, Lee Fletcher, Willi Meyers and H. Van de Wetering. Members of this group worked closely with senior policy analysts of the growth and equity study groups, provided supplementary policy research capabilities, and participated in growth and equity policy workshops during their several consulting trips to Indonesia. They also assisted in editing the basebook agricultural policy study. A summary of short-term consulting services provided to the ADPA project is found in Table 12.

Resident campus staff were actively involved in supporting project activities taking place both in the United States and Indonesia. Most of this campus support was provided as a normal part of the University's administrative service without cost to the project. Campus staff who provided direct support to the ADPA project are shown in Table 13.

Table 12. Summary of ISU short-term ADPA consultants

Year	Beg. Mo.	Name	ISU Title	Purpose	P/M
1979	03	Luckett, D.	Professor	ContrSign&TrngPrg	2.0
	06	Merrill, W.	Professor	AdvProjPrep	2.0
		Grosvenor, P.	Dir Com Ctr	CADP Consultant	2.0
1980	03	Heady, E. O.	Proj Dir	Proj Review	0.5
	06	Neibaum, J.	Professor	DataProcSpec	1.0
1981	03	Heady, E. O.	Proj Dir	Proj Review	0.5
	06	Van de Wetering, H.	Professor	ProjAnal/Eval	1.0
		Fletcher, L.	Professor	Growth & Equity	1.0
	07	Meyers, W.	Assoc Prof	Food D&S	2.0
		Butcher, W.	Professor	Nat Resources	1.5
08	Scott, J. T.	Dean Int'l Prog	Adm. Consultant	0.1	
1982	01	Vocke, G.	Asst Prof	ADPA Consultant	1.0
	03	Fletcher, L.	Professor	Growth & Equity	0.5
		Heady, E. O.	Proj Dir	Proj Review	0.5
	06	Fletcher, L.	Professor	Growth & Equity	1.0
	07	Van de Wetering, H.	Professor	Macro Analysis	1.0
		Meyers, W.	Assoc Prof	Food D&S/Mktg	1.0
	08	Butcher, W.	Professor	Nat Resources	1.0
		Daly, Rex	Consultant	MOA Adm Org	1.0
	12	Kolmer, Lee	Dean Agr.	Admin. Visit	0.3
		Ray, Robert*	Governor	Trade/Admin	0.2
Swanson, D. H.*		Dir CIRAS	Trade/Admin	0.2	
1983	01	Fletcher, Lee	Professor	Growth & Equity	0.3
	03	Hasbrook, R. E.	Contracts Off	Adm Consultant	0.3
		Heady, E. O.	Proj Dir	Proj Review	0.5
	05	Meyers, W.	Assoc Prof	Food D&S	1.0
	07	Van de Wetering	Professor	Macro Anal	1.0
	08	Butcher, W.	Professor	Nat Resources	1.0
09		Cowan, Donna*	Assoc Dean	Food & Nutrition	0.2
1984	01	Fletcher, L.	Professor	Growth & Equity	0.3
	02	Meyers, W.	Assoc Prof	Food D&S	0.5
		Hickman, R.	Professor	Survey Design	0.5
				Total:	26.9
				Count:	30

*Funded from alternative non-ADPA sources.

Table 13. ISU campus support staff for the ADPA project

Function	Staff member
1. ISU Project Director	Dr. E. O. Heady
2. Int'l. Agr. Programs	Dr. J. T. Scott
3. Contracts & Grants	Mr. Richard E. Hasbrook
4. ISU Project Coordinators	Dr. W. C. Merrill Dr. Gary Vocke Mr. Darold Ackridge
5. Participant Coordinators	Ms. Leanne McGranahan Mr. Kevin Moore
6. Administrative Support	Ms. Verlee Clinefelter Ms. Sandy Nelson Ms. Janet Tryon Ms. Harti Elston Ms. Suzie Jaeger
7. Business Office Support	Mr. Roger Lively Ms. Stephanie Fox

The ADPA project was implemented under the guidance of the Secretary General of the Ministry of Agriculture who was the designated ADPA Project Officer. Operational implementation of project activities was assigned to the Director of the Bureau of Planning as Deputy Project Officer and two sub-project officers as shown in Figure 1.

Additional counterpart staff were also assigned to the ADPA project. A summary of Ministry of Agriculture ADPA project staff is shown in Table 14, which also includes periods of service to the project. Many other MOA professional and administrative staff members also assisted project officials in the implementation of various aspects of the project. MOA administrative staff who provided valuable assistance to the ADPA project included Sodiken, Tahir, Sutrisno, Iwan, Endang and Soejarwo, among others. Ratna Siregar, who initially worked in the director's office of the Bureau of Planning and is presently assigned to the office of the Minister, provided valuable coordinating and appointment assistance throughout the life of the project.

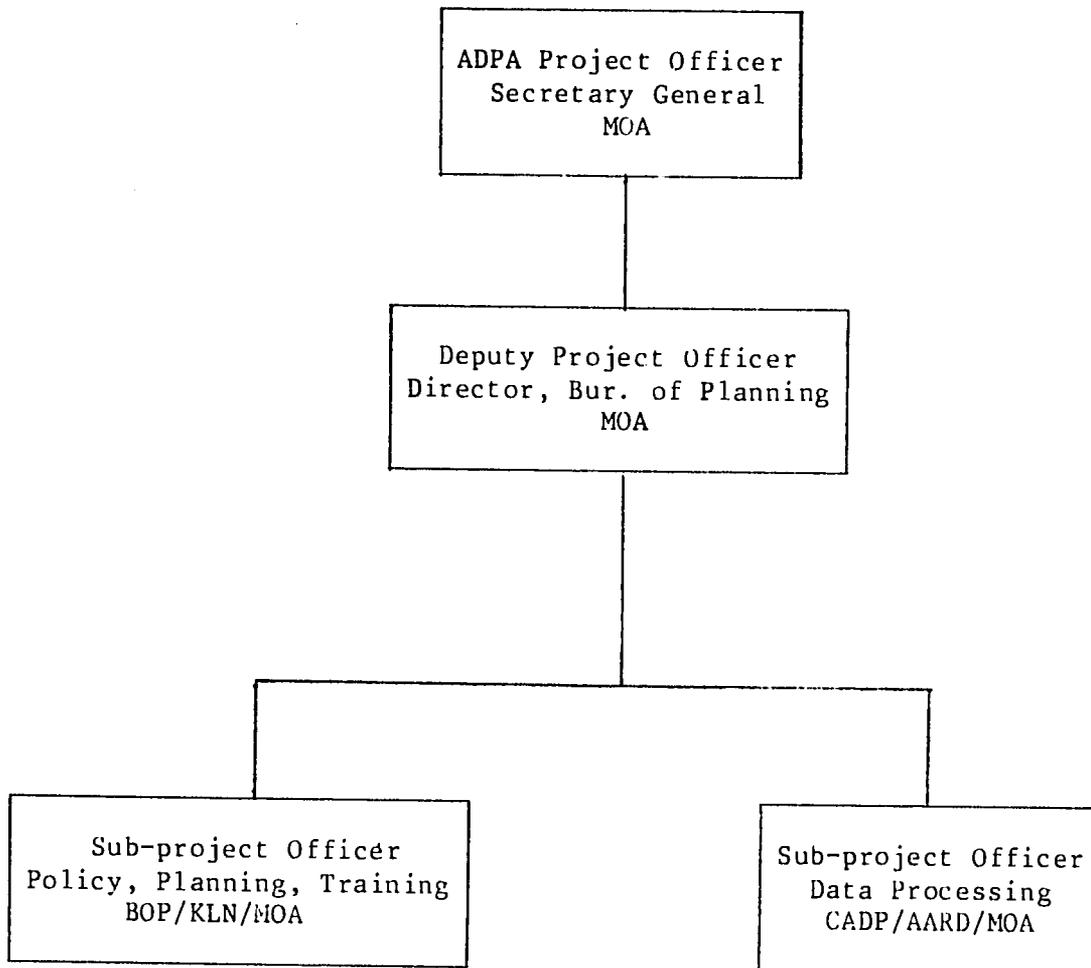


Figure 1. Ministry of Agriculture officials for administering implementation of the ADPA project

Table 14. Ministry of Agriculture project staff

Position	Staff member	Period	P/M
1. Secretary General/ Project Director	Mr. Panoedjoe	04/79-12/82	45
	Dr. Syarifuddin Baharsyah	01/83-09/84	21
2. Dir. Bur. of Planning/ Dep. Project Director	Dr. A. T. Birowo	04/79-05/83	50
	Dr. Soetatwo Hadiwigeno	06/83-09/84	16
3. Dir. CADP/ Sub-Proj. Officer	Dr. Sampe Tanapa	04/79-12/80	20
		07/83-09/84	15
	Dr. Subiyanto	01/81-07/83	31
4. Sec. Chief, Bur. For. Coop/ Sub-Proj. Officer	Drs. Hendro Soewarno	04/79-09/84	66
5. Agr. Economist/ Counterpart Staff	Dr. Djoko Budianto	07/79-06/81	24
	Mr. Nanu Sanusi, M.S.	01/82-12/83	24
	Ms. Metrawinda Tunis, I.	07/81-04/84	34
6. Chief, Comtpr Oper/ Counterpart Staff	Nainggolan, K.	10/79-08/83	47
	Hanif, M.	09/83-04/84	8
	Total person months		<u>401</u>

Three USAID project officers were actively involved in implementation of the ADPA project. Mike Korrin assisted in development and initiation of the project. Jim Gingerich was actively involved during the majority of the implementation phase of the project. Dr. Martin Hanratty assumed project responsibilities toward the end of the project and will be actively involved in any possible continuation of agricultural policy and planning activities. Additional support was provided by the agriculture, administrative, contract, finance, and program offices of USAID. Major project assistance was provided by the Training Office of USAID under the direction of Tom Ward and ably assisted by Subroto and Sally of the same office in the processing of ADPA external participants. A summary of USAID project officers and training support staff who assisted the ADPA project including the periods of service is found in Table 15.

Table 15. USAID project and support staff in Indonesia

Position	Staff member	Period
1. Dep. Chief AGR/ ADPA Proj. Offc.	Mr. Michael Korin	04/79-10/81
2. ADPA Proj. Off./ Head, Agr. Planning Sec.	Mr. James Gingerich	01/80-09/84
3. ADPA Proj. Off./ Agr. Policy Specialist	Dr. Martin Hanratty	02/84-09/84
4. Training Office	Mr. Tom Ward	04/79-05/84
	Mr. Subroto	04/79-09/84
	Ms. Sally	04/79-09/84

VIII. PROJECT IMPLEMENTATION

A limited number of unanticipated factors and issues arose during the life of the ADPA project which influenced the timing and the focus of the project. These factors and issues included English language skills of proposed third country and United States participants, delays in availability of computer software, uncertainty concerning the future role of the Bureau of Planning in agricultural policy analysis and administrative confusions in interpretation of Host Country Contract provisions.

English language skills are a requirement for third country and U.S. participant training. While English language training was provided in-country, difficulties were encountered in achieving acceptable language levels for several proposed participants. As a result, some participants had to be reprogrammed for in-country training. Others found their options were restricted to universities that would accept lower language proficiency levels or grant waivers contingent on taking additional English language training along with degree courses. Because of English language difficulties, the number of potential candidates for third country and U.S. training was constrained and delays were experienced by some participants who found it necessary to take additional language training as part of their degree training programs.

Software availability and development for the Honeywell Level 6 computer was a major technical problem for use of computer facilities by policy and planning researchers. Statistical and modeling software packages were not available during initial years of the CADP computer

center operations. Because of the special characteristics of the Honeywell Level 6 operating system and the ways in which program languages, especially FORTRAN, are implemented, attempts at converting public domain software packages to use on the Honeywell computer were only partially successful. Recent availability of a condensed version of a statistical package for social scientists has partially resolved this problem. When the IBM 4331 scientific computer and its related statistical and modeling software packages become operational at Bogor, an alternative data analysis and processing installation will be available for policy and planning researchers, which should help to resolve this problem area.

Assignment of the long-run agricultural policy analysis function to the Center for Agricultural Economics Research of AARD created a number of doubts and uncertainties concerning the remaining role and responsibility of the Bureau of Planning in agricultural policy analysis. A clearly defined role with assigned institutional responsibilities and structure would have greatly facilitated implementation of the policy analysis function of the ADPA project. Recent changes in administrative leadership and related clarifications of institutional roles and responsibilities for MOA agricultural policy analysis should provide a stronger base for future program design and implementation.

The working relationship between the Ministry of Agriculture and Iowa State University was specified in a host country contract between the two institutions. Terms and conditions of the contract were separate and specific to the clauses and provisions contained in the contract document.

Operational and administrative relationships between the MOA and ISU were excellent throughout the life of the project. However, confusion did arise within certain USAID administrative, finance and project review offices concerning the interpretation and applicability of some contract provisions. This confusion was resolved with the arrival of more experienced USAID administrative, contract and finance officers about two-thirds of the way through the life of the contract. On the whole, the host country contract functioned remarkably well as a vehicle for provision of technical assistance services to the Ministry of Agriculture.

IX. RECOMMENDATIONS

Much was accomplished during the five-year life of the original ADPA project. A major professional resource development program was carried out. Large quantities of data and administrative processing equipment were acquired. Two major agricultural policy studies on growth and equity issues in Indonesian agricultural development were implemented. In addition, a cadre of highly qualified professional experts on Indonesian agricultural policy and development problems was assembled to serve as a forum for the review and recommendation of alternative agriculture policies. Several members of this agricultural policy cadre have recently assumed high level administrative positions within the Ministry of Agriculture where they are in key positions to implement future developments in agricultural planning and policy.

Although much was accomplished during ADPA, these achievements are not sufficient for the long-run needs of the Ministry. The training program was broadly focused and those who were trained will require

on-the-job guidance to most effectively apply their newly acquired skills. While large quantities of data and administrative equipment were acquired, the application utilization of this equipment needs to be further developed and expanded. Further, the initial ADPA project was narrowly focused on only one element in the policy and planning process, the Bureau of Planning. More attention needs to be devoted to the broader interactions in policy and planning formulation involving both multiple agencies and different governmental levels. In short, although much was accomplished during ADPA, more remains to be done by building on the base already established.

In view of the above, it is recommended that a five-year, more sharply focused, continuation of the policy and planning activities be planned and programmed with sufficient financial support provided by an external donor. An external funding level of approximately \$10 million would seem appropriate with distribution of these funds destined as about one-third for technical assistance, one-third for training, and the remaining one-third for commodities, special studies and related activities.

A. Training

Training activities of the follow-on development planning project should be more need specific to fill training areas overlooked by the ADPA project and to anticipate possible attrition of staff already trained. This implies the need for a manpower study and projection of staff needs and related qualifications for the mid- to long-term future. Appropriate

ways also need to be designed so that newly acquired skills of returning participants can be utilized most effectively.

Long-term degree training might most appropriately be directed at the M.S. level with only selected individuals chosen for Ph.D. training based on past superior performances. At least two ADPA participants achieved Cum Laude or superior performance ratings in their M.S. programs and could be candidates for future Ph.D. training.

Short-term training for the future will need to be more goal specific. Indonesian universities and institutes have provided excellent training in the past, but curricula and staff need to be reviewed in order that training programs provide more direct relation to on-the-job needs. The successful on-site training program developed by BULOG and the Stanford Food Research Institute provides a model that might be adapted to MOA needs. Computer training for staff will need to be continued to provide for possible attrition and expanded needs. Training in applications of existing software should be emphasized for Ministry-wide users of data processing facilities.

Specialized English language training will also need to be provided for potential third country and U.S. participants in order to more adequately meet proficiency levels required by selected educational institutions. Potential participants would benefit from full-time language training in-country and/or from such special training programs in English language and academic review of basic core courses as offered by the Economic Institute at Boulder, Colorado.

B. Policy Analysis, Planning and Special Activities

The two growth and equity policy studies implemented under the ADPA project provided a great deal of background information concerning the agricultural sector of the Indonesian economy. In the process of implementing these studies, additional areas for future in-depth analysis were identified. Skilled researchers with management capabilities and dedication were also identified. Based on these research experiences, a nationwide agricultural policy agenda now needs to be developed with the appropriate institutional framework and related responsibilities specified. Once the agenda and framework are in place, funds will need to be provided in order to carry out more in-depth research on the priority issues identified. Appropriate funding needs to be made available for carrying out these kinds of special studies in a future project.

Policy decision makers require many different types of information for arriving at final decisions. An area which merits further development is the action analysis type of research that results in situation reports and outlook appraisals of immediate use to policy decision makers. Action analysis research tracks current trends and happenings in the agricultural sector. It uses the findings of other longer run research analysis to develop models and analytical frameworks that can respond quickly to "what if" policy questions. The demand/supply model developed by Teken and Meyers for the ADPA project is an excellent example of a policy model that can quickly respond to "what if" questions of policy makers. Professional technical assistance could be very effectively utilized in developing this type of action analysis capability within the Ministry.

C. Integrated Planning

While ADPA policy and planning technical assistance activities were more narrowly focused at the Bureau of Planning, long- and short-term training was broadly based with participants coming from many different directorates and spatial levels within the Ministry. Half of all degree participants came from the province level with South Sulawesi, West Java, and Riau provinces all sending substantial numbers of participants. These participants provide an excellent resource base from which a more integrated approach to agricultural planning might be developed. Rather than start with a nationwide integrated planning program, it seems more appropriate to limit initial steps to one or two provinces over an experimental and developmental period of five years. Selection of one province with a trained resource base and another with fewer trained staff resources would provide a basis for comparative analysis of integrated planning developmental efforts. Both technical assistance and special study funds would be needed to support this activity.

D. Agricultural Data Base

A major responsibility of the Center for Agricultural Data Processing is the design and implementation of the National Agricultural Data Base. Once installed and operational, this data base could provide extremely valuable services to the policy, planning and administrative functions of the entire Ministry of Agriculture. Two major determinations need to be made before attempts are made to load the data base. The first evaluation and determination is whether or not the Honeywell Level 6 minicomputer at CADP, or some upgraded version of this equipment, has the capacity to

fully implement a rapid response data base system as per discussions by Stuart and Rowland in their October 1983, consultation. The second determination involves how the data base will be loaded -- as a whole, by individual components, or some combination of the two approaches. The summary report of a data base seminar chaired by Mike Morfitt on February 22, 1984, should provide some additional insight for making this decision. Loading of the data base will require additional technical assistance and some special project funding support.

E. Long-Term Policy Analysis

The Center for Agricultural Economics Research currently is surveying farm households nationwide from which data on income, employment and farm production will be collected periodically. In addition, it also has several other policy oriented modeling exercises in process and under development. The recent acquisition of an IBM 4431 mainframe computer will help to resolve computational needs, but may not completely resolve all data entry needs. An experienced professional with training and experience in economics, statistics and computer applications could provide valuable services to research efforts of the CAER. Some funding for purchases of equipment and services not covered by other sources would also be beneficial for increasing the flexibility of the CAER in carrying out its policy research mission.

F. Technical Assistance

In order to provide sufficient professional support for future agricultural planning activities, a critical mass of at least four long-term consultants will be required. Two of these consultants could

appropriately be assigned to policy and planning tasks and attached to the Bureau of Planning and the Center for Agriculture Economics Research. They should have sufficient flexibility to interact and assist with the functions of other agricultural policy and planning units within and without the Ministry as well as with selected regional offices. In addition to responsibilities for assisting in long-run and action analysis policy and planning activities, they could also play an important role in identification and placement of participants as well as in the design and implementation of short-term and on-the-job training programs. They could also play an important role in identifying and specifying terms of reference for special research studies and in organizing inter-agency research, and policy discussions through policy and planning seminars, workshops and other types of formal and informal interactions. Professionals with strong backgrounds and demonstrated skills in agricultural economics analysis and analytical development skills will be required to fulfill the multiple tasks of these two policy planner consultants. Sufficient funding for short-term consultants should also be provided to complement the activities of long-term consultants and to perform special tasks concerned with short-term training, special policy and planning studies, project management and other related areas.

Technical assistance will also be necessary for further agricultural data base management and computer application activities at the center for Agricultural Data Processing and the Center for Agricultural Economics Research. Since most computer equipment has already been purchased and installed, emphasis should be placed on optimizing the use of present

installations with professional assistance provided for implementing the data base, processing of agricultural data and expanding the use of most appropriate computer application programs. Assistance in planning computer training programs for both staff and users should also be provided by these consultants. Professionals with strong backgrounds in computer applications, statistical analysis and econometrics would be most desirable for the long-term positions. Short-term consulting services will also be required for special data base implementation tasks, survey design, data entry and processing and statistical analysis.

APPENDIX A:
Summary Tables 1A to 16A

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Table 1A. Summary of ISU short-term ADPA consultants.

YEAR	BEGMO	NAME	ISU TITLE	PURPOSE	M/M
1979	03	Luckett, D.	Professor	ContrSign&TrngPrg	2.0
	06	Merrill, W.	Professor	AdvProjPrep	2.0
		Grosvenor, D.	Dir CompCtr	CADP consultant	2.0
1980	03	Heady, E.O.	Proj Dir	Proj Review	0.5
	06	Neibaum, J	Professor	DataProcSpec	1.0
1981	03	Heady, E.O.	Proj Dir	Proj Review	0.5
	06	Vandewatering, H.	Professor	ProjAnal/Eval	1.0
	07	Fletcher, L.	Professor	Growth & Equity	1.0
		Meyers, W.	AssocProf	Food D&S/Mktg.	2.0
		Butcher, W.	Professor	Nat Resources	1.5
	08	Scott, J.T.	Dean Intl Prog	Adm Consult	0.1
1982	01	Vocke, G.	Asst. Prof	ADPA consult	1.0
		Fletcher, L.	Professor	Growth & Equity	0.5
	03	Heady, E.O.	Proj Dir	Proj Review	0.5
	06	Fletcher, L.	Professor	Growth & Equity	1.0
	07	Vandewatering, H.	Professor	Macro Analysis	1.0
	08	Meyers, W.	AssocProf	Food D&S/Mktg	1.0
		Butcher, W.	Professor	Nat Resources	1.0
	12	Daly, Rex	Consultant	MOA Adm. Org.	1.0
		Kolmer, Lee	Dean Agr.	Admin. Visit	0.3
		Ray, Robert*	Governor	Trade/Admin	0.2
	Swanson, D.*	Dir CIRAS	Trade/Admin	0.2	
1983	01	Fletcher, Lee	Professor	Growth & Equity	0.3
	03	Hasbrook, R.E.	Contracts Off.	Adm. Consult.	0.3
		Heady, E.O.	Proj Dir	Proj Review	0.5
	05	Meyers, W.	AssocProf	Food D & S	1.0
	07	Vandewatering, H.	Professor	Macro Anal	1.0
	08	Butcher, W.	Professor	Nat Resources	1.0
	09	Cowan, Donna*	AssocDeanHEC	Food&Nutrition	0.2
1984	01	Fletcher, L.	Professor	Growth & Equity	0.3
		Meyers, W.	AssocProf	Food D & S	0.5
	02	Hickman, R.	Professor	Survey Design	0.5

		Total:			
		Count:	32		26.9

* Financed from other, non-ADPA, funding sources.

Table 2A. External long-term ADPA degree participants.

BEGYR	UNIV	NAME	DEPARTMENT	PROGRAM	MS	PHD
1979	CORN	Nanu Sanusi	BOP	AgEcon	C	
	ISU	Wahyudi Sugianto	BOP	AgEcon	C	P
1980	ISU	Hardono T.K.	BOP	AgEcon	C	
		M. Anwar Wardhani	FoodCrops	AgEcon		P
	SIU	M.H. Rantetana Togar Napitupulu	CADP/AARD CADP/AARD	CompSci CompSci	C C	P P
1981	ISU	Pantjar Simatupang	CAER/AARD	AgEcon		P
	NMSU	Edi Abdurachman Ahmad Muslim*	CADP/AARD KLN	Statistics AgEcon	C C	P
1982	ISU	Widarya Noer**	ForProdRI	RurSoc	C	
	NMSU	H. Sosroharsono	FoodCrops	AgEcon	P	
		S. S. Hardjanto	FoodCrops	AgEcon	P	
1983	OKSU	Kaman Nainggolan	CADP/AARD	Econ/AgEcon		P
	UofP	Ato Suprato	CADP/ADPA	Econ/AgEcon		P
		T. H. Basri	CADP/AARD	Statistics	C	
					15	8

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Table 3A. External ADPA advanced degrees completed.

BEGYR	UNIV	NAME	DEPARTMENT	PROGRAM	DGR	ENDYR
1979	CORN	Nanu Sanusi	BOP	AgEcon	M.S.	81/11
	ISU	Wahyudi Sugianto	BOP	AgEcon	M.S.	83/09
1980	ISU	Hardono T.K.	BOP	AgEcon	M.S.	83/05
	SIU	M.H. Rantetana	CADP/AARD	CompSci	M.S.	83/12
		Togar Napitupulu	CADP/AARD	CompSci	M.S.	83/12
1981	ISU	Edi Abdurachman	CADP/AARD	Statistics	M.S.	83/05
	NMSU	Ahmad Muslim	KLN	AgEcon	M.S.	83/12
1982	ISU	Widarya Noer	ForProdRI	RurSoc	M.S.	84/05
1983	UofP	Tjuk H. Basri	CADP/AARD	Statistics	M.S.	83/12
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Count:		9			9	
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Table 4A. External short-term ADPA participants.

YEAR	NAME	DEPARTMENT	COURSE	PIO/P	P/M
1980	Moffid Gunawan	BMat	Man&OrgChange	80369	1.5 1.0 1.0 1.5
	Munara Wargaprawira	BIMAS	SmFarmCredD&A	80418	
	Tjandra Nur Karim	FoodCrops	AgrProjPlanImpl	80382	
	Tody Soemarsono	Riau	ManAgrProjImpl	80416	
Count:	4				
1981	A. Manafe	NTTimur	AnalAgrCapProj	80540	2.0
	Bambang Mulyono	BIMAS	AgrProjImple	80513	1.5
	Herry Sudardja	Livestock	AnalAgrCapProj	80523	2.0
	Idar Nasution	DKIJ	Mgt&RoleWomen	80501	1.5
	K. Pratignyo	FoodCrops	StratDevelAgrSec	80514	3.0
	R.M.H. Manurung	FoodCrops	AgrProjImple	80513	1.5
	Redinal Aswin SH	KLN	MgtAgrOrgan	80515	2.0
	Sehab Budoyo	Livestock	LS&CropMgtSmFarms	80524	1.5
	Sigit Sunarto	BOP	StratDevelAgrSec	80514	3.0
	Soehartono Adipoetro	Livestock	LS&CropMgtSmFarms	80524	1.5
	Soenarsono	AARD	MgtAgrOrgan	80539	2.0
	Sri Isbarni	BIMAS	DataBases&AnalSys	80512	3.0
	Surjadi Hadijanto	BPO	EcForAgrPolM&P	80580	1.0
	Suwardi Puspowidigdo	FoodCrops	DataBases&AnalSys	80512	3.0
Victor Situmorang	NSumatera	MgtAgrCropOrgan	80581	1.5	
Count:	15				
1982	Budi Sampurno	BFIN	DevMktsAgrProd	80657	2.5
	Farida M. Mocharam	AETE	Mgt&RoleWomen	80648	1.5
	Ishak Sumantri	ForProdRI	Remote Sensing	80759	1.0
	Metrawinda Tunus	BOP	AgrProjImpl	80656	1.5
	Saefuddin Achmad	KLN	ManRurDevProg	80787	2.0
	Sandra Harris	BOP	EcFoAgrPol&p	80760	1.5
	Sri Widayati	BOP	AgrProjImpl	80656	1.5
	Suyono Suropati	BOP	ComPlan&Strat	80742	1.0
Count:	8				
1983	Abdul Hamang	CADP/AARD	DataBaseAnal	80819	3.3
	Harry Dewanto	BOP	IntRurDev	80840	2.0
	Ning Pribadi	BOP	AgrProjImp	80814	1.5
	Ratna Siregar	BOP	ComunStrat	80818	1.5
	Subiyanti M.	KLN	AgrProjImp	80672	1.5
Zainal Arrifin	BFin	IntRurDev	80840	2.0	
Count:	6				
Total:					
Count:	33				59.3

Table 5A. External ADPA professional computer training.

YEAR	CENTER	NAME	DEPARTMENT	COURSE	PIO/P	P/M
1980	NCI/P	Kamen Nainggolan	CADP/AARD	CompOper/Prog	70528	10.0
		Munawar Hanif	CADP/AARD	CompOper/Prog	70528	10.0
		Sablin Yusuf	CADP/AARD	CompOper/Prog	70528	10.0
		Yuanto Ismuyatmono	CADP/AARD	CompOper/Prog	70528	10.0
		Count:	4			
1981	AIT/T	Karmini Gandasamita	SRI/AARD	Programming	80482	4.5
		Egi Djanuiswati R.	DGEstCrop	Programming	80482	4.5
		Nur Cholik Budaeri	CAER/AARD	Programming	80482	4.5
		Tabel Bukit	FRI/AARD	Programming	80482	4.5
		Irzal Kamaruddin	BOP	Programming	80482	4.5
	HIS/US	Sablin Yusuf	CADP/AARD	SystemsAnal	80571	2.5
		Yuanto Ismuyatmono	CADP/AARD	SystemsAnal	80571	2.5
	NCI/P	Walyuno Ahmadi S.	CADP/AARD	CompOper/Prog	80481	12.0
		Iwan Fortuna M.	CADP/AARD	CompOper/Prog	80481	12.0
		M. Tassim Billah	CADP/AARD	CompOper/Prog	80481	12.0
		S. S. Murdiyono	CADP/AARD	CompOper/Prog	80481	12.0
		Haryono Soeparno	CADP/AARD	CompOper/Prog	80481	12.0
		Harisno	CADP/AARD	CompOper/Prog	80570	12.0
		Gun Gun Gunawan	CADP/AARD	CompOper/Prog	80570	12.0
Count:	14					
1982	HIS/US	Munawar Hanif	CADP/AARD	SystemsAnal	80754	3.0
		Haryono Soeparno	CADP/AARD	Systems Anal	80754	3.0
	NCI/P	Susana Ateng	CADP/AARD	CompOper/Prog	80633	10.0
		Robert Silitonga	CADP/AARD	CompOper/Prog	80633	10.0
		T.E. Hari Basuki	CADP/AARD	CompOper/Prog	80637	10.0
		Hilman Hanafiah	CADP/AARD	CompOper/Prog	80637	10.0
		Djoni O. Susilo	CADP/AARD	CompOper/Prog	80637	10.0
		Suroto Adi	CADP/AARD	CompOper/Prog	80655	10.0
Count:	8					
1983	HIS/US	Tassim Billah	CADP/AARD	Systems Anal	80834	4.5
		Iwan Malonda	CADP/AARD	Systems Anal	80834	4.5
Count:	2					
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Total:						226.5
Count:					28	
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Table 6A. Internal long-term ADPA degree participants.

BEGYR	UNIV	PARTICIPANT	DEPARTMENT	PROGRAM	MS	PHD
1979	IPB	Ali Sastrohoetomo	EJava	AgEcon		P
		Y.M. Lubis	BOP	AgEcon	P	P
		Uu Suhadi	BOP	AgEcon	C	
		G. Panggabean	BOP	AgEcon	C	
	UGM	Murasa Sarkaniputra	BOP	AgEcon		P
		Sri Harti Murasa	BOP	AgEcon		P
		Soedjarwo	DKIJ	AgEcon		P
Count:	7			3	5	
1980	IPB	Sjahrial Sjam	FoodCrops	RegRurDevel	C	
		Wagner Nasution	FoodCrops	RegRurDevel	P	P
		Manuarang Marpaung	Livestock	RegRurDevel	P	
		Priyatna Akasah	EstateCrops	RegRurDevel	P	
		Deddy Ma'mum	WJava	RegRurDevel	C	
		Prabowo Pudjowidodo	Riau	Stat/AgEc	P	P
		Ruchijat Padmakusuma	DKIJ	ResMgt	C	
		M. Rosichon	EKalimantan	AgEcon	C	
		H. Suryatman	EKalimantan	AgEcon	C	
		Kusmiba Kadjad	WKalimantan	RegRurDevel	C	
	UGM	Soeparno Soehadi	WKalimantan	ResMgt	C	
		Isman Abu	SSulawesi	AgEcon	C	
		Count:	12			12
1981	IPB	Tom E. Napitupulu	FoodCrops	AgDevelPlan	P	P
		Hery Purwanto	Forrestry	ResMgt	W	
		Suatmodjo	Forrestry	ResMgt	P	
		Soesanto	WJava	AgEcon	P	
		Saefullah	WJava	ResMgt	C	
		Aos Rosidin Rusjdi	WJava	AgEcon	P	
		Jafar Hafisah	SSulawesi	AgDevelPlan	P	P
		Mohamad A. Sawidak	SSulawesi	AgDevelPlan	P	
		Ambiar Boer	Riau	RurSoc	P	
		Anran Samiran	FoodCrops	AgDevelPlan	P	
		Harry Santoso	Forrestry	AgDevelPlan	P	P
		Soedjatmiko	Forrestry	ResMgt	P	
		UGM	Sinis Munadar	FoodCrops	AgEcon	
	Riyadi A. Somantri		WJava	AgEcon	P	
	Iskandar A. Nuhung		SSulawesi	AgEcon	C	
	Inuserah Mesatam		SSulawesi	RegRurDevel	P	
	T.M. Kasner Turnip		NSumatera	RegRurDev	C	
	Cosmas S. Birana		SSulawesi	AgEcon	C	
	Taswa Sukmadinata	EJava	AgEcon	C		
Ilmi Senawan	Riau	AgEcon	C			
Count:	20			19	4	
1982	IPB	M. Littik	NTTimur	NatResEcon	P	
		Ilsyas Kasim	SSumatera	NatResEcon	P	
		Abdul Rachim	Bali	NatResEcon	P	
		Agus Sriyanto	Forrestry	NatResEcon	P	
		Frans Sitorus	Bengkulu	NatResEcon	P	
		Dachlan Noor	SSulawesi	AgDevelPlan	P	
		Subrata Sudarga	FoodCropsTP	AgDevelPlan	P	

Table 6A. Internal long-term ADPA degree participants.

BEGYR	UNIV	PARTICIPANT	DEPARTMENT	PROGRAM	MS	PHD
		Saharudin	SPMA Bog	RegRurDevel	P	
		Haryono Soeroso	CKalimantan	NatResEcon	P	
	UGM	Jacob Ampang	SSulawesi	AgEcon	C	
		Sumartono	KLN	AgEcon	P	
		Soewarno Budianto	SSulawesi	AgEcon	P	
		Rubimin Wibisono	SSulawesi	AgEcon	P	
		Made Antara	Bali	AgEcon	P	
		Soepeno	Riau	AgEcon	P	
		Amir Hanzah	SSumatera	AgEcon	P	
		I.G.K. Swastika	BPLPP	AgEcon		P
		Count:	17		16	1
		Count:	56		50	12

Table 7A. Internal advanced degrees completed.

BEGYR	UNIV	PARTICIPANT	DEPARTMENT	PROGRAM	DEGR	ENDYR
1979	IPB	Uu Suhadi	BOP	Ek Pert	M.S.	82/12
		G. Panggabean	BOP	AgEcon	M.S.	82/06
1980	IPB	Sjahrial Sjam	FoodCrops	RegRurDevel	M.S.	83/05
		Deddy Ma'mum	WJava	RegRurDevel	M.S.	83/03
		Ruchijat Padmakusuma	DKIJ	ResMgt	M.S.	83/05
		M. Rosichon	EKalimantan	AgEcon	M.S.	83/03
		H. Suryatman	EKalimantan	AgEcon	M.S.	83/06
		Kusmiba Kadjad	WKalimantan	RegRurDevel	M.S.	83/05
		Soeparno Soehadi	WKalimantan	ResMgt	M.S.	83/03
	UGM	Isman Abu	SSulawesi	AgEcon	M.S.	83/03
1981	IPB	Saefullah	WJava	ResMgt	M.S.	83/12
	UGM	Iskandar A. Nuhung	SSulawesi	AgEcon	M.S.	83/02
		T.M. Kasner Turnip	NSumatera	RegRurDev	M.S.	83/08
		Cosmas S. Birana	SSulawesi	AgEcon	M.S.	83/08
		Taswa Sukmadinata	EJava	AgEcon	M.S.	83/08
		Ilmi Senawan	Riau	AgEcon	M.S.	84/03
1982	UGM	Jacob Ampang	SSulawesi	AgEcon	M.S.	84/02
		Count:	17		17	

Table 8A. Short-term ALPA training at IPB.

IPB	NAME	DEPARTMENT	COURSE	BEGYR	M/M
1	Agus Suryoto	Badan Lit Bang	ProjEval	1979	1.0
	Amrin Abbas	DirBinProTaPang	ProjEval	1979	1.0
	Asna Ahmad	DirJendPerk	ProjEval	1979	1.0
	Bambang Trimulyono	DirBinProKeh	ProjEval	1979	1.0
	Dumairi	DirBinProKPer	ProjEval	1979	1.0
	Jacob Ampang	Kanwil DepPer	ProjEval	1979	1.0
	Koesnyoto	DirBinProPer	ProjEval	1979	1.0
	Max Lolowang	Kanwil DepPer	ProjEval	1979	1.0
	Moesa Meliata	Kanwil DepPer	ProjEval	1979	1.0
	N. Ginting	Badan Lit Bang	ProjEval	1979	1.0
	Tasirun Setyono	BirPenMo	ProjEval	1979	1.0
	Titi Mudmainnah S.	DirBinProPer	ProjEval	1979	1.0
	Tjptoningsih	BinProTaPang	ProjEval	1979	1.0
	Wahid Khairin	Kanwil Deptan	ProjEval	1979	1.0
	Zainita	DirBinProTaPa	ProjEval	1979	1.0
Count:		15			
2	Abdul Rozak Rioeh	DinPeter	RurDevelPlan	1981	2.0
	Amrin Zakaria	BPLPP AdmPen	RurDevelPlan	1981	2.0
	Bakarudin Is	DitBinProPerk	RurDevelPlan	1981	2.0
	Budi Basuki	DinPer	RurDevelPlan	1981	2.0
	Darmadji M.	DinPer	RurDevelPlan	1981	2.0
	Dasril Darusman	DinPerik	RurDevelPlan	1981	2.0
	Dwiati Retno Aminudin	DinPeter	RurDevelPlan	1981	2.0
	Eddy Satya Suhanda	BirPenMoDepPer	RurDevelPlan	1981	2.0
	Hayun Raona	DinPerke	RurDevelPlan	1981	2.0
	Helena Butar Butar	DitBinProTaPang	RurDevelPlan	1981	2.0
	M.P. Simanjuntak	BirPenMoDepPer	RurDevelPlan	1981	2.0
	Nani Kurnia	DinPeter	RurDevelPlan	1981	2.0
	Rachmadi Sarwo Sumadyo	DinPer	RurDevelPlan	1981	2.0
	Salampesy Mulaa	DitBinProTaPang	RurDevelPlan	1981	2.0
	Samino Reksowahyono	DinPer	RurDevelPlan	1981	2.0
	Siti Masthuro D.	Din Perik	RurDevelPlan	1981	2.0
	Sugiyanto	Diperta	RurDevelPlan	1981	2.0
	Suryohantoro	SatPengBim	RurDevelPlan	1981	2.0
	Taufik Abduh	DepPer	RurDevelPlan	1981	2.0
Count:		19			
3	Achmad Busro	BaLitbangPer	RurDevelPlan	1982	2.0
	Afif Mansur	DirJenKeh	RurDevelPlan	1982	2.0
	Aphani	Kanwil Deptan PSS	RurDevelPlan	1982	2.0
	Budiman Madjid	DinPetST	RurDevelPlan	1982	2.0
	Darso Kusumo	DirBinProPet	RurDevelPlan	1982	2.0
	Doorce Line Manik	DirBinProPerk	RurDevelPlan	1982	2.0
	Hadiatin	Kanwil Deptan PJB	RurDevelPlan	1982	2.0
	Janemin Kustantini	DinPerk PKT	RurDevelPlan	1982	2.0
	Maharendra	DinKeh DIY	RurDevelPlan	1982	2.0
	Moch. Tatang Sukmana	DirBinProKeh	RurDevelPlan	1982	2.0
	Muh Dalwy Mardiwaskito	DinPet DIY	RurDevelPlan	1982	2.0
	Napitupulu	DinPet PKT	RurDevelPlan	1982	2.0
	Prayitno	DinPerk PST	RurDevelPlan	1982	2.0
	Rama Alexander Asia	DinPerRaPKT	RurDevelPlan	1982	2.0
	Rudjima Limbong	DinPet PKT	RurDevelPlan	1982	2.0

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Table 8A. Short-term ADPA training at IPB.

IPB	NAME	DEPARTMENT	COURSE	BEGYR	M/M
	Tua Sibarani	DirBinProPer	RurDevelPlan	1982	2.0
	Tunggul D. Siagian	DinPerRa PKS	RurDevelPlan	1982	2.0
	Waidi Budi Susetyo	DirBinProPet	RurDevelPlan	1982	2.0
	Warsito M.Ed.	BPLPP	RurDevelPlan	1982	2.0
	Yusuf Marzuku	Kanwil Deptan PSS	RurDevelPlan	1982	2.0
Count:		20			
4	Blasius Lema	KanwilPertNTT	RurDevelPlan	1983	2.0
	D. Prasastyawati	BPLPP	RurDevelPlan	1983	2.0
	Ilyas Laraga L.	KanPertSulSel	RurDevelPlan	1983	2.0
	Johanis Mahupale	DinPerkMalu	RurDevelPlan	1983	2.0
	Katrún Nida	BiroPeren	RurDevelPlan	1983	2.0
	La Atjeh Amin	KanPertSulTeng	RurDevelPlan	1983	2.0
	Luhut Limbong	BiroPeren	RurDevelPlan	1983	2.0
	Made Dana	KanPertBali	RurDevelPlan	1983	2.0
	Mariden Henry Sir.	KanwilPertBeng	RurDevelPlan	1983	2.0
	Marzuki Husein	KanPertRiau	RurDevelPlan	1983	2.0
	Nelly Rosdiana	KanPertSumSel	RurDevelPlan	1983	2.0
	Nur Tjahyadi	InspJend	RurDevelPlan	1983	2.0
	Purwandariyanto	BinProPert	RurDevelPlan	1983	2.0
	Rofidah	LitbangPert	RurDevelPlan	1983	2.0
	Sri Meity	KanwilPertLamp	RurDevelPlan	1983	2.0
	Sri Turniati	BinaProPerik	RurDevelPlan	1983	2.0
	Sumarsini	LitbangPert	RurDevelPlan	1983	2.0
	Syahrial Syarief	KanPertSumBar	RurDevelPlan	1983	2.0
	T. Kamalsyah	KanPertAceh	RurDevelPlan	1983	2.0
	Taufiq Rusdi	BPLPP	RurDevelPlan	1983	2.0
Count:		20			
5	Diarto Trisno Utamo	DinPerkeKalTeng	RurDevelPlan	1983	2.0
	Dody Rohdiat	KanJawaBarat	RurDevelPlan	1983	2.0
	J.J. Hutahaeen	KanNTB	RurDevelPlan	1983	2.0
	Kebun Tarigan	KanSumatUt	RurDevelPlan	1983	2.0
	Malongi Litta	KanSulaTeng	RurDevelPlan	1983	2.0
	Mamay Sumarna	BinProPerke	RurDevelPlan	1983	2.0
	Maryusri Nidin	KanSumatBar	RurDevelPlan	1983	2.0
	Muhamad Mustadjab	KanJawaTimur	RurDevelPlan	1983	2.0
	Murtadha S.	KanJambi	RurDevelPlan	1983	2.0
	Noadi Prawiroputro	DinPerkRiau	RurDevelPlan	1983	2.0
	Sri Ardiati	BinProPerke	RurDevelPlan	1983	2.0
	Sugianto	BiroPeren	RurDevelPlan	1983	2.0
	Suherman	Pusdatik	RurDevelPlan	1983	2.0
	Sumindar Sihotang	BinProTanPan	RurDevelPlan	1983	2.0
	Syarifudin	KanKalimTim	RurDevelPlan	1983	2.0
	Syukur Iwantoro	BiroKLN	RurDevelPlan	1983	2.0
	Tasril Tembok	KanSulaTeng	RurDevelPlan	1983	2.0
	Wuryani	Litbang	RurDevelPlan	1983	2.0
	Yani Phakti Pertiwi	DinPeterYog	RurDevelPlan	1983	2.0
	Yayat Hudaya	DinPerkeBeng	RurDevelPlan	1983	2.0

Table 8A. Short-term ADPA training at IPB.

IPB	NAME	DEPARTMENT	COURSE	BEGYR	M/M
Count:					20
Total:					94
Count:					173.0

Table 9A. Short-term ADPA training at UGM, Fac Agr.

UGM	NAME	DEPARTMENT	COURSE	BEGYR	M/M
1	Ahmad Jahmin	Kanwil Deptan	ProjEval	1979	2.0
	Antarno	Kanwil DepPer	ProjEval	1979	2.0
	Dachlan Noor	Kanwil DepPer	ProjEval	1979	2.0
	H. Susanto	Kanwil DepPer	ProjEval	1979	2.0
	Hendartuti	Kanwil DepPer	ProjEval	1979	2.0
	Heriwijaya Suwandi	BadLitBang	ProjEval	1979	2.0
	Mardjuki Almashri	Kanwil Deptan	ProjEval	1979	2.0
	Ratnawati	DirBinProPerk	ProjEval	1979	2.0
	Setyanto	DirBinProTaPang	ProjEval	1979	2.0
	Suhatri I Ismail	DirBinProTaPang	ProjEval	1979	2.0
	Sukarni	DinPer	ProjEval	1979	2.0
	Sulastri Subadi	Kanwil DepPer	ProjEval	1979	2.0
	Sumardiko	DirBinProPerk	ProjEval	1979	2.0
	Suryono SW	Sek JenDepPer	ProjEval	1979	2.0
	Syafril Kasim	DinPertKanDeptSB	ProjEval	1979	2.0
Count:	15				
2	An'amta Djamhari	DinKeh DKIJ	RurDevPlan	1981	2.0
	Cahyani Suminar Edi	KanDep D.I.Y.	RurDevPlan	1981	2.0
	H. Hardiarto	DinPet D.I.Y.	RurDevPlan	1981	2.0
	J.L. Sitepu	DitBinProTaPang	RurDevPlan	1981	2.0
	Kadiono	DinPer PJT	RurDevPlan	1981	2.0
	Maria Mintarti	DirBinProTaPang	RurDevPlan	1981	2.0
	Mulyono	DirBinProPer	RurDevPlan	1981	2.0
	Pu: yanto	DitBinProTaPang	RurDevPlan	1981	2.0
	Rukmi Rumanti	DinPet PST	RurDevPlan	1981	2.0
	Sartono	DitBinProPerk	RurDevPlan	1981	2.0
	Saswiyanto	DinPet PIJ	RurDevPlan	1981	2.0
	Sri Wahyuningsih	KanDepPM	RurDevPlan	1981	2.0
	Subagyo	DinPet PB	RurDevPlan	1981	2.0
	Sudiyanto	DinPerik PST	RurDevPlan	1981	2.0
	Suprijadi B. Sc.	BinProTaPang	RurDevPlan	1981	2.0
	Suprijadi, Ir.	KanDepD.I.Y.	RurDevPlan	1981	2.0
	Susanto	PengPerBLM	RurDevPlan	1981	2.0
	Wiwiek Hidayati	BPLPP	RurDevPlan	1981	2.0
	Yusrizal Burhan	DinPerPJ	RurDevPlan	1981	2.0
	Yusuf Hamidun	DinPertPS	RurDevPlan	1981	2.0
Count:	20				
3	AB.Abuseno	DinKehPKT	RurDevPlan	1981	2.0
	Alfi Gandrung	Kanwil PerPKT	RurDevPlan	1981	2.0
	Amiruddin	DinPerikKKPKT	RurDevPlan	1981	2.0
	Azikin	Kanwil PerPIJ	RurDevPlan	1981	2.0
	Budjo Hardjanto	DepPerPKS	RurDevPlan	1981	2.0
	Colosewoko	DirBinProPerk	RurDevPlan	1981	2.0
	Emilia Leki	DinPerkPNTT	RurDevPlan	1981	2.0
	Gozali	BPLPP DepPer	RurDevPlan	1981	2.0
	Harsono	DinPeterPKT	RurDevPlan	1981	2.0
	Ibnu Nirwani	DinPerkPKT	RurDevPlan	1981	2.0
	Ishaka H. Mustamin	DepPer	RurDevPlan	1981	2.0
	Ismail Basri	DepPerPSB	RurDevPlan	1981	2.0
	Ketut Ardha	DepPerPB	RurDevPlan	1981	2.0
	M. Rahardjo	DinPerikPSU	RurDevPlan	1981	2.0

Table 9A. Short-term ADPA training at UGM, Fac Agr.

UGM	NAME	DEPARTMENT	COURSE	BEGYR	M/M
	PH. Rawis	DepPerPSU	RurDevPlan	1981	2.0
	Poerwinto	DirBinProPerik	RurDevPlan	1981	2.0
	R. Much Mardjuki	Kanwil PerPSS	RurDevPlan	1981	2.0
	Ratman Heriawan	DepPerPJB	RurDevPlan	1981	2.0
	Sri Sukini	KanwilPerPST	RurDevPlan	1981	2.0
	Susilah	DepPerKDKIJ	RurDevPlan	1981	2.0
	Yusri Lubis	DinPerkPB	RurDevPlan	1981	2.0
Count:	21				
4	Abubakar Hasan	KanPertRiau	RurDevelPlan	1983	2.0
	Buwono	DinPeterKaltim	RurDevelPlan	1983	2.0
	Chairiza Gafar	KanPertDKIJak	RurDevelPlan	1983	2.0
	H. Simandjuntak	BiroPeren	RurDevelPlan	1983	2.0
	Harta Victor	DinPerikKalTen	RurDevelPlan	1983	2.0
	Lendiyono Hernald	KanPertKalTen	RurDevelPlan	1983	2.0
	Made Widana	KanPertBali	RurDevelPlan	1983	2.0
	Mansyur Arifin	DinPertTimTim	RurDevelPlan	1983	2.0
	Mudjiono	KanPertJambi	RurDevelPlan	1983	2.0
	Ngk.Nyoman Padma	DirJenPerk	RurDevelPlan	1983	2.0
	S.A. Wakkary	KanPertSumSel	RurDevelPlan	1983	2.0
	Sadiman	InspJendPert	RurDevelPlan	1983	2.0
	Sri Hastuti	KanPertJaTim	RurDevelPlan	1983	2.0
	Sumarni	KanPertAceh	RurDevelPlan	1983	2.0
	Sumarti	DinPerkYogya	RurDevelPlan	1983	2.0
	Sumiyati	DinPertYogya	RurDevelPlan	1983	2.0
	Syamsul Hasan	KanPertSumSel	RurDevelPlan	1983	2.0
	Tjahyo Wijoso	DinPeterLamp	RurDevelPlan	1983	2.0
	Tri Lestari	DirJenPerk	RurDevelPlan	1983	2.0
	Wiwiek Ediyati	BinProPeter	RurDevelPlan	1983	2.0
Count:	20				
5	Achmad Basuki	DinPerikJawaTim	RurDevelPlan	1984	2.0
	Ary Sulaksono	DinPerikJawTen	RurDevelPlan	1984	2.0
	Atas Sri Hanjani	KanwilYogya	RurDevelPlan	1984	2.0
	Bantu Sembiring	KanSumatUt	RurDevelPlan	1984	2.0
	I.Gusti Bagus N.	KanBali	RurDevelPlan	1984	2.0
	Irwati S.	KanBengkulu	RurDevelPlan	1984	2.0
	Iskandar Laborahima	KanSu.laTengah	RurDevelPlan	1984	2.0
	Joko Harsoyo	KanYogya	RurDevelPlan	1984	2.0
	Lucki Rulyaman	KanJawaBar	RurDevelPlan	1984	2.0
	M. Zaman	DinPerkeSumBar	RurDevelPlan	1984	2.0
	M.Salim Kasim	KanwilAceh	RurDevelPlan	1984	2.0
	Mandang Herdy Y.	Litbang	RurDevelPlan	1984	2.0
	Nuswar Anwar	DinPerkeLamp	RurDevelPlan	1984	2.0
	Rizali Mankin	DinTPKalimTeng	RurDevelPlan	1984	2.0
	Rusdy K. Duhe	KanSulaSel	RurDevelPlan	1984	2.0
	Sentot Sugiyanto	BHukunOrgan	RurDevelPlan	1984	2.0
	Siti Ranin	KanSumatSel	RurDevelPlan	1984	2.0
	Sri Bastiah	BRumahTanPer	RurDevelPlan	1984	2.0
	Syamsu Rizal	BinProBeng	RurDevelPlan	1984	2.0
	Tuti Aryuti M.	KanDKIJ	RurDevelPlan	1984	2.0

Table 9A. Short-term ADPA training at UGM, Fac Agr.

UGM	NAME	DEPARTMENT	COURSE	BEGYR	M/M
Count:					20
Total:					96
Count:					192.0

Table 10A. Short-term ADPA training at UGM, Fac. Econ.

UGM	NAME	DEPARTMENT	COURSE	BEGYR	M/M
1fe	A. Susilorini	BinProPeter	ProjEval	1984	2.0
	Abdul Wazir	BirHukumOrgan	ProjEval	1984	2.0
	Agus Hasanudin	BinProBung	ProjEval	1984	2.0
	Agus Widodo	BiroPeren	ProjEval	1984	2.0
	Azmi Hasdiana	BinProPeter	ProjEval	1984	2.0
	Djodi Tjahyadi	BIMAS	ProjEval	1984	2.0
	Erman Usman	BinProPerke	ProjEval	1984	2.0
	Estefanus Worang	BinProPerik	ProjEval	1984	2.0
	Mohamad Toyib	BinProTanPan	ProjEva.	1984	2.0
	Nyoman Sudarsana	BinProBung	ProjEval	1984	2.0
	R. Suryadi Sugoto	BiroPeren	ProjEval	1984	2.0
	Sri Indrastuti	BinProPerik	ProjEval	1984	2.0
	Sri Sundari	MenMudTanKer	ProjEval	1984	2.0
	Sri Widjajanti	BinProPerke	ProjEval	1984	2.0
	Supriyati	CAER	ProjEval	1984	2.0
	Susetyo Hadi	BinProPerik	ProjEval	1984	2.0
	Victor Manurung	CAER	ProjEval	1984	2.0
	Yudono Soedigdo	BirPeren	ProjEval	1984	2.0
	Yeyum Rumnasih	BiroPeren	ProjEval	1984	2.0
	Zuhri Effendi	BIMAS	ProjEval	1984	2.0
Count:		20			
2fe	Anwar Ahmad	DinTPSulSel	ProjEval	1984	2.0
	Azhur Azhari	PerenDiklat	ProjEval	1984	2.0
	Bagun Nusantoro	LitMalang	ProjEval	1984	2.0
	Burhanudin	KanSulwesiSel	ProjEval	1984	2.0
	Chalil Usman	BinProPeter	ProjEval	1984	2.0
	Eddy Sudartanto	BinProPerik	ProjEval	1984	2.0
	Erlisa Sudjai	BiroPeren	ProjEval	1984	2.0
	Hasanuddin Usman	BinProPerik	ProjEval	1984	2.0
	Ito Mukti Setiarto	BiroPeren	ProjEval	1984	2.0
	M. Bakri Remang	DinPerikSulSel	ProjEval	1984	2.0
	Paulus Wartaja	DirJendPerke	ProjEval	1984	2.0
	Ruswardjito	DinTPJaTeng	ProjEval	1984	2.0
	Sopnar Sihombing	BirKeuangan	ProjEval	1984	2.0
	Sri Heri Susilowati	CAER	ProjEval	1984	2.0
	Sri Nurniati	BinProTanPan	ProjEval	1984	2.0
	Sudiro	BirTataUsaha	ProjEval	1984	2.0
	Sugiyono	DinPerkSulSel	ProjEva.	1984	2.0
	Sukriya Pabicara	BinProPeter	ProjEval	1984	2.0
	Sumarna	PengProDiklat	ProjEval	1984	2.0
	Suratno	DirJendPerke	ProjEval	1984	2.0
	Susanto	DOLOGYogya	ProjEval	1984	2.0
	Zueni Tarigan	BirRumTanPerl	ProjEval	1984	2.0
Count:		22			

Table 10A. Short-term ADPA training at UGM, Fac. Econ.

UGM	NAME	DEPARTMENT	COURSE	BEGYR	M/M
Total:					84.0
Count:					42

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Table 11A. Short-term ADPA training at Univ of Indonesia.

UofI	NAME	DEPARTMENT	COURSE	BEGYR	M/M
1	Daniel Sarijowan	Kanwil DepPerSS	DevelAdm	1980	2.0
	Didin Syarifudin	BaPlanKeh	DevelAdm	1980	2.0
	E. Lubis	BirKewDepPer	DevelAdm	1980	2.0
	Eddy D. Kasik	Kanwil DepPer	DevelAdm	1980	2.0
	Eina Esde	DinPerikSum	DevelAdm	1980	2.0
	F.J.J. Nisnoni	Kanwil DeptanTT	DevelAdm	1980	2.0
	H. Enjang Mansur	ProKalSel	DevelAdm	1980	2.0
	Harumin Djahri	DinPeter	DevelAdm	1980	2.0
	Herry Purwanto	DitBinProKeh	DevelAdm	1980	2.0
	Huntung Nurjito	DitBinProKeh	DevelAdm	1980	2.0
	Idrus Alwi	DitBinProTaPang	DevelAdm	1980	2.0
	Kamaludin	Kanwil DepPer	DevelAdm	1980	2.0
	L.L. Napitupulu	Kanwil DeptanSY	DevelAdm	1980	2.0
	M. Indah Ginting	DinPerik	DevelAdm	1980	2.0
	M. Zakir Wahid	DinPeterSum	DevelAdm	1980	2.0
	Muhidin Djaropi	Kanwil DepTanSS	DevelAdm	1980	2.0
	Rosjid Hoewel	Kanwil DepPerJB	DevelAdm	1980	2.0
	Suryadi	DepPer	DevelAdm	1980	2.0
	Tonton Yassin	DinPerkSY	DevelAdm	1980	2.0
	Zainal Arifin	DepPer	DevelAdm	1980	2.0
Count:	20				
2	Abdul Hamid Husin	PMMR, DepPer	DevelAdm	1981	2.0
	Amiruddin Nasution	Kanwil DepPer	DevelAdm	1981	2.0
	Djamhari	DepPer	DevelAdm	1981	2.0
	Dradjad Supomo	DinKeh	DevelAdm	1981	2.0
	Eha Djulaeha	DinPer	DevelAdm	1981	2.0
	Endang Purwani	DinPer	DevelAdm	1981	2.0
	Hartati	BirPerDepPer	DevelAdm	1981	2.0
	Ismaryati	DinPerSS	DevelAdm	1981	2.0
	Jafar Ishak	DepPerDa	DevelAdm	1981	2.0
	Jamuara Sinaga	DirBinUsPer	DevelAdm	1981	2.0
	Karti	DepPer	DevelAdm	1981	2.0
	M. Alwi	Kanwil DepTan	DevelAdm	1981	2.0
	Martha Sulaksmi	DirBinProTaPang	Devel;Adm	1981	2.0
	Maryatu Yudawinata	BPLPP DepPer	DevelAdm	1981	2.0
	Rosyida Setiyawati	DirBinProPer	DevelAdm	1981	2.0
	Siti Nuriyah	DinPer	DevelAdm	1981	2.0
	Siti Nurjanah Hayati	DinPerIJ	DevelAdm	1981	2.0
	Sumartini	DepPer	DevelAdm	1981	2.0
	Sutari	DirBinProTaPang	DevelAdm	1981	2.0
	Warto	DinPerik	DevelAdm	1981	2.0
Count:	20				
3	Amir Husni Ritonga	DepPer	DevelAdm	1981	2.0
	Azman Bahaoedin	Kanwil DepPer	DevelAdm	1981	2.0
	Bachtiar Simangunsong	Kanwil Deptan	DevelAdm	1981	2.0
	Darmanto	DepPer	DevelAdm	1981	2.0
	Edy Sardjito	DepPer	DevelAdm	1981	2.0
	Feliciana Suharto	DirBinProTaPang	DevelAdm	1981	2.0
	Husaini	DinPeKerKT	DevelAdm	1981	2.0
	Made Antara	Kanwil DepPer	DevelAdm	1981	2.0
	Marah Moch. Hasni Aziz	Kanwil DepPer	DevelAdm	1981	2.0

Table 11A. Short-term ADPA training at Univ of Indonesia.

UofI	NAME	DEPARTMENT	COURSE	BEGYR	M/M
	Maskalan Daulay	BirPerDepPer	DevelAdm	1981	2.0
	Murti Rasjid Sm.	BirPerDepPer	DevelAdm	1981	2.0
	Pribadi	Kanwil DepPer	DevelAdm	1981	2.0
	Sakdan AS	InsJen Deptan	DevelAdm	1981	2.0
	Sridodo	Puslitbang TanPang	DevelAdm	1981	2.0
	Subagijono Darmowijono	Kanwil DepPer	DevelAdm	1981	2.0
	Sudahinan	DirBinProPerik	DevelAdm	1981	2.0
	Syafril Lamsayun	LitbangPer	DevelAdm	1981	2.0
	Syamsir Djalib	Kanwil DepPer	DevelAdm	1981	2.0
	Zainal Abidin	Kanwil DepPer	DevelAdm	1981	2.0
	Zalidar Yakub	BPLPP, DepPer	DevelAdm	1981	2.0
Count:		20			
4	Baharudin BT	DinPerkSS	DevelAdm	1982	2.0
	Basuki	PerBiHu&OrSekJen	DevelAdm	1982	2.0
	Djaka Sulistya	SNAKMA, Bogor	DevelAdm	1982	2.0
	Dwitmi	DitBinProPerik	DevelAdm	1982	2.0
	Gerson Simon Poyh	DinPerikPNTT	DevelAdm	1982	2.0
	Hartiningsih	BaLitbangPer	DevelAdm	1982	2.0
	Herriyadi Nuezir	BirPeren	DevelAdm	1982	2.0
	Julmunius Mz	BirKeuSet	DevelAdm	1982	2.0
	M. Arifin Lamba	DinPerRaPSS	DevelAdm	1982	2.0
	Marsetyo Mardjono	DinPerkPST	DevelAdm	1982	2.0
	Parwadi	DinPerRaJT	DevelAdm	1982	2.0
	Sadi Rosady	DinPerRaJT	DevelAdm	1982	2.0
	Soedjarwo	DinPetDaPJT	DevelAdm	1982	2.0
	Soehardjanto	DinKehKSSS	DevelAdm	1982	2.0
	Stanis T. Anggen	BirHuSekJen	DevelAdm	1982	2.0
	Subchi Hasbullah	DepPer	DevelAdm	1982	2.0
	Sudarmo	DinKehPKT	DevelAdm	1982	2.0
	Sudijono	BTUSEkJen	DevelAdm	1982	2.0
	Suhermi	DinPerDKIJ	DevelAdm	1982	2.0
	Thamrin Nurdin	DinPerTaSB	DevelAdm	1982	2.0
	Winarko C.	DinPerJaTen	DevelAdm	1982	2.0
Count:		21			
5	Ahmad Naiman	BTataUsaha	DevelAdmin	1983	2.0
	Arsyad Abdullah	InspJend	DevelAdm	1983	2.0
	Bambang Sukardjo	KasPemLitbang	DevelAdm	1983	2.0
	Basuki Iman	BiroKeuang	DevelAdm	1983	2.0
	Djoko Sujanto	BHukumOrgan	DevelAdm	1983	2.0
	Dodi Supriadi	SecLitbang	DevelAdm	1983	2.0
	Edy Ashariyono	BiroPeren	DevelAdm	1983	2.0
	Ibrahim Djunaidi	BinProPerke	DevelAdm	1983	2.0
	Indra Suari	BinProPerke	DevelAdm	1983	2.0
	Kisnadi Sastradipura	KanwilJak	DevelAdmin	1983	2.0
	Rande Pongbulan	KasAdmPusdatik	DevelAdm	1983	2.0
	Saidjan Dasuki	BHukumOrgan	DevelAdm	1983	2.0
	Soetardjo Sigids	BPLPP	DevelAdm	1983	2.0
	Sri Irawati Susalit	BiroKLN	DevelAdm	1983	2.0
	Sri Sutarni	BiroKeuangan	DevelAdm	1983	2.0
	Sugiman	BiroKepegaw	DevelAdm	1983	2.0
	Suharto	BinProTanPang	DevelAdm	1983	2.0

Table 11A. Short-term ADPA training at Univ of Indonesia.

UofI	NAME	DEPARTMENT	COURSE	BEGYR	M/M
	Sutarto	BPerlengkap	DevelAdm	1983	2.0
	Sutrisno	BiroKLN	DevelAdm	1983	2.0
	Suwardi	BinUsaPetTP	DevelAdm	1983	2.0
Count:	20				
6	Badra Arsana	BiroPeren	DevelAdm	1984	2.0
	Barabang Sulistiyono	DinPerkLamp	DevelAdm	1984	2.0
	F.K. Mudjiatmo	KanSumatUt	DevelAdm	1984	2.0
	Fahri Bahtiar	DitJenPerke	DevelAdm	1984	2.0
	Fathul Amin	Litbang	DevelAdm	1984	2.0
	Ferial Lubis	BiroKLN	DevelAdm	1984	2.0
	G.B. Lonan	TanPanSulSel	DevelAdm	1984	2.0
	H. Masfar	BiroKeuang	DevelAdm	1984	2.0
	Imanuel Babu Ema	KanNTTimur	DevelAdm	1984	2.0
	Muchlis Darisan	BiroKeuang	DevelAdm	1984	2.0
	Nurjanah	KanLampungn	DevelAdm	1984	2.0
	Pantius Batubara	DinPerikBeng	DevelAdm	1984	2.0
	Rizal Amini	BPLPP	DevelAdm	1984	2.0
	Siradjuddin	KanSumatSel	DevelAdm	1984	2.0
	Sudirman H.U.	DinTPRiau	DevelAdm	1984	2.0
	Sulhan Yuseran	KanKalimSel	DevelAdm	1984	2.0
	Suprat	BiroPeren	DevelAdm	1984	2.0
	Syamsu Hariyadi	KanKalimBar	DevelAdm	1984	2.0
	Widi Sutikno	DinPerkYog	DevelAdm	1984	2.0
Count:	19				
Total:					
Count:	120				240.0

Table 12A. Short-term ADPA management skills training.

BEGYR	NAME	DEPARTMENT	COURSE	ADPA	CADP
81/11	Al Brown	ADPA/ISU	Mgt Skill	X	
	Amrin Zakaria	AAETE	Mgt Skill	X	
	Ato Suprato	CADP	Mgt Skill	X	
	Budhoyo Sukotjo	AAED	Mgt Skill	X	
	Dan Peterson	ADPA/ISU	Mgt Skill	X	
	Hansani Pekerti	CADP	Mgt Skill	X	
	Hendro Soewarno	ADPA ProMgr	Mgt Skill	X	
	James Gingerich	USAID/AGR	Mgt Skill	X	
	Kamaruddin Abdullah	ViceDeanIPB	Mgt Skill	X	
	Kasmo	DirPIPr/FC	Mgt Skill	X	
	Munawar Hanif	CADP	Mgt Skill	X	
	N.P. Hutabarat	Dir Est Rehab	Mgt Skill	X	
	P.M. Soedarsono	InspectFin	Mgt Skill	X	
	Randall Hoffmann	ADPA/ISU	Mgt Skill	X	
	Rusdi Rasjid	ADPA/BOP	Mgt Skill	X	
	Soedarsono Alisadono	UnivGM	Mgt Skill	X	
	Soenarso Wirjoprajitno	ProMgrNAEP	Mgt Skill	X	
	Subiyanto	DirCADP	Mgt Skill	X	
	Tuhpawana P. Sendjaja	UnivPadja	Mgt Skill	X	
Count:	19			19	0
82/08	Abdul Hamang	CADP	Mgt Skill		X
	Al Brown	ADPA/ISU	Mgt Skill		X
	Ato Suprato	CADP	Mgt Skill		X
	Dan Peterson	ADPA/ISU	Mgt Skill		X
	Hansani Pekerti	CADP	Mgt Skill		X
	Herena Pujihastuti	CADP	Mgt Skill		X
	James Gingerich	USAID/AGR	Mgt Skill		X
	Kaman Nainggolan	CADP	Mgt Skill		X
	Kiswara	CADP	Mgt Skill		X
	Munawar Hanif	CADP	Mgt Skill		X
	Sablin Yusuf	CADP	Mgt Skill		X
	Satsiyati	CADP	Mgt Skill		X
	Subiyanto	DirCADP	Mgt Skill		X
	Yuanto Ismuyatmono	CADP	Mgt Skill		X
Count:	14			0	14
Count:	33			19	14

ab

Table 13A. Short-term ADPA personnel management training.

BEGYR	NAME	DEPARTMENT	COURSE	PLACE	M/M
1982/01	Adhe Suyatman	Forrestry	Pers Mgt	Bogor	1.0
	Arlina Yuniar	AETE	Pers Mgt	Bogor	1.0
	Boyadi	Yogyakarta	Pers Mgt	Bogor	1.0
	Dadang Supardi	SecGen	Pers Mgt	Bogor	1.0
	Djoko Mulyono	Surabaya	Pers Mgt	Bogor	1.0
	Djumhari	Forrestry	Pers Mgt	Bogor	1.0
	E. Sabarno	EstateCrops	Pers Mgt	Bogor	1.0
	Heru Suprpto	EstateCrops	Pers Mgt	Bogor	1.0
	I. Sunardi	FoodCrops	Pers Mgt	Bogor	1.0
	Ishak Hukum	AETE	Pers Mgt	Bogor	1.0
	Iyan Miftahuddin	FoodCrops	Pers Mgt	Bogor	1.0
	Jalil Jamaluddin	Lib/Bogor	Pers Mgt	Bogor	1.0
	Joso Cholid Suhadji	BIMAS	Pers Mgt	Bogor	1.0
	Margono	SecGen	Pers Mgt	Bogor	1.0
	Maskuri	CJava	Pers Mgt	Bogor	1.0
	Memem Suherman	CJava	Pers Mgt	Bogor	1.0
	Mulyono	EstateCrops	Pers Mgt	Bogor	1.0
	Prayitno	AARD	Pers Mgt	Bogor	1.0
	R. Soediyono	Livestock	Pers Mgt	Bogor	1.0
	R.E.B. Bushari	Fisheries	Pers Mgt	Bogor	1.0
	Slamet Djunaedi	BIMAS	Pers Mgt	Bogor	1.0
	Soedaryono	CJava	Pers Mgt	Bogor	1.0
	Soegiarto M.	FoodCrops	Pers Mgt	Bogor	1.0
	Sri Wahyuni	CJava	Pers Mgt	Bogor	1.0
	Sunaryatun	InsGen	Pers Mgt	Bogor	1.0
	Suradi	CJava	Pers Mgt	Bogor	1.0
	Tity S. Wiraumidjaja	AARD	Pers Mgt	Bogor	1.0
	Trimurti Lamato	BIMAS	Pers Mgt	Bogor	1.0
	Uddin Sukarna	Forrestry	Pers Mgt	Bogor	1.0
	Zainal Syamsuddin	Quaran/SG	Pers Mgt	Bogor	1.0

Total: 30.0

Table 14A. Short-term food and nutrition training.

PLACE	NAME	COURSE	DEPARTMENT	BEGYR	M/M	
Lampung	A. Basri	FoodNutrPlan	Lampung	1982	0.5	
	Abdulah Sani	FoodNutrPlan	Lampung	1982	0.5	
	Abdurachman Y.	FoodNutrPlan	Lampung	1982	0.5	
	Anwir Nawir	FoodNutrPlan	Riau	1982	0.5	
	Berawi	FoodNutrPlan	Lampung	1982	0.5	
	Darmadji Margadi.	FoodNutrPlan	Lampung	1982	0.5	
	Dian Utama Jenahar	FoodNutrPlan	SSumatera	1982	0.5	
	Eline Bahder	FoodNutrPlan	Lampung	1982	0.5	
	Ermanita Saleh	FoodNutrPlan	Jambi	1982	0.5	
	H. Samsuir	FoodNutrPlan	Jambi	1982	0.5	
	Helmi Machmud	FoodNutrPlan	Lampung	1982	0.5	
	M.P. Simanjuntak	FoodNutrPlan	Riau	1982	0.5	
	Mardjuki Almashri	FoodNutrPlan	Riau	1982	0.5	
	Marzuki Husein	FoodNutrPlan	Riau	1982	0.5	
	Murdani Suwito	FoodNutrPlan	Lampung	1982	0.5	
	Musyawir Subing	FoodNutrPlan	Lampung	1982	0.5	
	Nelly Rosdiana	FoodNutrPlan	Lampung	1982	0.5	
	Nuzwar Anwar	FoodNutrPlan	Lampung	1982	0.5	
	Robaman Mahmud	FoodNutrPlan	SSumatera	1982	0.5	
	Rydwan Saleh	FoodNutrPlan	SSumatera	1982	0.5	
	Sahat Hutagaol	FoodNutrPlan	Riau	1982	0.5	
	Soemarto	FoodNutrPlan	Lampung	1982	0.5	
	Sudarto Djajusman	FoodNutrPlan	Lampung	1982	0.5	
	Syahrir Djohan	FoodNutrPlan	Jambi	1982	0.5	
	T.K. Ritonga	FoodNutrPlan	Jambi	1982	0.5	
	Uning Satya Bhakti	FoodNutrPlan	Jambi	1982	0.5	
	Yok Suhaya	FoodNutrPlan	Riau	1982	0.5	
	Malang	Christian Wiggers	FoodNutrPlan	NTB	1982	0.5
		Nyoman Mastra	FoodNutrPlan	NTB	1982	0.5
		Wahyudi	FoodNutrPlan	NTB	1982	0.5
Wayan Darmaysa		FoodNutrPlan	NTB	1982	0.5	
Soropadan	Adi Wachyudi	FoodNutrPlan	Soropadan	1983	0.5	
	Anna Marniyati	FoodNutrPlan	Pusat	1983	0.5	
	Basjirin Ali	FoodNutrPlan	Bengkulu	1983	0.5	
	Chairiza Gafar	FoodNutrPlan	DKIJ	1983	0.5	
	Darchutni	FoodNutrPlan	Bengkulu	1983	0.5	
	Erto B.	FoodNutrPlan	WSumatera	1983	0.5	
	Hani I.P.	FoodNutrPlan	Livestock	1983	0.5	
	Helmi S.	FoodNutrPlan	DKIJ	1983	0.5	
	Hurriyah	FoodNutrPlan	Bengkulu	1983	0.5	
	Irawati	FoodNutrPlan	Bengkulu	1983	0.5	
	Martini	FoodNutrPlan	DKIJ	1983	0.5	
	Masmur Syam	FoodNutrPlan	WSumatera	1983	0.5	
	Melly Amalia	FoodNutrPlan	WJava	1983	0.5	
	Musa R.	FoodNutrPlan	DKIJ	1983	0.5	
	Pandu S.	FoodNutrPlan	WJava	1983	0.5	
	Ratna Mahlida	FoodNutrPlan	WSumatera	1983	0.5	
	Riswan S.	FoodNutrPlan	Bengkulu	1983	0.5	
	Sudiro	FoodNutrPlan	WJava	1983	0.5	
	Suhar Effendi	FoodNutrPlan	WJava	1983	0.5	
	Suparno	FoodNutrPlan	WSumatera	1983	0.5	
	Suparya	FoodNutrPlan	WJava	1983	0.5	
	Supriadi	FoodNutrPlan	DKIJ	1983	0.5	

Table 14A. Short-term food and nutrition training.

PLACE	NAME	COURSE	DEPARTMENT	BEGYR	M/M
	Syahroni	FoodNutrPlan	Benkulu	1983	0.5
	Titin Rustini	FoodNutrPlan	WSumatera	1983	0.5
	Tjipta Hadi	FoodNutrPlan	WJava	1983	0.5
	Yuyun	FoodNutrPlan	SecGen	1983	0.5
	Zurmida	FoodNutrPlan	WSumatera	1983	0.5
Total:					
Count:	58				29.0

Table 15A. English language training, LIA & British Coun.

NAME	DEPARTMENT	SECGEN	CADP	OTHERDEPT
Amien Harsianto	SecGen	1		
Djoni Oentoro	CADP		1	
Edi Abdurachman	CADP		1	
Gayatri K. Rana	SecGen	1		
Hamid Husein	SecGen	1		
Hari Dewanto	SecGen	1		
Hartati	SecGen	1		
Irawati	SecGen	1		
Jamil Musanif	SecGen	1		
Marigan Rumahorbo	SecGen	1		
Metrawati	SecGen	1		
Mukti Setiarso	SecGen	1		
Ratna Kusuma Dewi	SecGen	1		
Rusminto Wibowo	SecGen	1		
Silitonga	CADP		1	
Simanjuntak	SecGen	1		
Sodikin	SecGen	1		
Sri Meity	SecGen	1		
Subijanto	SecGen	1		
Subiyanti Hardjanto	Food Crops			1
Subiyanti Marwoto	SecGen	1		
Sumartono	SecGen	1		
Suroto Adi	CADP		1	
Sutrasdi	SecGen	1		
Syukar Iwantoro	SecGen	1		
Yuliar Murad Nasution	SecGen	1		
Yusni Emilia H.	SecGen	1		
Zainal Arifin	SecGen	1		
Count:	28	23	4	1

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Table 16A. Short-term in country computer training

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
Group #1, UGM, 4.0 m/m					
1. Yan Bastian	BIMAS	X			
2. Sahat Pasaribu	CAER	X			
3. Kiswara	CADP	X			
4. Marcus Mangopang BA	CADP	X			
5. Suharyadi Salim	Fisheries	X			
6. Parlin Pakpahan	Fisheries	X			
7. Susetyo Hadi BSC	Fisheries	X			
8. Sonny Mongkol	Fisheries	X			
9. Aehmab Bachrun MS	Forestry	X			
10. Suparman	Soil Research	X			
Group #2, UGM, 2.0 m/m					
1. Dra. Evy Yulianti	Food Crops Research	X			
2. Zaenal Arifin BSC	Animal Disease Res	X			
3. Ita Puspitaningrum BSC	Fisheries	X			
4. A.S. Murdiati	Industrial Crops	X			
5. Ismuni	Forestry	X			
6. Yetti Rusli	AETE	X			
7. Sumanto	Animal Science	X			
8. Siti Ambarini	Food Crops	X			
9. Chairil Anwar	Estate Crops	X			
10. Anang Gunawan	Estate Crops	X			
11. Barayah Suhendar BSC	Estate Crops	X			
12. Endang Titi P.	Food Crops	X			
13. Raja Gukguk	Animal Science	X			
14. Bambang Suhirlan	Forestry	X			
15. Pratomo Wardoyo	Food Crops	X			
16. Rusmin Mardjono	Industrial Crops	X			
17. Wahyudin BSC	Industrial Crops	X			
Group #3, UGM, 2.0 m/m					
1. Bambang Mardi R.	Estate Crops	X			
2. Dedeh Azie	Industrial Crops	X			
3. Tri Lestari	Industrial Crops	X			
4. Lilik Kristiani	Industrial Crops	X			
5. Nuryanto Daris BSC	Industrial Crops	X			
6. Winarso	Animal Science	X			
7. Soedjarwo PS	Forestry	X			
8. Didik Habjar G.	Estate Crops	X			
9. Djoko Purnomo BA	AARD	X			
10. H. Yopyy Mandang BSC	AARD	X			
11. Haryanto M.	Fisheries	X			
12. Kasih Suryani	Fisheries	X			
13. Suharman Ismail	Fisheries	X			
14. Zuhri Effendi BSC	BIMAS	X			
15. Dailami Jamin	Food Crops	X			

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
Group #4, UGM, 2.0 m/m					
1. Mustari Basir	Food Crops	X			
2. Mono Raharjo BSC	Food Crops	X			
3. Yulianto	Food Crops	X			
4. Haryanto MS	AARD	X			
5. Mappaona	AARD	X			
6. Ripah K.	Food Crops	X			
7. Djudju Djuriah	Animal Husbandry	X			
8. Ade Ruskandar	Food Crops	X			
9. Lalang Buana	Estate Crops	X			
10. Han Roliadi MS	Forestry	X			
11. Ruwiji Basuki	Forestry	X			
12. Endang T.	Animal Science	X			
13. M. Badrusin	Fisheries	X			
14. Thamrin Wikanta	Fisheries	X			
15. Suparman H.	CAER	X			
Group #5, MASRIDA, 4.0 m/m					
1. Arifin Habibie	Animal Science		X		
2. M. Badrudin	Fisheries		X		
3. Suwarna S. BSC	Forestry		X		
4. Endang T.	Forestry		X		
5. Zainal Abidin	Forestry		X		
6. Arnold Sinurat	Forestry		X		
7. Yulianto	Food Crops		X		
8. Sumaryono	Estate Crops		X		
9. Lalang Buana	Estate Crops		X		
10. Suparman	CAER		X		
11. Suwiji Basuki	Forestry		X		
12. Andi Mappaona	AARD		X		
13. Han Roliadi MS	Forestry		X		
14. Suherman	CADP		X		
15. Thamrin Wikanta	Estate Crops		X		
Group #6, MASRIDA, 4.0 m/m					
1. Setaisih Irawati	Forestry			X	
2. Agus Hasanuddin R.	Estate Crops			X	
3. Benny Darmawan	Estate Crops			X	
4. Ny. Hanny Parengkuan	USAID			X	
5. Melly Basiroen	USAID			X	
6. Iwa Sungkawa	CADP			X	
7. J.F. Suparti BSC	Food Crops			X	
8. Mustari Basir	Food Crops			X	
9. Made Mahardika BA	AARD			X	
10. Naniek Aryani	Estate Crops			X	
11. Prabowo Singgih	Inspector General			X	

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
12. Putu Wirta Antara BSC	Fisheries			X	
13. Sunarto	Fisheries			X	
14. Sri Iswari	Fisheries			X	
15. Sri Indarstuti R. BSC	Fisheries			X	
16. Sri Rahayu	Bureau of Material			X	
17. T. Syahrul BA	Estate Crops			X	
18. Y. Kumoro P.	CADP			X	
19. Zainil Zakaria	Bureau of Personnel			X	
Group #7, BCI, 4.0 m/m					
1. Evy Yuliantini	Food Crops		X		
2. Meike Ameriana	Food Crops		X		
3. Sonny Leksono	Food Crops		X		
4. Oemi Koesmawardani	Food Crops		X		
5. Bailami Jamin	Food Crops		X		
6. Aten M. Harun MS	Food Crops		X		
7. Supardi	Food Crops		X		
8. Eso Suwangsa	Food Crops		X		
9. Bangun Nusantoro	Food Crops		X		
10. Yoga Hoedoyo	Fisheries		X		
11. Siti Ambarini S.	Food Crops		X		
12. Pudji Wijatio	Estate Crops		X		
13. Haseng Pada	Fisheries		X		
14. Ismuni	Forestry		X		
15. Fauzie Hayat	Estate Crops		X		
16. Yagpis Sitorus	Estate Crops		X		
17. Nurtjahyo	AETE		X		
18. Kismosatmoro	AETE		X		
19. Jamil Musanif	Bureau of Planning		X		
20. Edy Asharyono	Bureau of Planning		X		
21. Slamet R.G.	CRIF		X		
22. Rachmat Effendi	CRIF		X		
23. Subandrio	CADP		X		
Group #8, BCI, 4.0 m/m					
1. Rachmat Lubis	Fisheries			X	
2. Lily Solihah	CADP			X	
3. Endang Koemiyati	AARD			X	
4. Tini Suhartini	AARD			X	
5. Koetanto	Bureau of Material			X	
6. Maruli Indra	Estate Crops			X	
7. Alsantama	Estate Crops			X	
8. Sri Ariyati M.	Estate Crops			X	
9. Fitri Lena	Estate Crops			X	
10. A. Gede A. Sastrawan	Estate Crops			X	
11. Adi Susmianto	Estate Crops			X	
12. Kadiasa P.	Estate Crops			X	

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
13. Nurhadi Utomo	Conservation			X	
14. Soedjono Kasri	Conservation			X	
15. Soekotjo BSC	Conservation			X	
16. Asep Hermawan BSC	Conservation			X	
17. Ade Rachmad BSC	Conservation			X	
18. Eko Widodo S.	Forestry			X	
19. Budhi Efiudin	Forestry			X	
20. M.H. Ambarita	Forestry			X	
21. Ita Puspitaningrum BSC	Forestry			X	
22. Djoko Isdianto	Inspector General			X	
23. Syamsudin	Inspector General			X	
24. Rasmidi Gendon	Forestry			X	
25. Azmi Hasdiana	Animal Husbandry			X	
26. Trimaharani R.	Livestock			X	
27. Zaiwil Abidin N.	Livestock			X	
28. Chairul Arifin	Animal Health			X	
29. Sonny Mongkol	Fish Resources			X	
30. Reni Kustiari	CADP			X	
Group #9, BCI, 4.0 m/m					
1. F. Supena Priantna BSC	CAER		X		
2. Marfuddin	CAER		X		
3. Retno Indah WBH	CADP		X		
4. Triyantoro Hadi	CADP		X		
5. Ibrahim	CADP		X		
6. Endang Titi P.	Food Crops		X		
7. Bambang Suharto	Food Crops		X		
8. Siska Antoinette T.	Food Crops		X		
9. Aspan	Food Crops		X		
10. Y. Maryadi	Food Crops		X		
11. Ahmad Fuad	Food Crops		X		
12. Susanto	Livestock		X		
Group #10, BCI, 4.0 m/m					
1. Leny Herliani Sule	AARD			X	
2. Sri Sumaryati	AARD			X	
3. Sri Erita	Soil Research			X	
4. Erna Hertiana BSC	Agricultural Science			X	
5. Djonet A.	Food Crops			X	
6. Ira Dewanti	Food Crops			X	
7. Kasdinoto BSC	Food Crops			X	
8. Suwartono BSC	Food Crops			X	
9. Susilo Widodo BSC	Bureau of Finance			X	
10. Naniek W.N. BSC	Food Crops			X	
11. Endang R.	Estate Crops			X	
12. Djauhari Aswan	Estate Crops			X	

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
13. Achmad Gusasi	Estate Crops			X	
14. Rusdi T. Dahlan	Estate Crops			X	
15. Herry H. Iskandar	Livestock			X	
16. Tri Satya P.N.	Animal Health			X	
17. Bambang Ariadi	Fisheries			X	
18. Bambang Dwi H. Bshk	BIMAS			X	
Group #11, DDS, 80 hours					
1. Eddy Asharyono	BOP				X
2. Mintarti BSC	Food Crops				X
3. Soegiyanto	Food Crops				X
4. Ratna Susilowati	Livestock				X
5. Dwiatmi BSC	Fisheries				X
6. Imam Hambali	Food Crops				X
7. Lilik Kristiani	Estate Crops				X
8. Sutrisno	Estate Crops				X
9. Pudji Wijati	Estate Crops				X
10. Benny Barmawan	Estate Crops				X
11. Noertjahyo	AETE				X
12. Dadang Suryanto	BIMAS				X
13. Chairani Lubis	Conservation				X
14. Surahman Ismail	Fisheries				X
15. Nina Meilina BSC	Fisheries				X
16. Erwan Mardi S.	Soil Research				X
17. Ahmad Jamil	Food Crops				X
18. Yasin	Food Crops				X
19. I. Komang Adha	Animal Science				X
20. Tato S. Pranoto	Animal Science				X
21. Tebal Bukit	Fisheries				X
22. Maria Wahyono	Fisheries				X
23. Tuti Hariati	Fisheries				X
24. Thamrin Wikanta	Fisheries				X
25. Bangun Nusantoro	Fisheries				X
26. Meike Ameriana	Horticulture				X
27. Oemi Koesmawardani	Horticulture				X
28. Widyawati	CADP				X
29. Sri Wuryaningsih	Library				X
30. Sodikin Badrudin	CAER				X
Group #12, DDS, 40 hours					
1. Nany Prastiwi	Estate Crops				X
2. Diah Mardiaty	Estate Crops				X
3. Kusmiati SC	Estate Crops				X
4. Subekto S.	Estate Crops				X
5. Kusumah Effendi	Horticulture				X
6. Suyatno	Horticulture				X
7. Sudarwati BSC	Industrial Crops				X

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training			
		PACK	FORT	COBOL	BASIC
8. Wardani	Industrial Crops				X
9. Kuntiyo BSC	Fish Resources				X
10. Agung Sumbogo BSC	Fisheries				X
11. Judrin Bowta BSC	Fisheries				X
12. Putu Wirta Antara BSC	Fisheries				X
13. Emmaria	Animal Science				X
14. Aldius Taher BSC	Animal Science				X
15. Sundoyo	Animal Husbandry				X
16. Edi Sudartanto	Animal Husbandry				X
17. Sri Susilowati	Animal Health				X
18. Sri Winarti	Animal Health				X
19. Agustina Elisabet	Animal Health				X
20. Jumari	Animal Health				X
21. Kusmoyadi	Agricultural Quarantine				X
22. Dikdik Sunardi P.	Animal Science				X
23. Suyoto	Food Crops				X
24. Puji Haryati	Inspector General				X
25. Kamaluddin	KLN				X
26. Purwanto Andiono	BOP				X
27. Ade Surachman	Food Crops				X
28. F.X. Hermawan	Food Crops				X
29. Edi Sutarwo	Food Crops				X
30. Eddy Kristiono	Estate Crops				X
Group #13, DDS, 40 hours					
1. Achmadi	BOP				X
2. Mugi Raharjo	BOP				X
3. Warsono	BIMAS				X
4. Sugiarto	BIMAS				X
5. Suhartika I. BSC	Fisheries				X
6. Slamet Widodo	Inspector General				X
7. Dewi Pujiastuti	KLN				X
8. Juli Alpeni	KLN				X
9. Burhan Amin	CADP				X
10. Zulkifli Muin	AETE				X
11. Yasmin Danusaputra	AETE				X
12. Naumar Sulaeman	Bureau Personnel				X
13. Mulyono Hadi	AARD				X
14. Abdul Fatah	Library				X
15. Sudiarti BSC	Library				X
16. A. Muis Hur	Fisheries				X
17. Gatot Dartoyo	Fisheries				X
18. Murpraptomo	Food Crops				X
19. Rusdi Dahlan	Estate Crops				X
20. Daryono	Food Crops				X
21. Didik Susiloharjo	Animal Husbandry				X

Table 16A. Short-term in country computer training continued

Name	Department	Type of Training				
		PACK	FORT	COBOL	BASIC	
22. Sri Setiati BSC	Food Crops				X	
23. Siti Zilda Abriana BA	Food Crops				X	
24. Sudarmanto	Food Crops				X	
25. Bambang Simiono	Fisheries				X	
26. Yayat Sudrajat	Fisheries				X	
27. Isbandi	Animal Science				X	
28. Komaruddin	Animal Science				X	
29. Wahyudin BSC	Industrial Crops				X	
30. Agus Bambang	Fisherie				X	
	TOTAL	57	50	67	90	264