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FINAL REPORT

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Eastern Islands Agricultural Education Project

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PROJECT SUMMARY

Country: INDONESIA

Project Title: Eastern Islands Agricultural Education

Project No: 497-0293

Contract No: AID 497-79-100.56

Contract Period: October 15, 1979 - June 30, 1984

Funding: USAID Funds to WSU

Grant $2,500,000
Loan $3,000,000

USAID Funds to BKS

Loan $2,000,000

GOI Project Support

$4,000,000 Est.

Technical Assistance:	Person Months
Chief of Party	55
Senior Advisors	127
Associate Advisors	60
	242

Training	Person Years	Person Months
Long-term		
Washington State University	71.4	--
Other U.S.	6.2	--
Third Country	12.5	--
In-Country	140.4	--
	230.5	
Short-term		
U.S.	--	84
In-Country	--	160

Procurement of Commodities and Equipment $314,866.00

Cooperating Groups:

BKS (Association of Eastern Island Universities)
WSU (Washington State University)
AID (Agency for International Development)
GOI (Government of Indonesia)

EXECUTIVE SUMMARY

The Eastern Islands Agricultural Education Project* (EIAEP) was a five-year institution-building project in Eastern Indonesia to upgrade ten public higher education institutions: the University of Hassanuddin at Ujung Pandang; IKIP Ujung Pandang; University of Sam Ratulangi at Manado; IKIP Manado; University of Mulawarman at Samarinda; University of Lambung Mangkurat at Banjarmasin; University of Pattimura at Ambon; University of Cenderawasih at Jayapura; University of Tadulako at Palu; and the University of Haluoleo at Kendari. The goals of the project were to increase the effectiveness of the BKS/T (Eastern Indonesian Association of Universities) which was formed in 1976, and through BKS/T, to upgrade the agricultural and supporting programs in rural development of the member institutions. This effort was to enable the member institutions to provide the leadership and trained manpower needed for the agricultural research, teaching, and extension activities in the rural development of eastern Indonesia.

The project goal was accomplished through the input of technical assistance (242 person months); short term training (244 person months) and long term training (230.5 person years) of faculty members (70 persons were upgraded by one degree level, with an attrition rate of 5%); and improvement of instructional materials (over $300,000 of contract funds were spent for laboratory equipment and books, and substantial numbers of additional books were contributed by Washington State University faculty members).

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*Project No. 497-0293; Contract No. AID 497-79-100.56; Contract Period October 15, 1979- June 30, 1984.

Funding for the project consisted of the WSU contract funds ($2.5 million grant funds and $3.0 million loan funds); loan funds from USAID directly to BKS/T ($2.0 million); GOI funds, in-kind and counterpart, to the BKS/T ($4.0 million).

Each university emphasized an area of concentration consistent with its faculty interests and abilities, and with particular needs within the region. Project implementation was correlated with these areas of concentration as closely as possible. Networking among the universities enhanced their capacity for self-help.

Twenty-seven institution-building activities (designated as "research activities") were identified during the initial stages of the project but were later reduced and consolidated to eleven activities to accommodate budget and time limitations. These activities were: intensive English and its evaluation; fourth year courses for potential faculties; acquisition of library books and journals, and utilization of dissertations; experimental farm development; experimental village development; improved administration capabilities; joint KKN student ecology; class notes for basic soils; lecture notes for food sciences; lecture notes, and related activities were carried out in such appropriate areas as seminars for returning training participants, seminars in extension work, animals sciences and research management. Also, the Project cooperated substantially with the rural satellite project and with other related projects.

By the end of the Project, the BKS/T universities measureably improved their capabilities to participate in expanded agricultural and community development because of more highly trained faculty and improved facilties and better management. In relative terms, the massive training

accomplished has lifted the program levels of the respective universities and helped to create a new level of operation and cooperation. The development of textbooks, lecture notes, instructional materials, tele-lessons, increased library holdings and special papers in the basic agro-sciences has improved the level of teaching, increased the learning materials available to the student, and helped set a higher level of academic expectations among the universities.

Although there were various frustrations and difficulties in project implementation, the goals of the project were achieved generally. A viable BKS/T secretariat was established and the institutions have been measurably strengthened. The Association, BKS-T, became a functioning, sustained organization; regular communications and sharing of resources among the personnel was achieved; the level of instruction was improved; and the impact of the universities upon the lives of rural and urban people was enhanced.

Next steps can only be to continue in a timely manner the planned patterns of development as shown in the Project, no matter what the source of support, no matter what the specific next project design. To do less would be to negate much that has already been set in motion.

ACKNOWLEDGMENTS

A great deal of credit and appreciation goes to a great many people connected in one way or another with this Project: the outstanding group of Rektors of BKS-T institutions, the able and cooperative officers of the Ministry of Education and Culture, the inspiring staff of BKS-T. Our thanks also goes out to the many faculty and staff members of WSU who gave time, insight and understanding to the Project. Appreciation is also extended to the officers of USAID, especially all of these in the Indonesia Mission who, by their interest and cooperation, were instrumental in the success achieved by this project. Recognition and thanks are also extended to all of those who supported and believed in the efforts described herein, most especially those who caught and held the vision of this awesome activity.

I. Introduction

A. Goals of the Project

The broad goal of the Eastern Islands Agricultural Education Project, No. 497-0293 (USAID), in cooperation with the government of the Republic of Indonesia, was to help augment an Indonesian capability for acceleration of national agricultural development, i.e., the production, distribution, storage and marketing of the agricultural products. This sector goal was called for to promote the development of the rural areas of the country, so that income would be more equitably distributed, and also so that the delivery of social services would be in better balance between the large urban centers and the vast rural areas.

In order to achieve this broad goal, several more explicit purposes were set for the project. The extent regional association, made up of ten Eastern Indonesia Universities, Badan Kerjasama Antar Perguruan Tinggi Nergeri, Indonesia Bagian Timur (BKS-T), has been considered by the Government to be a suitable consortium which can bring about more rapid regional change and development in order to improve education and society generally. This development is meant to increase employment, raise income levels, improve food production and bring social development generally in the rural areas. Specifically, the strengthening of the association and the member universities was to be accomplished through staff development, improved administration, instruction and research upgrading, and the acquisition of selected materials and equipment.

B. Background

In 1978, Washington State University became involved in the program development and support for Eastern Islands Agriculture Education, Republic of Indonesia, which subsequently became USAID Project No. 497-0293. This involvement for Washington State University came first through an interest expressed by Indonesian educators and USAID officials in WSU President Glenn Terrell's ideas on international development participation by American universities, and then by his subsequent visit to Eastern Indonesia, and finally through a visit to Indonesia by a Washington State University project design team in May of that year.

After the Government and USAID accepted the project plan paper, grant agreements and loan agreements to fund the project were signed between the Government of Indonesia and the U.S. Government in July and August, 1979, respectively, and the five-year project began officially July 1, 1979. Washington State University signed an agreement as Project Contractor with USAID in October 1979. Personnel were on site by November, 1979, when the actual implementation was started. The Project ended on June 30, 1984.

The BKS-T had been formed as an association of eight Eastern Indonesia Universities in 1976. These government universities, (Universitas Cenderwasih at Abipura, Universitas Pattimura at Ambon,

Universitas Sam Ratulangi and the IKIP Negara at Manado, Universitas Mulawarman at Samarinda, Universitas Lambung Mangkurat at Banjarmasin and IKIP Negara and Universitas Hasanuddin at Ujung Pandang), upon the initiative of their respective Rektors, and with the concurrence of the Ministry of Education and Culture, formed the Association. The intent was to foster cooperation among these institutions of higher learning and to improve their capabilities as instruments of regional development. The initial funding support from the GOI was in the form of relatively small, uniform grants to the individual institutions, and an additional amount to UNHAS to establish and maintain the Secretariat.

The GOI and the BKS-T sought USAID assistance to strengthen the Association in order to improve the agricultural, rural development, and support programs of each of these relatively remote, scattered, less developed universities. The project herein reported upon was formulated in response to that request. It should be noted that the conceptual guidelines were drawn by USAID program staff, and that from inception, the matter of dealing through the Association was promoted by USAID.

C. Implementation Plan

Through technical assistance, long and short term training, improvement of instructional materials, and strengthening administration, communications and research functions, it was intended that the BKS-T and its member institutions would become more responsive and would, therefore, contribute more significantly to regional development. It was also felt that the development of these universities under the aegis of BKS-T would be more attuned to national goals.

The governance of the BKS-T, and the administration of the project, were intended to be closely related to the administrative upgrading of the Association and the member institutions. The rectors of the ten universities, in effect, made up the Board of Directors of the BKS-T. Their elected chairman, vice-chairman, and executive secretary (and his assistant) are the on-going officials of the Association. In the instance of this project, the Chief of Party, and eventually the administrative officer from WSU, acted in an advisory capacity in matters of training, technical inputs, fiscal matters, and planning. A project steering committee, made up of the BKS-T Chairman, Vice-Chairman, the Sekretaris, two representatives from the Director-General of Higher Education, the Project Manager for USAID, and the Chief of Party, met periodically to help plan and monitor the programs.

Meetings of the rektors were held, on the average, twice per year; one meeting was usually at the time and site of the national meeting of all rektors, of all universities in the country. BKS-T meetings of vice-rektors, activity chairmen, professional and technical groups were held at different eastern university sites, usually at a time to complement seminars and workshops.

D. Finance

The fiscal arrangements of the Project, and of BKS-T, were inherently complex; three different finance systems, that of the GOI, of USAID, and of WSU were expected to interface with each other. In effect, five different kinds of funds (grant, two kinds of loan money, two kinds of GOI money), were provided, sometimes sporadically, to support Project and BKS-T activities. In every category, the lines of delineation as to who paid for what were modified so often that the starting up and carrying on of activities were often severely constrained.

1. Grant funds (US $2.5 million) from USAID through the contractor, WSU, for costs of technical assistance to BKS-T and to individual universities through BKS-T.

2. Loan funds (US, $3.0 million) from USAID through the contractor, WSU, for long and short-term participant training, in-country, in the U.S., in third countries, and also to purchase selected commodities which would be needed at the sites.

3. Loan funds (US $2.0 million) from USAID directly to BKS-T, for networking and strengthening of the BKS-T and member institutions. These funds proved to be very difficult to bring into the activities for which they were planned.

4. Counterpart funds from the GOI to the BKS-T and the individual universities as the GOI share of the total support for the project activities. Different fiscal years and complex procedures for distribution sometimes made these funds difficult to utilize.

5. In-kind monies from the GOI or a part of the on-going programs of the universities. The total of items 4 and 5 was expected to be of the order of US $4.0 million.

E. Areas of Concentration

With limited resources available, each university found it advantageous to develop an area of concentration consistent with its faculty interests and abilities and with the developmental needs within the region. Project implementation was correlated with these areas of concentration. Technical assistance, selection of participant trainees, and purchase of commodities and equipment at each university were related to the extent possible to these areas of concentration. For example, UNSRAT concentrated on food science. A total of 26 months of technical assistance in food science was provided at UNSRAT: approximately 48 months of long term training in food science and nutrition were provided; approximately $10,000 for food science laboratory equipment were purchased for the new food science laboratory; and approximately 800 volumes of books and journals were purchased for the library. Coordinating selection of

participants with the area of specialization was not always possible and was sometimes hampered by the lack of persons with adequate English language ability, as well as inadequate academic background for admission to graduate study.

The areas of emphasis identified for special emphasis at each of the member universities were as follows:

(1) Hasanuddin - Paddy rice soils and fisheries - Less than 50 percent of potential paddy land in South Sulawesi now being properly exploited.

(2) Ikip Ujung Pandang - Training of nonformal village educationists.

(3) Sam Ratulangi - (Food Science/Nutrition).

(4) Ikip Manado - Relating basic education to needs of the rural people.

(5) Malawarman - Control of Alang-Alang grass, management of tropical rain forest.

(6) Lambung Mangkurat - Management of tidal lands agriculture.

(7) Pattimura - Sea resources, and small holders farming.

(8) Cenderawasih - Vegetables and estate crops at the village level.

(9) Tadulako - Animal science and improving irrigated agriculture at village level.

(10) Haluoleo - Improve fisheries villages and diversified agriculture.

II. Summary of Accomplishments

A. Start-up

Although the BKS-T had been in existence since 1976, the activities and accomplishments were of a limited scale managed by UNHAS personnel, until the Project began in December, 1979. At that time, an office secretary and an administrative assistant to the Chief of Party and Sekretaris were assigned by the GOI (UNHAS) to the Project office.

The first major activity after the Project was started was a meeting of the Rectors at IKIP U.P. at which time priorities were reviewed, areas of concentration for each university were re-examined, and long- and short-term training procedures were outlined. It was apparent to WSU personnel that leadership had already been established and to some degree working relationships and a spirit of cooperation

existed among the universities and the Rectors. It also was evident that some long and short range planning had been done and the Project itself had been long anticipated. The Project had been thought of consistently as a catalyst to achieve the goals of the BKS-T.

The second activity, in December, 1979, and January, 1980, was for the Sekretaris of BKS-T and the Chief of Party, to visit all campuses of BKS-T. Training needs, language deficiencies and other preliminary concerns were discussed with all Rectors and their staffs. It was realized early on that intensive training in English was necessary if long-term candidates were to qualify for U.S. training. Two decisions were made: 1) to begin intensive English training in Indonesia, with follow-up in the U.S.; and 2) to lower the TOEFL minimum requirement at Washington State University for Project students. This will be further rationalized in the English language activity section.

The initial activity, the start-up of the Project, is described here to emphasized that the Project began as a Title XII. Collaborative project in which two significant aspects prevailed: what had gone on before in development was taken into account, and the actual conditions, the local and collective needs were indeed the basis upon which Project activities were implemented. In some instances this approach meant modifications of the Work Plan. However, this mode of operation continued remarkably well throughout the life of the Project. Admittedly, this kind of process, along with the vast logistical problems, endemic communications problems, and the halting flow of the activities funds, both from the GOI and USAID, all somewhat blurred the obvious successes of the Project.

B. Technical Assistance

The mode of techmical assistance was as a combination of 30 long and short term techincal advisors, all from WSU, who were in Indonesia for a total of 242 person months. The details of time, areas of expertise, and activity involvement are addended to this report. Each expert visited several sites as appropriate, quite often taking advantage of time and place to do more than was scheduled. In all instances the input from the technical advisors fit into the goals of the project.

There are several aspects of the technical assistance furnished through the Project which should be noted. First of all, there were serious difficulties in deploying and utilizing advisors because of delays in funding, delays in having concurrence in scheduling, and difficulties in matching local support with advisors' requirements. In some instances there were also shifts in priorities, comparable help from other sources, etc., which simply changed needs.

However, the flexibility and willingness to share among technical advisors prevailed, coupled with a general growth of interest in higher education in Indonesia, and resulted in a generally high impact by the technical advisors. The test of this came in several

instances: for example, two new universities were, at their own request, absorbed into the scheme, and they were accepted and provided for by other BKS-T member institutions. Project activities were also supportive of the new members' activities, such as the Rural Satellite Project, the DELSALIFE rural leadership project, and various other training and activities.

As refinements were made in technical assistance, it became apparent that under the conditions of the Project (i.e., in the jobs to be done), the most effective pattern of utilization of assistance was by teaming short-term senior advisors and long-term associate advisors. This provided continuity as well as a high quality input. Another addition was to have some of the short-term advisors repeat with two or more techincal visits. Indonesian reactions to the technical input generally were very high.

An insufficiently anticipated addition to the technical assistance was through Indonesian expertise. Especially in the fields of forestry, soils sciences, ecology technical english, and food science, the contribution by Indonesian scholars was very appropriate and of a high order. This input was usually of a shorter duration and was timed to enrich a specific activity (lecture notes, lab developments, textbooks, etc.).

C. Training

The various kinds of training, long and short-term; in-country, third-country, and U.S.; were considered to be some of the most important elements of institution building. Even though there were serious initial constraints, i.e., a lack of English language proficiency, and difficult on-going constraints, i.e., in staffing, logistical and communication problems, the program as a whole was successful. An estimated 244 person months of short-term training, or 144% over target (100 pm) were delivered. These seminars and workshops, both in-country and in the U.S., by their depth, timeliness and number of people involved had considerable immediate impact upon the staffs of the respective universities.

This can also be said of the long-term training, in-country, third-country, and U.S. An estimated 230.5 person years of long-term training, or 15% over target (200 person years) were delivered by the end of the project. An estimated 70 degrees were awarded to participants of these programs.

The attrition rate for all long-term training was about 5%. However, the average length of time to attain a master's degree or equivalent was slightly over two and one-half years. This was due largely to two factors: inadequate or obsolete preparatory work, and/or language deficiency. Comparable factors affected the 9 participants who studied for the S-3 or Ph.D.

The matter of participants returning to their home campuses and their previous positions posed several problems. In the minds of

these participants, who had been away from their homes for 2-3 years or longer, their return often seemed unanticipated and their newly-won intellectual growth seemed to be unrecognized and unutilized. On the other hand, it was difficult for them to understand that conditions had changed during their absence, that people and institutions had not stood still, adminstrations and programs, more often than not, had changed dramatically.

The process of preparing participants for re-entry to their home country was initiated at Washington State University through informal sessions with each participant. These sessions followed a group meeting with an experienced counselor who had worked with foreign students to help them adjust to their return. The participants had varied reactions to this re-entry preparation but it is fair to say that perhaps none of them were, at that point, fully aware of the difficulties in becoming re-oriented into their professional and their personal lives in Indonesia.

With Project support, three seminars were held in Ujung Pandang for these returnees from all training programs, USAID, ADB, etc. Although these sessions did not reach all returnees, they were received enthusiastically. The discussion of the common problems encountered by all of these people were very worth-while to help re-entrants readjust. Papers were delivered by most participants in which they re-introduced themselves to their colleagues.

This area of concern, the experience of returning, will continue to be somewhat difficult for candidates from all universities in Eastern Indonesia until their positions, their jobs of work, experiences away from the home university are recognized and their new positions are assured and challenging. Also, because the faculties, i.e, the teaching/research staffs of each university, continue to be made up largely of home graduates, there must be a continued effort to send candidates for advanced degrees out to other universities in-country and abroad, in order to develop more broadly experienced teaching staffs.

D. Institution-building

As has been stated, one of the salient goals of the Project was institution-building, for both BKS-T and for the respective universities. The initial and continuing intent of the GOI, at all levels, was and is to utilize BKS-T as an important instrument for a more even-handed and efficient development of universities in Eastern Indonesia. It was similarly regarded, at the time of formulating and planning the project, the intent of the USAID/JKT. This was emphasized by USAID with the design team. As the Project progressed, however, it seemed that USAID/JKT shifted its emphasis to more discrete, smaller projects rather than "umbrella" projects such as this. This shift in approach exacerbated the on-going funding difficulties and management challenges which were difficult, although not impossible, to carry out.

The original Title XII nature of the Project was well-suited to the over-all higher education management style and aspirations among Eastern Indonesia universities through their BKS-T Association; unfortunately, the Title XII concepts, even though they were very appealing to the Indonesian administrators, did not prevail. It seemed again and again that not enough of officialdom outside the actual Project operation accepted Title XII collaboration and the remarkable opportunities for development that were provided for by the Project plan.

Nevertheless, despite some assertions otherwise, a Secretariat was developed, and was in operation by the end of 1980. By the end of 1981, a fiscal management process similar to and in keeping with that of UNHAS and the GOI was in place. This was verified and accepted by GOI auditors. By the end of the Project, this fiscal management interfaced satisfactorily with those of USAID and WSU as well; and met one of the basic goals of the Project. The finance 'system' in its final development had integrity and flexibility which may have been misjudged in its laborious making. Obvious to the finance people of each of the three systems, there were funding problems - of poor synchronization, who paid for what, etc., - but these were eventually overcome.

The activities identified which were to be considered as institution-building were, for administrative reasons, as designated to be training activities and were in the beginning twenty-seven in number. As jobs of work, they reflected the consistent concerns of the BKS-T itself and of the original design team, well as of USAID. They had been set in terms of priorities, and in November 1982, they were further prioritized. Because of funding and time constraints they were reduced and consolidated into eleven activities. All activities are summarized as follows:

a. Intensive English program In-country intensive training programs were started by May-June, 1980, and eventually served an estimated 175 people who attended intensive language workshops of six-week duration at Ujung Pandang, Palu, Banjarmasin, Manado, and Ambon. The general interest in studying English increased so that a long-term, perhaps lasting effect resulted. Concurrently, an intensive English Language program was put into place at WSU to provide persons who were sent to WSU for long term training. The results of these efforts were evaluated and appear in a report by Dr. Mark Fleisher.

b. Fourth-year courses Selected courses were designated at UNHAS and IPB (Bogor) in order to allow fourth year students at smaller schools to take courses not offered at their home universities so that they could graduate from, and teach at their own university. At the end of the Project 12 students, who are committed to return to their own universities to reach were involved in this activity.

c. Library materials purchased As elaborated later in this report, thousands of books and journals were purchased and delivered to the respective university libraries. In addition to these purchased materials thousands more books and journals were donated by 'outsiders', largely WSU faculty members, to the libraries. In addition, the skripsi (theses) and dissertations which have been written by Indonesians, in-country and in other countries, in the agro-sciences, are being catalogued and annotated. At Project end those of UNHAS, estimated at 75% of the total, had been completed.

d. Experimental Farms Six of the universities, UNLAM, UNHAS, UNSRAT, UNPATTI, UNMUL and UNTAD have established sites for experimental farms and are at various stages of development, including farming plots, greenhouses and other buildings and equipments. UNHALU and UNCEN, in addition to their experimental village activities, have also set aside sites for experimental farms. Five of the universities are using their farms for student learning including research. Three have received heavy equipment. More detail on this activity is reported below.

e. Experimental villages Five of the universities have experimental village sites: IKIP-M, IKIP-UP and UNCEN are most active and have progressed to the point of solving a set of social problems at their respective sites. Each of the more advanced experimental village efforts - IKIP-M, upland farming development; IKIP-UP, development of village leadership; UNCEN, moving of fishing villages to new sites to include farming areas; is beginning to show a long-range impact in meeting the needs of the rural people.

f. Administrative upgrading At all levels of BKS-T and the member institutions, the administration and management skills have been improved. The most often used method of upgrading has been by workshops with individual training for a particular job - the use of particular equipment, the technique of planning, of fiscal management, etc. Three major administrative training sessions were held (two at Ujung Pandang, one at Ambon) in broad cooperation with other organizations. At Project end, the BKS-T Sekretariat was a functioning organization. As with any organization, continued leadership, program and funding support will be needed. For these reasons, more general meetings, more technical meetings, more exposure to broad material plans and projections, etc. will be needed. The quality of leadership of the BKS-T institutions has improved markedly during the five years of the Project. This growth is felt within BKS-T, and in the universities themselves. Although the Project can take only partial credit for this, it nevertheless was often catalytic in the process.

g-i. Research management upgrading, teaching-learning upgrading, and internship for Dosen Muda Because these activities could be subsumed in other ways, the rectors opted to place them at a lower priority as strictly Project activities. As worthy activities they were dealth with in the technical assistance input (Scheer, Hard, Hill, Bienz, Dingle, etc.), in workshops (such as extension, soils, forestry, ecology, etc.), and in cooperation with other projects such as GOI training workshops.

h. Joint KKN Program Joint planning led to the shared KKN activities by all BKS-T universities, at selected sites in South Sulawesi in 1983. The goals were to share KKN experiences, to bring together students from all ten of the universities, to set patterns of planning to achieve more uniform excellence in the jobs the students performed. All of these goals were achieved with great success and enthusiasm. This added new dimensions in planning and carrying out of individual university KKN programs. Although this was a relatively expensive activity, it was considered to be outstanding.

k. Skripsi and dissertation cataloging This activity was, because of low priority, subsumed under activity c and was estimated to be over fifty-percent completed by project end.

l-s. Class notes and instructional materials Again, priorities had to be re-set after the initial planning. This meant that teams were developed, and they in turn produced materials (i.e., texts, lecture notes, telecast notes in the following: basic ecology, basic soils, food sciences, technical english, and basic forestry). Similar materials in plant protection, agronomy and animal sciences, are yet to be developed, although the impetus for such work in these areas is presently there. The materials which have been developed (i.e., three textbooks in soils, class notes, a textbook and 15 telecast lessons in food science/food protection; three textbooks in technical english; three textbooks and 15 telecast lessons in basic forestry, and ecology), are all ready for publishing, for first trials, and be to distributed throughout Indonesia. The magnitude and local involvement of this whole effort is notable.

t. Other In connection with the widespread Project activities there have been other activities which have been accomplished by hard work, but with little or no additional resources. For example, extension seminars, returning participant seminars, PKK (Home Economics) seminars, library seminars, and animal sciences seminars (one by rural satellite) were held. In addition, the Project supported the Rural Satellite development by sharing costs for seminars and technical training sessions.

One of the valuable characteristics of this Project was the flexible and positive way in which it and BKS-T cooperated with other developmental projects sponsored by other organizations. The operational mode of the Project was complementary and cooperative, rather than being merely competitive and unduly critical of other efforts.

E. Special Discussion of Larger Activities

a. Experimental farms improved and equipped for instructional research

Experimental farms were proposed in the original project paper as a major means to meet the overall sector goals of increased agriculture production and nutrition levels, crop diversification and redistribution of income. In more specific terms, experimental farms help meet the universities goals of instruction, research, and outreach service.

The capability to complement teaching with research and extension programs is one of the strengths of the US land grant institutions. Transference of this concept to the BKS-T institutions helped promote regional development and provided a broader base of research for village and farmside extension programs. Because agriculture in Indonesia is varied, diversified, and specialized in particular areas, the experimental farms were designed to reflect the universities and the regional specializations.

Experimental farm sites are now in various stages of development at six association universities: UNSRAT, UNPATTI, UNTAD, UNMUL, UNLAM and UNHAS. Each is unique to its area because of the agricultural needs peculiar to that region. They range in size from two hectares with outlying fields and plots at UNPATTI in the Moluccas, to the 65 hectare farm at UNSRAT in North Sulawesi. Research specializations vary from plantation crops and experimental double cropping at UNSRAT to intensive greenhouse, seedling and nursery research at UNPATTI.

Some twelve WSU technical advisors have provided extensive input into the planning, development, and later, management and operation of the experimental farms. Their expertise included campus planning, nutrition, animal sciences, horticulture, food sciences, soils, extension, administration and management.

The experimental farm activity was developed and implemented by a committee comprised of an overall activity coordinator and a coordinator and other representatives from each university. The activity was financed by the AID $2 million loan to the GOI and by GOI monies and payment in kind. The technical input came from the WSU advisors. Early on the activity coordinator and several local coordinators attended a national experimental farm seminar in Jakarta where national plans for experimental research stations in Indonesia had been collected to be used as models for the eastern island experimental farms. Early budget projections were formulated from

those plans and were subsequently modified to fit the specialized needs of each university. The plans and budgets were in a constant state of flux as the technical different advisors recommended modifications. Finally, in November 1982, AID in a series of logframe planning sessions mandated new plans following AID's planning and budget format. Then the activity budgets went through a series of three formal planning and budget iterations that were required before a final budget was approved. The experimental farm activity, and all of the related activities were held up until September, 1983, when USAID loan budgets were approved, GOI loan monies were released, and the intensive flow of activities finally got underway.

In spite of the AID loan, freeze several universities had proceeded with excavation and construction on their sites. Notably, the UNSRAT experimental farm had been surveyed, roads and implement sheds constructed and trees and seedlings ordered, all prior to the release of AID loan funds in November, 1983. UNSRAT officials documented some U.S. $14,000 in expenditures that were allowable as AID financed expenditures prior to the release of AID funds. In addition GOI expenses on the farm amounted to $34,000.00. Likewise, UNPATTI, UNLAM and UNHAS sites had been cleared and UNHAS's farm temporarily fenced. Unfortunately due to the inertia caused by the money freeze and by changes in staff assigned to the experimental farm activity, two universities, UNMUL and UNTAD, were unable to begin site preparation prior to November, 1983, but were only beginning to implement their plans at the termination of the project on June 30, 1984.

By the end of the project none of the experimental farm plans had been fully implemented. However, the plans were designed with 18 month time frames for full implementation and only seven months remained on the project when they were finally funded by AID. Remarkable progress was made in that short time.

A few examples:

- Three experimental farm training sessions were held for local coordinators and committee members. WSU technical advisors, experts from Institute Pertanian Bogor and national agriculture experts were featured at each session.

- The UNSRAT experimental farm became nearly fully operational. All funds budgeted for the facility were spent, i.e., is, all supplies, materials and equipment were purchased.

- UNHAS took delivery of its farm tractor and dedicated it and their experimental farm site in formal ceremonies in June.

- UNLAM and UNSRAT also received farm tractors with implements for their experimental farms.

- Networking was strong in this activity as in most of the others. It is especially evident among the experimental

farm group because of the wide disparity of progress on the various farms. Committee members from universities that progressed quickly (UNSRAT, UNHAS) were very responsive to assist members from their sister universities who were not progressing as well (UNTAD, UNMUL).

It should be mentioned that UNCEN was originally included in the experimental farm activity, but the Rector later opted for the experimental village activity for two reasons. First, the relocation of fishing villages to farm sites was a more immediate need and, second, the government research station on Manokwari was subsequently turned over to UNCEN giving UNCEN, in effect. a working experimental farm.

The experimental farm activity reflects the concept of specialized programs possibly more than any other project activity. In addition to emphasis on crop and food needs and soil capabilities peculiar to each area, the farms reflect regional needs in research, teaching and extension, and other regional development needs.

The experimental farms are, in effect, action laboratories which develop research and research techniques for students and staff and overall improvement of the quality of instruction. They are vital, too, in the effective extension roles of the universities.

Through the network of working committee members and other professionals who assisted in training, site analysis and development, this activity strengthened the association and laid the groundwork for cooperation for years to come.

The experimental farm activity was designed as a long range activity with the initial construction and implementation stage planned over an 18 month period. None of the farms were fully operational after the slim seven month period of the contract which remained once AID released funds for the activity. UNSRAT was nearest completion. What remains for the other farms obviously is to complete as much of the initial stage as possible with the funds still available.

Beyond that and assuming the farms all become operational, they will be utilized by all the agroscience disciplines for teaching, research, and extension. They must, however, be integrated closely with other disciplines such as food sciences and fisheries in order to meet the overall regional goals of improving rural life in the respective provinces.

b. Experimental villages

Although not included in the original project proposal as sets of specific activities, the experimental villages were part of the original 27 activities under consideration in 1980. They survived the cutback in activities to 19 midway through the project and were included in the final 10. Approved by the Rectors in April 1983, each activity was unique, yet each met the overall project goals of

improving and upgrading agro-science and the quality of life of the rural poor of the eastern islands. Family and village incomes were addressed through training and livestock programs (IKIP-Ujung Pandang), the regional economy through farming and marketing cooperatives (IKIP-MANDO), village health and sanitation through water systems (UNCEN) and nutrition through study and improvement of traditional methods of food and fish preservation (UNHALU).

The experimental village activity provides a good example of the Title XII collaborative philosophy and flexibility. The activity was not included per se in the project proposal but was soon identified by the BKS-T as a means for the IKIP's and three of the universities to provide support to the rural areas. A single model and budget were proposed for five sites; IKIP - Manado, IKIP - Ujung Pandang, UNTAD, UNHALU and UNCEN. However, each university was addressing a different set of problems so the original design evolved into five unique activities.

Like the experimental farm activity this activity was designed, developed and implemented by a committee comprised of an overall coordinator, with local coordinators and representatives at each site, all with assistance from Washington State University advisors. And, again like the experimental farm activity, progress ranged from near completion (IKIP-Mando) to little progress due to funding and staffing constraints (UNTAD). The activities at IKIP - MANADO, UNCEN, and IKIP - Ujung Pandang were started and had progressed with GOI funds prior to release of the AID loan monies in November 1983. UNHALU was able to begin once funds were available, and UNTAD was only in planning stages at the end of the project. The network and cooperation established by this activity was stronger between agencies, governments, institutions and the farmers villagers than between the association universities. The following examples will amplify this interaction.

IKIP - Manado:

By any measure, this activity exceeded all expectations and provided a good example of networking and cooperation at all levels. The provincial government participated in this project with funds, officials and personnel. The governor of North Sulawesi had a personal interest in the project and Dr. Jan Turang, the coordinator, was invited by the national government to document the project as a model for farm cooperatives across Indonesia. Twenty-five co-op groups of some 300 farmers from 10 villages plus instructors and officials are involved in this activity. Plans are to expand into five more villages.

The farmers learned to break away from growing traditional crops and farming methods, and went into new techniques and cash crops. The emphasis was on diversification. Cloves had been overplanted, so cinnamon was taken up by the co-op farmers. Corn and peanut multiple cropping was introduced. Onions, carrots, tomatoes, soybean, ginger and vanilla were examples of crops introduced by the activity, and these are now being grown by the farmers. Marketing cooperatives are

planned as the next step, and plans have been drawn for a corn oil processing plant in the center of the cooperative farms. The activity has exceeded its original objectives but continues to evolve and adress the cooperatives' new and changing needs. AID commodity funds provided one small riding tractor and a walking tractor which the farmers share to work their farm sites.

UNCEN:

This experimental farm activity was run by a fourteen member committee comprised of university and government officials with technical assistance from Washington State University and national agencies. The activity basically, was to assist in relocating two villages from lake Sintani to higher ground nearby where each family would be given land to work, farm tools, and an adequate water supply, and fishing gear. A dam on Lake Ventani will flood the old village sites. Information and training are crucial to this activity as the villagers have been fishermen for generations. Small tractors originally planned for this activity were dropped and the funds instead budgeted for video equipment to re-educate the villagers, and for materials to pipe fresh water four kilometers into the villages. The fresh water supply appears to be the best incentive for the villagers to relocate. The Government has provided coffee trees and other plantation seedlings. AID commodity money bought sewing machines and materials, basic homemaking supplies, and tools for farming, in addition to the video equipment and water system.

More than half of the two villages were relocated by the end of the project. This is a long term activity as economic, cultural and jurisdictional problems were anticipated in relocating villagers from their ancestral homes.

The experimental village activity, again similar to the experimental farm activity, reflects the concept of specialized programs that were basic to the project proposal. Each activity is unique and reflects special area needs. At the same time two of the projects (IKIP-Manado and UNCEN) are considered models for implementing similar projects in other areas of Indonesia.

Networking and intergoverment level cooperation tends to be clustered within the area on these activities. There are exceptionally strong networks, close cooperation and strong ties among area agencies, the university and the villagers.

The IKIP-Manado activity, at least, is related closely to the experimental farm activity in that each cooperative farm site is a working experimental plot for new crops and farm methods and techniques. Developing markets will require working with university extension and agricultural marketing professionals.

The IKIP - Manado activity needs to quickly form marketing cooperatives and continue educating the farmers in market supply and demand so they don't overproduce single crops. More vertical integration in the form of processing crops (corn oil specificially)

needs study. The basic growers cooperative concept is ready for expansion into other villages. However, with increaed production the farm to market and marketing aspects of the activity need special attention.

Quick completion of the water and sanitation system in the UNCEN villages should be top priority as fresh water access appears to be the best incentive to get the remaining villages moved. Continued re-education and introduction to basic farming techniques is, of course, a high priority.

A continued presence in the IKIP-Ujung Pandang experimental village and carefully defined objectives is necessary for the continuation of DELSILIFE. The two remaining site activities realistically will progress little without additional outside technical assistance and aid in some form.

Finally, the coordinators of the IKIP - Manado and UNCEN activities should fully document their projects. Both carry much potential as models for improving the quality of rural life in Eastern Indonesia.

c. Libraries and laboratories in agrosciences

The Project paper states that by the end of the project "laboratories and libraries will be improved at each institution in order to support its programs." In more exact terms, the goals of the project were to improve laboratories and libraries at the association universities by improving design, and operation; by purchasing equipment, books and journals for use in the labs and libraries and by upgrading personnel through seminars and short term training.

Laboratories are keys to the teaching and research necessary for increased food production and processing, for utilizing resources that are presently underutilized and for general economic growth and improvement of the overall lifestyles and well-being of the people of the eastern provinces. Adequate libraries are, of course, central and keys to not only university research and education but also life-long education.

Laboratory and library design were addressed by the WSU campus planning advisor on two consulting trips to Indonesia in 1981 and 1983. He visited all university sites except UNCEN to consult with university planners, architects and administrators. The campus planner advised and drew part of the master plan for the new UNMUL campus in 1981 which included design of the central library and various labs. Consultations with UNTAD, UNLAM and UNPATTI officials also included specific advice on campus plans then underway for new labs and libraries.

Two short term home economics and food science advisors and on two consulting trips each were instrumental in the design and set up of the UNSRAT food science lab. A separate building was built for

this lab. It was used as a model lab for subsequent workshops held there for home economists from all the association universities. The two advisors also visited other sites and addressed specific design, equipment and lab management problems. The long-term food science associate advisor assigned to UNSRAT and IKIP-Mando was instrumental in the design, setting up and operation of the UNSRAT Food Science Laboratory. Several other consultants made additional contributions to laboratory improvement in their specific fields.

The library sciences advisor traveled to Indonesia in 1981, 1982 and 1983 for a total of nine months and visited all association libraries to advise on design, set up and operations. Recommendations from the first consultations were followed up on subsequent visits. Problems addressed ranged from actual design and location to library management, security, hours of operation, access and circulation policies, library equipment, book lists, staffing and staff training needs. The library sciences consultant also visited and advised on operations at provincial government, local school and private institution libraries to improve the regional library network.

Over $300,000 was spent under the contract for equipment and books to be placed in association laboratories and libraries. The majority of the scientific lab equipment purchased (over $70,000) was placed in the model UNSRAT Food Science Laboratory. Equipment lists were prepared by the advisors for various other universities but time constraints, stage of development, operation or staffing of the specific labs prevented actual purchase of more equipment. Lab equipment and books were also purchased with the $2 million GOI loan money administered separately by the BKS-T staff.

Book lists in the agrosciences and related disciplines were developed by the library network, local administrators and professors and WSU consultants over a period of many months under the supervision of the library sciences advisor. In addition to the basic agrosciences, disciplines included marine sciences, fisheries and aquaculture; ecology; rural development, rural sociology, nonformal education and anthropology; English as a second language; and management and administration.

In late 1983 over 5,200 books were ordered for the association libraries with approximate volume distribution as follows:

UNSRAT	780
UNHAS	625
UNCEN	520
UNMUL	470
UNLAM	470
UNPATTI	470
UNTAD	470
UNHALU	470
IKIP-Manado	470
IKIP-Ujung Pandang	470

Of the volumes ordered from American Overseas Book Corporation 3,640 were delivered.

The Dewey Decimal Classification Schedule and Library of Congress Subject Headings and various other materials critical to library collections work were purchased for each BKS-T library at the recommendation of the library science advisor.

In addition to book and journal purchases with AID/WSU loan money and AID/BKS-T loan money, WSU and many WSU staff have donated materials and books to BKS libraries. The most substantial single collection donated was the approximate 270 volumes of books, journals and other publications in forestry and silviculture that was donated to the UNHAS library by the forestry advisor, Dr. Richard W. Dingle.

Library staff training consisted of both formal and informal methods. In nine months total in Indonesia the library sciences advisor conducted short courses, and lectures on every BKS-T institution campus. These sessions included not only library staff but university administrators, lecturers, students and local and private library officials as well. Two shortcourses were held in Ujung Pandang for the BKS-T librarians. In 1983 librarians from every association library attended a short course in Ujung Pandang prior to traveling to the national librarians' meeting in Jogjakarta. This was instrumental in strengthening the association library network and provided valuable contacts with librarians throughout Indonesia. A follow up short course was held in May, 1984.

The library science advisor coordinated an intensive two month shortcourse for the head librarians of IKIP-Manado and IKIP-Ujung Pandang at WSU in Pullman. Included were field visits to surrounding county, school and city libraries and participation in the US national library association conference.

No long-term participants were trained in library sciences. The project proposal identified agroscience majors as top priority. Acting upon the library science advisor's recommendations UNTAD officials have since sent their head librarian to University Indonesia for an advanced degree with other funding sources. A real constraint to training has been the low status of librarians in Indonesia. Given training options the participants prefer a more prestigious agroscience degree.

The weak position of library staff early in the project forced the library technical advisor to reach into other disciplines to build a library network. The booklists, for example, were compiled by staff from virtually every discipline and every component of the project. The result is a stronger interdisciplinary network of librarians and staff supportive of the libraries. Conversely, a strong library system is necessary for adequate and effective education in every discipline.

In a similar way, input into laboratory design, as well as equipment purchases also reflected needs of several disciplines.

Laboratories on each campus have been designed to accomodate the specialized program areas selected by each university as most critical to their needs. The experimental farm activity project and experimental village activities also include laboratories and research facilities.

A BKS-T network of librarians has been established and must be nurtured through more workshops and larger participation as well as continued national library meetings. The continued exchange of information about common library problems among BKS members has been vital to the universities.

Library collections must also be increased, but according to the library technical advisor, more emphasis should be placed on identifying resources available in Indonesia. At the present time it is difficult to identify materials available because of the limitations of a system that circulates lists of publications available. The assessment of library collections must be continued at all the universities in identifying book and journal needs, and in establishing a logical next increment in purchasing materials.

The preliminary work done on identifying and locating skripsi and research reports should be continued. This is a valuable resource that now is scattered about each campus and granted by each writer as his own material. They represent probably the only information available on some subjects in the Indonesian language. The Bibliotheca Bogorienses has offered to microfilm all skripsi related to agriculture and this should be followed up.

Photocopy machines are needed at each library. In addition to the convenience it has been proved that photocopy machines reduce theft and mutilation (torn out pages) of books. Microfilm readers are also needed at each library, as microfilm holdings are increased.

Library buildings planned for the future should be designed only after consultation between the architects and librarians to ensure the buildings are usable as libraries once built. Laboratory design should also include input from professionals in the specific discipline for which it is being built. Equipment purchases for labs should be prioritized by professionals before purchase by the administrators. Equipment lists established by the technical assistants can serve as guides.

III. Site Briefs (as of June, 1984)

A. IKIP-MANADO took full advantage of training and workshop oppotunities with five long-term participants to the U.S., seven long-term participants in country, four short-term participants to the U.S., and an estimated forty short-term in-country participants. They were active in all appropriate activities of BKS-T. Their outstanding experimental village activities are recorded in Mapalus Di Minahous (Cooperation in the Land of Minahasa) by Dr. Jan Turang. This socio/agricultural scheme has been quite successful, and plans to replicate

it in other parts of Indonesia and are being discussed at the provincial and national levels. The Project supported this effort through workshops, instructional materials, technical inputs, and equipment. The activity so approaches self-sufficiency. Very briefly, individual farmers, small farmer groups, and large farmer groups are supported in their organizations in order to make them self-sufficient and productive for development of the area. The support success was possible only because the Project was at the grass-roots. IPIP Manado was also very active in the library development and training.

B. IKIP Ujung Pandang also took full advantage of the training and workship opportunities with four long-term participants in the U.S., three long-term in-country, one in Philippines, five short-term out-of-country participants and an estimated seventy in-country, short-term participants. Two of the outstanding pieces of developmental work by the IKIP-UP were the small village leadership development called DELSA-LIFE and the KKN or student work force activity. They were also very active in a leadership role in the PKK or Home Economics activities and workshops at the village level. The Project supported these activities with technical input, materials development, training and equipment. This institution (IKIP-Ujung Pandang) was also very strong in library development, and their library is one of the model libraries of BKS-T, in its buildings, collections, and aesthetics of the surroundings.

C. Universitas Cendrawasih, one of the smaller, more remote institutions of BKS-T could not use their full training opportunities for a least two reasons - a very small staff with many duties, and language deficiency. However, they did send four long-term participants to the U.S., one for the PhD. They also sent four short-term participants to the U.S. No third-country participants were sent but it is estimated that up to 30 short-term people attended seminars and workshops. One of UNCEN's more important activities is the experimental village, in which three small lake (entan) fishing villages are being moved about three kilometers from the lake to a new consolidated site so that the villagers may also have farm plots. The Project has helped with technical assistance and equipment, in a timely way, especially for equipment to bring water from the mountains. The activities of this move have been underway since 1976, and the socio/intracultural problems have been complex as the villagers adjust to new ways of life. The Project itself obviously could only help for a relatively short time, but was flexible enough to do so.

The two UNCEN library sites, at Abipura and Manokwari, have relatively modest library holdings, but they are well managed, of excellent selections, and have considerable usefulness for staff and students. The Project furnished approximately 1000 books to these two libraries.

D. Universitas Haluoleo at Kendari is the newest, least developed of all the BKS-T institutions, only 2½ years old, although it had previously been a branch campus of UNHAS. The present campus

is being developed as an interim site, and a new larger campus site has been designated. UNHALU is beginning to participate in several of the BKS-T activities. UNHALU has sent one long-term participant to the Philippines, and two short-term participants to the U.S. Their main participation in Project activities has been in Experimental Village development. Two fishing villages have been selected as prototypes for fish marketing, preservation, curing, etc. Partly through re-arranged (flexible) Project support UNHALU will also have a complete Rural Satellite installation; the original plan had not included them. Approximately 500 volumes of library books plus a selection of journals were furnished to the UNHALU library.

E. Universitas Hasanuddin (UNHAS), the largest, most developed of the BKS-T institutions availed itself of the training opportunities of the Project. It should be pointed out, however, that UNHAS gave a significant portion of its training quota to other, smaller BKS-T universities. Nevertheless, UNHAS sent two, plus an extension of another, long-term participants to the U.S. They sent one long-term PhD candidate (successful) to the Philippines. They sent five short-term particpiants to the U.S. and approximately sixty short-term participants in-country. They also sent twelve long-term, in-country degree participants, but only after other universities could not send a sufficient number of candidates. The UNHAS experimental farm development has been particularly dynamic and fitting for their needs. The site on the new campus is on the way to becoming a model of an experimental farm system. They were furnished with a considerable amount of heavy equipment. UNHAS furnished a great deal of the high level leadership to make the Project successful, in administration, libraries and in technical areas (such as animal sciences, soils and English. They received approximately 1000 books and journal collections for their central library and for specific departments.

F. Universitas Lambung Mankurat (UNLAM) was very active and supportive of the Project. They sent one long-term participant to the U.S., four short-term participants to the U.S., one long-term participant to the Philippines, thirteen long-term participants in-country and approximately thirty short-term participants in-country. Much of the experimental farm activity leadership resided at UNLAM. Their planning and development, and their cooperation with national leaders added a great deal to the development of all experimental farms. Their agricultural emphasis is upon farming in tidal areas. They received approximately 500 library volumes, in the agrosciences, and in related fields.

G. Universitas Mulawarman (UNMUL), where the basic developmental area of interest is forestry, sent five long-term participants to the U.S., four short-term participants to the U.S., two long-term participants in-country. UNMUL has been particularly active in the Project efforts in forestry instructional materials and the UNMUL Rektor has served as a forestry expert on the Project. UNMUL has also contributed in the Technical English instructional materials preparation, and in the experimental farm activity. They received approximately 500 volumes of books and journals in the agro-science area for their library.

H. Universitas Pattimura (UNPATTI) of AMBON took full advantage of the Project training opportunities. They sent five long-term participants to the U.S., three short-term particpants to the U.S., seven long-term participants in-country, and approximately fifty short-term in-country participants. UNPATTI has been very active in Project activities, soils sciences, technical english, food sciences (especially fisheries), and experimental farms. They also held two successful administrative traini ng workshops one of the nost notable of their contributions was a province-wide survey and workshop conference in fish processing which involved national expertise in fish preservation. This resulted in similar meetings at UNHALU and in other parts of Indonesia. UNPATTI received approximately 500 library books and journals in the agro-science and fisheries through the Project.

I. Universitas Sam Ratulangi (UNSRAT) - Manado sent five long-term participants to the U.S., five short-term participants to the U.S., one long-term participant to the Philippines, ten long-term participants in country, and approximately seventy-five short-term participants in county. UNSRAT was very active in the activities of the Project, in the experimental farm efforts, in KKN, and especially in food sciences. By the end of the Project they had a well-equipped food science laboratory, and a considerable amount of research underway. During the seminar and workshop activities, seven food science workshops were held, and three textbooks and instructional materials were produced. Large amounts of research equipment and farm equipment were purchased through the Project for UNSRAT. Also, over 800 volumes of books and journals in food sciences and agroscience were purchased through the Project.

J. Universitas Tadulako (UNTAD) - Palu is the second youngest university of BKS-T, almost four years old. At the present time it has three campus sites, and many of the decisions as to locations and programs have not yet been made. However, the rate of development has increased, and the relatively small staff is growing somewhat. UNTAD sent two long-term participants to the U.S., three short-term participants to the U.S., one long-term participant in-country and approximately forty short-term in-country participants. Their interest in an experimental farm is at the planning stage, and their interest and activity in an experimental village centers upon ways in which a selected very low income village can find ways of improving the quality of life in the village. It is intended that such villages can develop approximate ways of improving economically, socially and educationally.

IV. End of Project Status Relative to Stated Objectives

A. As stated in the Project Paper in Jaunary 1979, the broad sector goal of Project 497-0293, Eastern Islands Agriculture Education, Indonesia, was: "An indigenous Indonesian capability for undertaking and maintaining national agricultural development (production, distribution, storage and marketing)". This development had a regional focus, i.e., from Kalimantan to Irian Jaya and was

intended to increase rural employment and income. The progress toward the sector goal and sub-goals was to be measured in terms of the annual increase in food production, decrease in post-harvest losses, and the increase in rural employment and income.

The difficulties in isolating valid accomplishments within the above goals are, in retrospect, quite apparent. Sound and articulated baseline data were available only partially and in pieces. Also, other donors and programs such as the Asian Development Bank, the Australian aid programs, the Asia Foundation, other USAID projects, etc. were all involved in related efforts. However, it can be said that the universities of BKS-T have become much more involved in providing leadership, information, and research needed to improve the national and regional food situation. Liaison among the various interested groups, the Department of Agriculture at its various levels, the national and provincial planning offices, and the universities is increasingly close in addressing common development proglems. Key personnel are often serving part-time in other agencies from a university-base, so that problems such as draught, post-harvest losses, new area interest, are now all more likely to be addressed successfully. The universities' ability to participate and often lead the efforts for solutions is more and more apparent. A summary statement is that the BKS-T universities have, with more highly trained personnel, improved their capabilities to participate in an expanded agriculture development.

The Project purpose is stated as being the upgrading of the Regional Association of Eastern Indonesian Universities, i.e., BKS-T, and its member institutions so that they are able to provide and produce the leadership, trained manpower, research, and extension activities in agriculture necessary for rural development, especially in terms of the employment, income and food production consumption capabilities of the rural poor. This focus on programs in the agro-sciences and at the rural level has been the central theme of the project. The technical assistance, the training and the institution strengthening activities have all been integral parts of the broad effect. Every Project effort has been directed toward these specific and over all purposes. For example, such efforts as experimental farms, now at six sites, experimental village activities at five sites, the KKN activities all have impact at the rural level. The instructional materials teams have all produced work which will continue to improve instructional and research levels.

The end of Project status is said to be three-fold: agro-science programs to have been improved; new and revised methods and materials to have been been introduced; and labs and libraries are to have been upgraded. The most obvious and lasting improvements have been in training of faculty members, staff members, administrators, and librarians. In relative terms, the massive training accomplished has lifted the program levels of the respective universities and helped to create a new level of operation and expectation. The development of textbooks, lecture notes, instructional materials, tele-lessons, increased library holdings and special papers in the basic agro-sciences has improved the level of teaching, increased the

learning materials available to the student, and helped set a higher tone of academic expectations among the universities.

A review of the Sector Goal, the Project Purpose, and the End of Project Status, indicate that the Project adhered quite well to the original design, and achieved the goals generally. With regard to the BKS-T itself, a viable secretariat has been established to serve the collective and individual needs of the member institutions. Training and technical assistance were achieved as envisioned at the start. The institutions were strengthened.

It must be pointed out that often during the life of the Project the establishment of a viable association (BKS-T) became a pre-requisite to development rather than a goal of the activities. This inconsistent perspective delayed many of the activities unduly, since the flow of funding was first delayed and then interrupted. It illustrated the great need for consistency of purpose, especially in a project of a mere five years.

V. Summary of Tables

Table 1. Summary of Technical Assistance Input, IEAEP, October 16, 1979 -June 30, 1984

Table 2. Summary of Participant Training, Long-term, WSU, October 16, 1979 - June 20, 1984

Table 3. Summary of Participant Training, Third Country, October 15, 1979 - June 20, 1984

Table 4. Summary of Participant Training, Long-Term, Ohio State University and Auburn University, October 15, 1979 - June 20, 1984

Table 5. Summary of Participant Training, Long-term, In-Country, October 15, 1979 - June 30, 1984

Table 6. Participant Training Support Services/Enrichment Activities, WSU Long-term Participants, October 1979 - 1984

Table 7. Summary of Particpiant Training and Executive Visits, Short-term, October 15, 1979 - June 30, 1984

Table 8. Activity Training Schedule

Table 9. Summary of Procurement of Commodities and Equipment, EIAEP, October 15, 1979 - June 30, 1984

Table 1 - Summary of Technical Assistance Input, IEAEP, October 15, 1979 - June 30, 1984

Name	Date of Assignment Begin	Date of Assignment End	Months on Assignment	Area of Specialization	Type of Assignment: Senior Advisor Long-term	Type of Assignment: Senior Advisor Short-term	Type of Assignment: Associate Advisor	Sites of Assignment
B. Yarberry	11/17/79	06/30/84	55	Chief of Party	X			Ujung Pandang
M. Waananen	02/17/80	03/11/80		Administrative Visits		X		
	01/16/81	02/07/81						
	02/12/82	03/03/82						
	10/30/82	11/17/82						
	04/17/83	05/11/83						
	05/18/84	06/15/84						
R. Harder*	02/17/80	03/11/80	1	Consulting		X		Ujung Pandang, Manado
A. Hill	11/03/80	02/28/81	4	Home Economics		X		Ujung Pandang
	06/20/83	09/30/83	3					Manado, Palu
J. Gillani	11/03/80	02/01/81	3	English		X		Ujung Pandang
R. Gebhardt	02/01/81	04/26/81	3	Audio Visuals		X		Manado, Palu
E. Sorensen	02/01/81	03/04/82	13	Horticulture			X	Banjarbaru
D. Bienz	02/01/81	11/18/81	5.5	Horticulture		X		Banjarbaru
A. Spitzer	07/01/81	11/18/81	5.5	Libraries		X		Various
	07/21/82	10/09/82	2.5					
	06/01/83	08/12/83	3.5					
M. Nance	07/09/81	09/14/81	2	Facilities Planning		X		Palu, Samarinda
	09/01/83	10/15/83	2.5					
J. McGinnis	07/09/81	01/01/82	6	Animal Science		X		Palu, Manado, Ambon, Ujung Pandang, Manokwari
D. Podol	08/26/81	10/31/83	26	Rural Development			X	Ujung Pandang, Manado
	05/21/84	06/30/84	1					
M. Hard	10/01/81	04/08/82	6	Home Economics		X		Manado, Ujung Pandang
	06/20/83	09/30/83	3					
R. Howell	10/05/81	12/31/82	2.5	Rural Sociology		X		Ujung Pandang, Manado
R. Dingle	11/18/81	12/31/83	13	Forestry	X			Ujung Pandang, Manokwari
R. Haggerty	07/12/82	04/30/84	21	Food Science			X	Manado, Ujung Pandang
K. Brandon*	03/16/82	04/25/82	1	Administrative		X		Ujung Pandang
F. Larsen	09/06/82	10/05/82	1	Horticulture		X		Ujung Pandang, Palu
M. Fleisher	09/06/82	10/05/82	1	Anthropology		X		Banjarmasin
W. Gash	09/01/82	06/30/84	22	Administration	X			Ujung Pandang, Palu
								Ujung Pandang,

Table 1 (continued) - Summary of Technical Assistance Input, IEAEP, October 15, 1979 - June 30, 1984

Name	Date of Assignment Begin	Date of Assignment End	Months on Assignment	Area of Specialization	Type of Assignment Senior Advisor Long-term	Type of Assignment Senior Advisor Short-term	Associate Advisor	Sites of Assignment
R. Norton	09/06/82	10/17/84	1	Experimental Farms		X		Ujung Pandang, Palu Banjarmasin, Manado
P. Rasmussen*	10/30/82	11/14/82	1	Administrative		X		Ujung Pandang, Palu, Samarinda
S. Alexander	03/16/84	04/22/83	1	English Inst.				Ambon
C. Nyman*	04/17/83	05/08/83	1	Administrative		X		Jakarta, Ujung Pandang, Manado, Ambon, Palu
W. Scheer	09/01/83	12/31/83	5	Extension		X		Ujung Pandang, Palu, Ambon, Banjarmasin, Samarinda, Manaod, Jayapura
L. Hunt	11/26/83	06/30/84	7	Bookkeeping				Ujung Pandang
J. Froseth	03/01/84	05/31/84	2	Animal Science		X		All sites
R. Hausenbuiller	03/19/84	05/31/84	2.5	Soils		X		Ujung Pandang, Manado
G. Johnson	05/31/84	06/29/84	1	Administrative		X		Jakarta, Ujung Pandang
OTHER FUNDING								
K. Struckmeyer[1]	02/16/83	03/16/83	1	Campus Planning				Palu, Ambon, Irian Jaya, Ujung Pandang
	08/11/83	09/09/83						
A. Stutler[1]	06/22/83	07/15/83	1	Administrative				Jakarta, Ujung Pandang
W. Millsap[1]				Short-Term Training				
L. Rogers								

* WSU Funds

[1]Strengthening Grant Funds

Table 2 - Summary of Participant Training, Long-term, WSU, October 15, 1979-June 20, 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Dates Begin	Dates End	Months of Training	Thesis/Special Problems	Credits Earned	PIO/P
Adelheid Doda	IKIP/Manado	60496813	Education Curriculum & Media	MEd	9/81	6/83	22	Instructional Media & the Teacher	36.0	90346
Jane Katuuk	IKIP/Manado	61090812	Adult & Continuing Education	MACE	6/81	2/84	33	Home Landscaping with Plant Materials Handbook for KKN/IKIP Man. Students	43.0	90322
Gustaaf Lasut	IKIP/Manado	60696813	Educ. Measure & Evaluation	MEd	9/81	6/82	22	Evaluating & Analyzing Achiev. Test Devel. of Manual for Indo. Ed.	36.0	90345
Sakidja	IKIP/Manado	61385812	Food Sci & Human Nutrition	MS	6/81	1/84	32	Physiochemical Changes of Cooked Rice During	48.0	90318
Raymond Tingginehe	IKIP/Manado	60796813	Education Curriculum	MEd	9/81	11/83	26	Teaching Methodology for Institute of Teachers Training & Ed. in Manado	39.0	90344
Deri Bangkona	IKIP/Ujung Pandang	60361813	Home Economics	MS	8/82	6/84	23	Development of Teaching Plan for Food & Nutrition at IKIP/UP	42.0	90343
Akil M. Malla	IKIP/Ujung Pandang	68412811	Food Sci & Human Nutrition	MS	1/81	7/83	31		42.0	90343
Abdul Rasjid	IKIP/Ujung Pandang	68913811	Food Sci	MS	1/81	8/83	32	Protein Quality of Soybean, Red Bean & Corn Tempeh	37.0	90269
Sahide	IKIP/Ujung Pandang	61774823	Adult & Continuing Education	MACE	6/82	6/84	24	Distance Learning Program at IKIP/UP: Problems & Rec. for Improvement	31.0	90497
Masman Andara	UNCEN	60102822	Sociology	MS	7/82	6/84	23		31.0	90523
Samuel Patty	UNCEN	68D16811	Anthropology	PhD	1/81	3/84	42	Social Movements in Western New Guinea	68.0	90271

Table 2 - Summary of Participant Training, Long-term, WSU, October 15, 1979-June 20, 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Dates Begin	Dates End	Months of Training	Thesis/Special Problems	Credits Earned	PIO/P
Adelheid Doda	IKIP/Manado	60496813	Education Curriculum & Media	MEd	9/81	6/83	22	Instructional Media & the Teacher	36.0	90346
Jane Katuuk	IKIP/Manado	61090812	Adult & Continuing Education	MACE	6/81	2/84	33	Home Landscaping with Plant Materials Handbook for KKN/IKIP Man. Students	43.0	90322
Gustaaf Lasut	IKIP/Manado	60696813	Educ. Measure & Evaluation	MEd	9/81	6/82	22	Evaluating & Analyzing Achiev. Test Devel. of Manual for Indo. Ed.	36.0	90345
Sakidja	IKIP/Manado	61385812	Food Sci & Human Nutrition	MS	6/81	1/84	32	Physiochemical Changes of Cooked Rice During	48.0	90318
Raymond Tingginehe	IKIP/Manado	60796813	Education Curriculum	MEd	9/81	11/83	26	Teaching Methodology for Institute of Teachers Training & Ed. in Manado	39.0	90344
Deri Bangkona	IKIP/Ujung Pandang	60361813	Home Economics	MS	8/82	6/84	23	Development of Teaching Plan for Food & Nutrition at IKIP/UP	42.0	90343
Akil M. Malla	IKIP/Ujung Pandang	68412811	Food Sci & Human Nutrition	MS	1/81	7/83	31		42.0	90343
Abdul Rasjid	IKIP/Ujung Pandang	68913811	Food Sci	MS	1/81	8/83	32	Protein Quality of Soybean, Red Bean & Corn Tempeh	37.0	90269
Sahide	IKIP/Ujung Pandang	61774823	Adult & Continuing Education	MACE	6/82	6/84	24	Distance Learning Program at IKIP/UP: Problems & Rec. for Improvement	31.0	90497
Masman Andara	UNCEN	60102822	Sociology	MS	7/82	6/84	23		31.0	90523
Samuel Patty	UNCEN	68016811	Anthropology	PhD	1/81	3/84	42	Social Movements in Western New Guinea	68.0	90271

Table 2 (continued) - Summary of Participant Training, Long-term, WSU, October 15, 1979-June 20, 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Dates Begin	Dates End	Months of Training	Thesis/Special Problems	Credits Earned	PIO/P
Frans Wospakrik	UNCEN	61088812	Engineering Wood	MS	6/81	3/84	34		51.0	90263
Judya Wospakrik	UNCEN	61094812	Engineering Adhesive	MS	6/81	3/84	34		51.0	90235
Najib M. Mahammadin	UNHAS	60898813	Education Adminstration	MEd	9/81	11/83	26	Development of Effective Recruitment Procedures of Admin. staff in Higher Ed.	36.0	90347
Baharuddin Nurkin	UNHAS	61398812	Forestry	MS	6/81	8/83	26	Problem Analysis of Soil Characteristics Related to Plantation Prod.	36.0	90272
Fudiat Suryadikara	UNLAM	64389832	Anthropology	PhD	9/83	6/84	10		15.0	90599
Adriansyah	UNMUL	68912811	Agronomy Crop Production	MS	1/81	6/83	30	Maturity Rating of Corn with Heat Units in Irrigated Central WA	44.0	90264
Iman Kuncoro	UNMUL	68205811	Forestry Economics	MS	1/81	8/83	32	Study of Forest Products Industries in East Kalimantan	39.0	90265
Komariah Kuncoro	UNMUL	62082821	Forestry Educ. & Extension	MS	2/82	1/84	24	Study in Forestry Extension Methodology for Undergrad. at UNMUL	48.0	90459
Boedi Kaliman	UNPATTI	61384812	Adult & Continuing Education	MACE	6/81	9/83	28	Strategy to Teach Extension Workers in Indonesia an Economic Concept of Soil Conservation	59.0	90326
Anaatje Lalopua	UNPATTI	68709811	Ag Econ	MS	1/81	2/84	37	Economic Analysis of Small Scale Fisheries in Ambon Island, Indo.	49.0	90267

Table 2 (continued) - Summary of Participant Training, Long-term, WSU, October 15, 1979-June 20, 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Dates Begin	Dates End	Months of Training	Thesis/Special Problems	Credits Earned	PIO/P
Frans Wospakrik	UNCEN	61088812	Engineering Wood	MS	6/81	3/84	34		51.0	90263
Judya Wospakrik	UNCEN	61094812	Engineering Adhesive	MS	6/81	3/84	34		51.0	90235
Najib M. Mahammadin	UNHAS	60898813	Education Adminstration	MEd	9/81	11/83	26	Development of Effective Recruitment Procedures of Admin. staff in Higher Ed.	36.0	90347
Baharuddin Nurkin	UNHAS	61398812	Forestry	MS	6/81	8/83	26	Problem Analysis of Soil Characteristics Related to Plantation Prod.	36.0	90272
Fudiat Suryadikara	UNLAM	64389832	Anthropology	PhD	9/83	6/84	10		15.0	90599
Adriansyah	UNMUL	68912811	Agronomy Crop Production	MS	1/81	6/83	30	Maturity Rating of Corn with Heat Units in Irrigated Central WA	44.0	90254
Iman Kuncoro	UNMUL	68205811	Forestry Economics	MS	1/81	8/83	32	Study of Forest Products Industries in East Kalimantan	39.0	90265
Komariah Kuncoro	UNMUL	62082821	Forestry Educ. & Extension	MS	2/82	1/84	24	Study in Forestry Extension Methodology for Undergrad. at UNMUL	48.0	90459
Boedi Kaliman	UNPATTI	61384812	Adult & Continuing Education	MACE	6/81	9/83	28	Strategy to Teach Extension Workers in Indonesia an Economic Concept of Soil Conservation	59.0	90326
Anaatje Lalopua	UNPATTI	68709811	Ag Econ	MS	1/81	2/84	37	Economic Analysis of Small Scale Fisheries in Ambon Island, Indo.	49.0	90267

Table 2 (continued) - Summary of Participant Training, Long-term, WSU, October 15, 1979-June 20, 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Dates Begin	Dates End	Months of Training	Thesis/Special Problems	Credits Earned	PIO/P
Jefta Lalopua	UNPATTI	68113811	Adult & Continuing Education	MACE	1/81	2/84	37	Introduction to Soil Conservation	43.0	90268
Danial J. Sahilatua	UNPATTI	68714811	Horticulture	MS	2/81	6/82	17	Degree not completed	12.0	90266
Moha Kolopita	UNSRAT	61183812	Animal Sci/Ruminant Nutr.	MS	6/81	4/84	35	Evaluation of Buffers of Acid Fish Silage for Dharma Wanita at UNSRAT	42.0	90323
Betsy Ottay	UNSRAT	61192812	Adult & Continuing Education	MACE	6/81	6/84	36	Instructional Program on Raising Broilers for Dharma Wanita at UNSRAT	42.0	90319
Max Ottay	UNSRAT	61092812	Adult & Continuing Education	MACE	6/81	6/84	36	Educational Strategy & Guidelines for Ruliah Kerja Nyata at UNSRAT	60.0	90320
Henny Pakasi	UNSRAT	61186812	Animal Science - Poultry	MS	6/81	2/84	21	Nutritional Value of Mung Beans for Chicks	33.0	90321
Victor Rantung	UNSRAT	61190812	Adult & Continuing Education	MACE	6/81	6/83	24	Experimental Design	39.0	90325
Musyi Amal	UNTAD	61188812	Sociology	MS	6/81	11/83	30	Transmission Problems in Indo.: Look for New Policy Alternatives	44.0	90324
Masril Bustami	UNTAD	62994821	Animal Sci./Ruminant Nutr.	MS	1/82	6/84	30		31.0	90458

Table 3 - Summary of Participant Training, Third Country, October 15, 1979-June 20, 1984

Name	Home University	Dept./Discipline	Degree	Dates Begin	Dates End	Person Months of Training	University	PIO/P
Mr. Syamsul Arifin	UNLAM	Aquiculture/Fisheries	MS	6/82	6/84	24	Visayas University	90499
Mrs. Djaenabong Azikin	IKIP/UP	Education Management	MS	4/83	6/84	15	DeLaSalle University	90560
Mr. Mahmud Hamundu	UNHOL	Agricultural Extension	MS	11/82	6/84	20	University of Philip.	90534
Miss Asiah Hamzah	UNHAS	Education Management	MS	3/83	6/84	16	Xavier University	90599
Mr. Ali Hasymi	UMLAM	Human Resource Economics	PhD	10/83	4/84	7	University of Philip.	
Mr. Nadjamuddin	UNHAS	Guidance & Counseling	PhD	9/80	5/84	45	DeLaSalle University	90226
Mr. Jozef M. Sinolungan	UNSRAT	Psychology	MS	8/82	6/84	23	University of Philip.	90498

Table 4 - Summary of Participant Training, Long-Term, Ohio State University and Auburn University, October 15, 1979-June 20, 1984

Name	Home University	Dept./Discipline	Degree	Dates Begin	Dates End	Person Months of Training	PIO/P
Jan Lawalatta	UNPATTI	Agronomy	PhD	9/80	7/83	35	90237
Arthur Mangalik	UNLAM	Fisheries	PhD	3/81	6/84	39	90263

Table 5 - Summary of Participant Training, Long-term, In-Country, October 15, 1979 - June 30, 1984

Name	Home University	Place of Study	Dept./ Discipline	Degree	Dates Begin	Dates End	Person Months of Training
Doda, Joshua	IKIP/Manado	IPB	Env. Mgt.	PhD	7/81	8/84	36
Lolombulan, Julius	"	IPB	Appl. Stat.	MS	9/81	8/84	36
Lumape, S.	"	IPB	Bio. Sci.	MS	9/81	8/84	36
Tjia, Robert	"	UI	Med. Agthr.	MS	1/82	8/84	32
Undap, A.P.P.	"	IKIP/Ban	Admin. Ed. Planning	MS	1/82	6/84	30
Dama, Nurdin	"	IPB	Rural Soc.	MS	9/82	6/84	21
Moningkey	"	IPB	Ag. Econ.	MS	9/82	Returned	12
Abustam, Idrus	IKIP/UP	IPB	Rural Soc.	PhD	8/81	6/84	46
Manangkasi	"	IPB	Appl. Stat.	MS	8/82	6/84	22
Makkulau, Andi	"	IKIP/Band	Curr. Dev.	MS	12/82	6/84	18
Manrihu, Tayeb	"	IKIP/Band	Guid. & Couns.	PhD	3/83	6/84	15
Muin, Liwa	UNHAS	IPB	Anim Breed. & Genetics	PhD	9/80	6/84	45
Hafidz, Achmad R.	"	IPB	Rural Soc.	MS	9/80	9/82	24
Laddong, Abu	"	IPB	Agronomy	MS	9/80	81/Return	12
Umar	"	IPB	Appl. Stat.	MS	9/80	6/84	12
Baso, Alimuddin	"	IPB	Ext. of Dev.	MS	9/80	6/84	45
Patunru, Dermawan	"	IPB	Animal Husb	MS	9/80	6/83	33
Saenong, Haerani T.	"	UI	Med. Parisit.	MS	8/81	6/84	34
Sardjono, Hanna	"	UGM	Plant Path.	MS	8/81	2/84	30
Tahzan, Hamdana	"	IPB	Ext. of Dev.	MS	9/80	3/83	30
Skaria, Senong	"	IPB	Pltry Hsbndry & Nutrition	MS	9/80	2/83	29
Panetto, Rahman	"	UI	Econ Dev	PhD	10/82	6/84	20
Sitaniapessy, P. M.	UNPATTI	IPB	Plant Sci.	PhD	9/81	6/84	33
Turukay, R.	"	IPB	Ag. Econ.	MS	12/81	6/84	30
Kewilaa, B.	"	IPB	Wood Sciences	MS	9/82	6/84	18
Seipala, B.	"	IPB	Wood Sciences	MS	9/82	6/84	18
Reisusun, D.	"	IPB	Rural Soc.	MS	9/82	6/84	18
Maitimu, B.	"	IPB	Rural Soc.	MS	9/82	6/84	18
Tellusa, S. P.	"	IPB	Appl. Stat.	MS	9/82	6/84	18
Berhimpon	UNSRAT	IPB	Food Sci.	PhD	9/80	6/84	45

Table 5 (continued) - Summary of Participant Training, Long-term, In-Country, October 15, 1979 - June 30, 1984

Name	Home University	Place of Study	Dept./ Discipline	Degree	Dates Begin	Dates End	Person Months of Training
Karrouw, Max	"	UGM	Fitopath.	MS	9/81	6/84	33
Soeroto, Bambang	"	IPB	Fisheries	PhD	9/81	6/84	33
Kawulusan, Hasan	"	IPB	Soil Sci	MS	9/81	6/84	33
Polii, John Bobby	"	IPB	Env. Sci.	MS	9/83	6/84	9
Polii, Jeany Mandang	"	IPB	Agronomy	MS	9/83	6/84	9
Tatuh, Jen	"	IPB	Entomology	MS	9/83	6/84	9
Kaseger, Berty	"	IPB	Food Sci.	MS	9/83	6/84	9
Pontoh, Julius	"	IPB	Food Sci.	MS	9/83	6/83	9
Paath, Johana	"	IPB	Entomology	MS	9/83	6/84	9
Tokarso, Darminto	UNMUL	UNPAD	Ag. Econ.	MS	9/81	6/84	33
Nirmala, Ratna	"	IPB	Plant Sci.	MS	9/82	6/84	21
Madukallang, Fattah	UNTAD	IPB	Ag Econ	MS	9/81	3/84	30
Arifin	UNLAM	IPB	Soil Sci		9/81	6/84	33
Bachriansyah, Gusti	"	IPB	Nat. Res. Mgt.	MS	9/81	6/84	33
Bandung, Riswandy	"	IPB	Sci. of Plant				
Musrefinah, Mahlan	"	IPB	Fisheries	MS	9/81	3/82	6
Noor, Hazairin	"	IPB	Crop Ecol.	MS	9/81	5/82	8
Suranto	"	IPB	Crop Ecol.	MS	9/81	9/82	12
Umar, Adriasyah	"	UGM	Soil & Water Eng	MS	9/81	6/84	33
Wahab, Marwan T	"	UGM	Food Sci.	MS	9/81	6/84	33
Yusuf, Ahmad	"	UGM	Food Sci.	MS	9/81	6/84	33
Supiyatna, Saleh	"	UGM	Food Sci.	MS	9/82	6/84	21
Halim, Anniemah	"	UGM	Biology	MS	9/82	6/84	21

Table 6 - Participant Training Support Services/Enrichment Activities, WSU Long-term Participants, October 1979-June 1984

Name	Home University	WSU ID No.	Dept./Discipline	Degree	Support: Orientation	Support: Tutoring	Professional Meetings	Host Family	Reentry Training	Practical Training
Adelheid Doda	IKIP/Manado	60496813	Education Curriculum & Media	MEd	XX	XX	XX	XX	XX	
Jane Katuuk	IKIP/Manado	61090812	Adult & Continuing Education	MACE	XX	XX	XX	XX		XX
Gustaaf Lasut	IKIP/Manado	60696813	Educ. Measure & Evaluation	MEd	XX	XX	XX	XX		
Sakidja	IKIP/Manado	61385812	Food Sci & Human Nutrition	MS	XX	XX	XX	XX		XX
Raymond Tingginehe	IKIP/Manado	60796813	Education Curriculum	MEd	XX	XX	XX	XX	XX	
Deri Bangkona	IKIP/Ujung Pandang	60361813	Home Economics	MS	XX	XX	XX	XX		
Akil M. Malla	IKIP/Ujung Pandang	68412811	Food Sci & Human Nutrition	MS	XX	XX	XX	XX		
Abdul Rasjid	IKIP/Ujung Pandang	68913811	Food Sci	MS	XX	XX	XX	XX		XX
Sahide	IKIP/Ujung Pandang	61774823	Adult & Continuing Education	MACE	XX	XX	XX	XX		
Masman Andara	UNCEN	60102822	Sociology	MS	XX		XX			
Samuel Patty	UNCEN	68016811	Anthropology	PhD	XX	XX	XX	XX	XX	
Frans Wospakrik	UNCEN	61088812	Engineering Wood	MS	XX	XX	XX	XX	XX	XX
Judya Wospakrik	UNCEN	61094812	Engineering Adhesive	MS	XX	XX	XX	XX		XX
Najib M. Mahammadin	UNHAS	60898813	Education Adminstration	MEd	XX	XX	XX	XX	XX	
Baharuddin Nurkin	UNHAS	61398812	Forestry	MS	XX	XX	XX	XX		
Fudiat Suryadikara	UNLAM	64389832	Anthropology	PhD	XX					
Adriansyah	UNMUL	68912811	Agronomy Crop Production	MS	XX	XX	XX	XX		
Iman Kuncoro	UNMUL	68205811	Forestry Economics	MS	XX	XX	XX	XX	XX	
Komariah Kuncoro	UNMUL	62082821	Forestry Educ. & Extension	MS	XX	XX	XX	XX	XX	
Boedi Kaliman	UNPATTI	61384812	Adult & Continuing Education	MACE	XX	XX	XX	XX	XX	XX
Antaatje Lalopua	UNPATTI	68709811	Ag Econ	MS	XX	XX	XX	XX	XX	
Jefta Lalopua	UNPATTI	68113811	Adult & Continuing Education	MACE	XX	XX	XX	XX	XX	XX
Danial J. Sahilatua	UNPATTI	68714811	Horticulture	MS	XX	XX				
Moha Kolopita	UNSRAT	61183812	Animal Sci.	MS	XX	XX	XX	XX	XX	
Betsy Ottay	UNSRAT	61192812	Adult & Continuing Education	MACE	XX	XX	XX	XX		
Max Ottay	UNSRAT	61092812	Adult & Continuing Education	MACE	XX	XX	XX	XX		
Henny Pakasi	UNSRAT	61186812	Animal Science	MS	XX		XX	XX		
Victor Rantung	UNSRAT	61190812	Adult & Continuing Education	MACE	XX	XX	XX	XX		XX
Musyi Amal	UNTAD	61188812	Sociology	MS	XX		XX	XX		
Masril Bustami	UNTAD	62994821	Animal Sci.	MS	XX		XX	XX		

Table 7 - Summary of Participant Training and Executive Visits, Short-term, October 15, 1979-June 30, 1984

Name	Home University	PIO/P	Type of Training	Dates Begin	Dates End	Months of Training
Dr. A. Amiruddin	UNCEN		Adm.	5/80	6/80	2
Drs. Masman Andara	UNCEN	90523	Adm.	5/80	6/82	2
Drs. Kustan Basri	UNLAM		Adm.	5/80	6/80	2
Drs. Adbd. Karim	IKIP/UP		Adm.	5/80	6/80	2
Drs. P. E. A. Pangalila	UNSRAT	90478	Adm.	5/80	6/80	2
Ir. Sambas Wirakusumah	UNSRAT	90496	Adm.	5/80	6/80	2
Drs. Jan Turang	IKIP/Man		Adm.	5/80	6/80	2
Drs. P. J. Siwabessy	UNPATTI		Adm.	5/80	6/80	2
Drs. Baharuddin Agie	UNMUL	90250	Forestry	9/80	12/80	4
Dr. Hasan Walinono	UNHAS		Adm.	10/80	11/80	2
Drs. Silos Anto	UNCEN	90288	Adm.	5/81	6/81	2
Drs. Idris Arief	IKIP/UP	90288	Adm.	5/81	6/81	2
Drs. Madukallang Fattah	UNTAS	90288	Adm.	5/81	6/81	2
Drs. Z. Latupapua	UNPATTI	90288	Adm.	5/81	6/81	2
Drs. Mirhanuddin	UNLAM	90288	Adm.	5/81	6/81	2
Drs. J. Rompas	UNSRAT	90288	Adm.	5/81	6/81	2
Drs. William Senduk	IKIP/Man	90288	Adm.	5/81	6/81	2
Ir. Soeyitno	UNMUL	90283	Adm.	5/81	6/81	2
Drs. Tjiptasurasa	UNHAS	90288	Adm.	5/81	6/81	2
Ir. Pakasi	UNSRAT		Agriculture	2/82	4/82	3
Drs. Memet Rusmaedy	UNCEN	90478	Agriculture	2/82	4/82	3
Ir. H. Supardi	UNLAM	90478	Agriculture	2/82	4/82	3
Drs. Ambo Enre Abdullah	IKIP/UP	90496	Adm.	6/82	7/82	2
Drs. Demmasabu	IKIP/Man.	90496	Adm.	6/82	7/82	2
Ir. J. J. Fransz	UNPATTI	90496	Adm.	6/82	7/82	2
Drs. M. Idris	UNTAD	90496	Adm.	6/82	7/82	2
Ir. H. S. Machbon	UNCEN	90496	Adm.	6/82	7/82	2
Drs. Soehartini Riyanto	UNMUL	90496	Adm.	6/82	7/82	2
Drs. Ir. G. T. Sarbini	UNLAM	90496	Adm.	6/82	7/82	2
Ir. Jacob Solo	UNHOL	90496	Adm.	6/82	7/82	2
Drs. A. F. Wilar	UNSRAT		Adm.	6/82	7/82	2
Drs. Ir. H. Mas'ud Yunus	UNHAS	90496	Adm.	6/82	7/82	2
Drs. D. T. Sembel	UNSRAT		Food Sci		7/82	*

Table 7 (continued) - Summary of Participant Training, Short-term, October 15, 1979-June 30, 1984

Name	Home University	PIO/P	Type of Training	Dates Begin	Dates End	Months of Training
Drs. Promoetadi			Exec Visit	6/82	7/82	*
Drs. Mattulada	UNTAD	90531	Adm.	9/82	10/82	2
Drs. Fachruddin	UNHAS	90540	Food Stor	10/82	10/82	1
Mrs. Sri Arini Waworoentoe	UNSRAT	90538	Fisheries	11/82	12/82	*
Dr. Waworentoe	UNSRAT		Exec Visit	11/82	12/82	*
Rector Parawansa	IKIP/UP	90606	Adm.	10/82	11/83	2
Drs. Eddy A. Mokodompit	UNHOL	90606	Adm.	10/83	11/83	2
Mrs. J. A. Jasin-Lestuny	IKIP/Man	90613	Lib.	3/84	5/84	3
Sjamsuddin Rasjid	UNHAS	90619	Animal Sci.	3/84	5/84	3
Mr. Abdul Hamid Rasjid	IKIP/UP	90613	Lib.	4/84	5/84	2

*Stayed less than 1 month

Table 8 - Activity Training Schedule

Date	Activity/Location	Estimated Attendance
16-17 May, 1983	Basic Forestry & Soil Science Training - Ujung Pandang	12
27-28 May, 1983	Technical English Training - Ambon	17
30-31 May, 1983	Experimental Farm Training - Banjrmasin	20
1 Aug.-31 Oct. 1983	Joint KKN Activity - Kabupaten Pinrang and Kabupaten Sinjai	30
8-13 August, 1983	Home Economics Training - Ujung Pandang	30
11-12 August, 1983	Basic Forestry Training	12
1-5 Sept., 1983	Basic Forestry Training	20
12-16 Sept., 1983	Food Safety and Sanitation Training - Manado	35
19-20 Sept., 1983	Library Training - Ujung Pandang	18
6-7 October, 1983	Project Coordinator Training	15
17-21 October, 1983	Basic Forestry Training - Ujung Pandang	15
7-21 November, 1983	Food Science Training - Manado	20
15-19 November, 1983	Basic Forestry Training - Ujung Pandang	10
5-10 December, 1983	AKTA V Remedial Program by Satellite Project-Ujung Pandang	25
5-16 December, 1983	Solar Dryer (Food Preservation) Training - Manado	40
12-17 December, 1983	Course Development Training by Satellite - Ujung Pandang	2
18-20 December, 1983	Basic Forestry & Soil Science Training - Ujung Pandang	11
12-14 January, 1984	Experimental Village Tutor Training - Jayapura	40
9-14 Jaunary, 1984	Soil Science Training - Ujung Pandang	10
23-28 Jaunary, 1984	Basic Forestry Training - Ujung Pandang	10
6-11 February, 1984	Soil Science Training - Ujung Pandang	10
9-11 February, 1984	Returnees Training - Ujung Pandang	

Table 8 (continued) - Activity Training Schedule

8-12 February, 1984	Satellite Local Technician Training-Ujung Pandang	20
17-18 February, 1983	Basic Ecology Training - Ujung Pandang	9
20-26 February, 1984	Experimental Farm Training - Banjarmasin	20
13-18 March, 1984	Basic Forestry Training - Ujung Pandang	8
20-24 March, 1984	Food Science Training - Ujung Pandang	20
27-30 March, 1984	Traditional Fish Processing Training - Ambon	25
3-5 April, 1984	Technical English Training - Ujung Pandang	8
2-7 April, 1984	Satellite Local Coordinator Training - Ujung Pandang	20
16-19 April, 1984	Food Science Training - Manado	25
16-19 April, 1984	Experimetal Farm Training - Banjarmasin	20
16-21 April, 1984	Basic Ecology Training - Ujung Pandang	8
23-27 April, 1984	Soil Science Training - Ujung Pandang	8
7-12 May, 1984	Basic Forestry Training - Ujung Pandang	9
7-15 May, 1984	Technical English Training - Ujung Pandang	7
9-15 May, 1984	Basic Ecology Training - Bogor	8
10-15 May, 1984	Soil Science Training - Ujung Pandang	8
15-19 May, 1984	Experimental Village Training - Kendari	15
15 - 19 May, 1984	Animal Science Teaching Training - Ambon	20
21-25 May, 1984	Food Science Training - Manado	25
11-13 June, 1984	Food Science	20
13-15 June, 1984	Basic Soils	7
13-15 June, 184	Technical English	7

Table 9 - Summary of Procurement of Commodities and Equipment, EIAEP, October 15, 1979 - June 30, 1984

Item	Total
Commodities*	$ 46,015.00
Books	223,439.00
Equipment	45,432.00
Total	$ 314,866.00

*Commodities figure includes shipping charges of $13,884.00

VI. Project Personnel

BSK/T PERSONNEL

Rectors of Institutions and Board of Directors, BKS/T

Prof. W. J. Waworoentoe, M.Sc., Chairman, BKS, Rector, Universtas Sam Ratulangi

Dr. A. Amiruddin, Former Rector of UNHAS and Chairman of BKS, currently Governor of South Sulawesi

Dr. Hasan Walinono, Rector, Universitas Hasanuddin

Drs. Kustan Basri, Rector, Universitas Lambung Mangkurat

Dr. Parawansa, Rector, IKIP Ujung Pandang

Mr. Lestaluhu, SH, Rctor, Universitas Pattimura

Dr. Mattulada, Vice-chairman, BKS, Rector, Universitas Tadulako

Mr. Eddy Mokodompit, M.A., Rector, Universitas Halu Oleo

Prof. Dr. Rudy Tarumingkeng, Rector, Universitas Cenderawasih

Prof. Dr. Soetrisno Hadi, Rector Universitas Mulawarman

Dr. Sinolungan, Rector, IKIP Manado

Sekretaris BKS, Dr. Basri Hasanuddin

Deputy Sekretaris, BKS, Drs. Djawad

Komisaris:

Drs. Baharuddin Agie, Universitas Mulawarman

Drs. Mirhanuddin, Universitas Lambung Mangkurat

Drs. J. Th. F. Pattiselano, Universitas Pattimura

Drs. H. E. Wagey, IKIP Manado

Drs. Hanafie S., Universitas Tadulako

Drs. M. Gazali, Universitas Sam Ratulangi

Drs. Anwar Arifin, Universitas Hasanuddin

Dr. Anwar Pasau, IKIP Ujung Pandang

Drs. Soedarto, Universitas Cenderawasih

Berita Editor, Drs. Baharuddin, D.M.

Administrative Assistant, Achmad Jusuf

Secretary, Nona Betty Duma

Finance Clerk, Mr. Sultan

Duplicator Clerk, Boko

General Worker, Massa

USAID Personnel

Dr. Clayton Seeley, Project Officer, Jakarta

Dr. Robert Schmeding, Head, EHR, Jakarta

Dr. Cameron Bonner, Project Officer, Jakarta

Dr. Frank Mann, Technical Resources, Washington, D.C.

Dr. Charles Green, Former Head, EHR, AID, Jakarta

GOI Personnel

Dr. Dody A. Tisna Amidjaja, Former Director General of Higher Education

Dr. Sukadji Ranuwihardjo, Director General of Higher Education

Dr. Pramoetadi, Director of Academic Affairs
Directorate General for Higher Education

Dr. Yuhara Sukra, Director, Ministry of Education

WSU PERSONNEL

On Campus Project Personnel

Campus Coordinator:	Dr. Martin Waananen
Program Coordinator:	Kristi Burns
Secretary:	Sandra Robertson
Participant Training Advisor:	Edith Grathwol
Secretary:	Betty Brandon

Off Campus Project Personnel

Chief of Party, WSU, Dr. Burl Yarberry

Senior Administrative Advisor, Mr. Wayne Gash

Executive Advisory Committee

Name	Department	Title
Dr. J. L. Ozbun	College of Agriculture and Home Economics	Dean
Dr. Margaret Hard	Former College of Home Economics	Professor Emeritus
Dr. Alberta Hill	Former College of Home Economics	Professor and Dean Emeritus
Dr. Jim Henson	Office of International Program Development	Coordinator
Dr. Robert Harder	Research Grants, Science and Arts	Associate Dean
Dr. Don Dillman	Rural Sociology	Professor
Dr. William Ackley	Horticulture	Professor
Dr. V. N. Bhatia	Office of International Programs	Director
Ms. Alice Spitzer	Library	Librarian

Other Project Related Personnel

Anna Stutler	Ag Finance
Minoo Damanpour	Purchasing

Other Key Administrators

Dr. Glen Terrell, President, Washington State University

Dr. C. J. Nyman, Dean, Graduate School

Dr. J. S. Robins, Former Dean, College of Agriculture, WSU.