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Volume 2

FEASIBILITY STUDY
EASTERN ISLANDS AGRICULTURAL EDUCATION PROJECT

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FEASIBILITY STUDY

EASTERN ISLANDS AGRICULTURAL EDUCATION PROJECT

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July 16, 1973

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Introduction

The following material was developed by a study in which the following team from Washington State University participated:

- Dr. Carl W. Hall, Dean of Engineering
- Dr. C.J. Nyman, Dean of Graduate Schools and Research
- Dr. Margaret Hall, Director of Research of College of Home Economics
- Dr. Martin Maananen, Agricultural Economist, Assistant Director of Instruction, College of Agriculture
- Dr. Don A. Dillman, Chairman, Rural Sociology Department
- Dr. Vic Bhatia, Director International Programs
- Dr. R. Burl Yarberry, School of Education

The team was assisted and briefed by Dr. Charles B. Green, Chief, of the Education and Human Resources Division and Ms. Frances Hays, Administrative Assistant, USAID/Jakarta.

The entire team and the USAID contingency visited the Eastern Islands Association of Universities headquarters, and Hasanuddin University, and IKIP Ujung Pandang. It also joined forces with the Association Survey Team which was made up of Ian Usman.

The combined team then split up to visit the other six universities. Dr. Margaret Hall, Dr. Vic Bhatia, Dr. Don A. Dillman, and went north to visit Sam Ratulangi University and IKIP Manado. Dr. Carl Hall, Dr. C.J. Nyman, Ms. Frances Hays, and went west to visit Langung Mangkurat and Mulawarman Universities. They were accompanied to the first university by Rector Amiruddin of Hasanuddin University who is also President of the Association of Eastern Island Universities. Dr. Martin Maananen, Dr. R. Burl Yarberry, Dr. Charles B. Green, and went East to the two campuses of Cenderawasih University and to Pattimura University in Ambon.

The written reports from these trips were subsequently edited for this paper by Dr. Charles B. Green and Ms. Frances Hays of USAID/Jakarta so they above are responsible for any errors that this paper may contain.

INSTITUTION: HASANUDDIN UNIVERSITY (UNHAS)

UNHAS was visited by all team members very briefly, and later by two members of the team. The circumstances of visiting in this manner meant that intensive conversation with high administrators, apart from discussion about the Eastern Island Association, were not held for purposes of discussing UNHAS as a unique institution. This report is based mostly upon conversations with the Dean of Agriculture and the staff of the Rural Research and Development Center, plus tours of facilities.

Our general conclusion is that UNHAS is the best-equipped and strongest of the universities. Yet, it also lacks library facilities, equipment, and adequate language training for students, and there is a great need for upgrading of staff.

The mission of UNHAS includes serving as the primary source of university education for the people of South Sulawesi. It serves several distinct cultures, each with its own language. Besides being the center of South Sulawesi, Ujung Pandang is viewed as the traditional center of development for all of eastern Indonesia. Thus UNHAS sees itself, too, as having a broad regional mission in terms of development planning.

UNHAS was founded in 1956. In the past 11 years it has grown to the point of having 8176 students enrolled, who are served by 645 professional staff members. It has graduated 2169 students, more than three times as many as any other university in the Eastern Island Association.

The mission of UNHAS places considerable importance on the work of its agriculture and animal husbandry staffs. National plans call for South Sulawesi to continue as a major producer of rice, even at the expense of reductions in other crops, e.g. corn. Yields in South Sulawesi are high and are continuing to improve. It is doubtful whether national leaders would encourage agricultural production plans that involve reduced production of rice. Thus, it seems important that crop production, and particularly rice cultivation, be an important component of the agricultural program at UNHAS.

South Sulawesi also has tremendous potential for fish production. Already about 20 percent of Indonesia's fishermen work out of South Sulawesi, supplying 11 percent of the country's production. This amount can be greatly increased by various means, developing a fresh water prawn industry, increasing the growth of eels in Central Sulawesi, and farming the brackish waters. Fisheries thus need to have considerable emphasis at UNHAS.

UNHAS has five faculties: medicine; law; economic-letters-social and political sciences; technical-natural sciences; and agricultural sciences. This is a reduction in number and is interpreted as a very important step in dissolving undesirable barriers between small, previously semi-independent faculties. Due to its pioneering efforts in university administration and reform, UNHAS has been granted special status as a national pilot project.

The agricultural sciences faculty consists of two major programs: agriculture which includes forestry and animal husbandry which includes fisheries. There are approximately 80 faculty members (excluding assistants). Three-fourths have a degree from UNHAS; the others have degrees from other institutions. There appear to be nine faculty with M.Sc. degrees, several of which are from the United States, and one Ph.D. from Japan. The faculty is under the direction of/dean, while a new dean of studies was just appointed to be responsible for curriculum development.

STRENGTHS

UNHAS has a larger faculty, better trained than at any other institution we visited. It is perhaps closer to having a critical mass for modernizing the university than all of the other universities in the region.

Two significant changes have recently occurred in the organization of UNHAS and must be seen as strengths. One is the combining of faculties to break down the barriers that separate them. This should lead to stronger training being provided to the students. Secondly, they have changed from a system whereby students either pass or fail an entire year's work to a credit system whereby they pass or fail individual courses as in the United States. This seems likely to dramatically lower the drop-out (flunk-out) rate of the University so that it will soon start graduating a far larger portion of its students. These changes suggest that structural changes in universities of the Association may be possible and greatly facilitate the achievement of their various goals, one of which is to increase the percent of students that graduate.

Another significant strength is the rector, who has pushed for the above-mentioned innovations, and seems to be providing very strong leadership to UNHAS. He is also the leader of the Regional Association.

Another potential strength is the acquiring of entirely new facilities, expected to be completed in about five years. The campus in Ujung Pandang will be used mostly for other purposes when the bulk of activities are moved several kilometers out of the city. One major building at the new location is already in use, now housing the Rural Research and Development Center (RRDC).

The RRDC is another potential, although yet unrealized, strength. It contains a number of subunits: Community Medicine, Regional Adaptive Technology Center, Institute of Population Studies, and the KKN (Student Field Service). The Regional Adaptive Technology Center deserves special mention. It comes closest in design of any structure we saw of providing an outreach function for the University. Through it UNHAS staff may become involved in extension-type projects in which technology is made applicable to the solution of village problems. The KKN and Community Medicine also attempt to reach into the villages to help solve problems. The major shortcomings of these programs at present is perhaps their "youth." Personnel have not been in their jobs for a lengthy period of time. The Institute was only formed a few years ago and must undergo substantial development before it can be considered one of the major strengths of UNHAS.

Another potential, but unrealized strength is the close proximity of the Ministry of Agriculture research station, where some excellent research on crop (especially rice) production is underway. In fact the research in many ways seemed as advanced as much now underway in the United States. It would be tremendously beneficial for UNHAS students and staff in the agrosociences to be exposed to the program now underway at this research station. However, at present there does not seem to be much more than courteous exchanges between them. Certainly they are not interactive to the degree of UNHAS staff being involved in specific research projects. The Director of the station said that some students from various institutions of the Eastern Islands Universities come to the station to do their theses. In fact two students from UNSRAT are there now being trained so they can go back to North Sulawesi and open a branch station. It seems likely that this station with its advanced research methods and procedures could be a very useful resource to the entire Eastern Islands Association.

An animal disease laboratory is also located nearby. It collects specimens (for diagnostic analysis) from all over the Eastern Islands and is one of three such stations in Indonesia. Its equipment is advanced and it could also be an excellent resource for UNHAS students and the Association. Soon the Ministry of Fisheries will add its research station to the complex and fisheries research will be moved from Ujung Pandang to there and represents a third resource that needs to be linked to the Universities. These installations are, interestingly enough, the closest place for any students of the Association's Universities to learn advanced scientific methods which cannot be learned at their home institutions.

WEAKNESSES

To some extent weaknesses have already been discussed. The familiar litany of lack of textbooks, inadequate language training, a lack of equipment, and the need for staff upgrading applies here just as it did to other institutions. Yet, UNHAS appears to be a slight cut above most of the others in terms of assembling the critical mass of scholars and resources that will produce a good university.

IKIP UJUNG PANDANG

IKIP Ujung Pandang was founded in 1955. Though it is primarily intended as an institution to train teachers, many of its students have the objective of getting the Sarjana Muda and Sarjana degrees so that they can open doors in both the public and private sectors that are only for degree holders. Normally the Sarjana Muda requires a 3-year program and the Sarjana 2 more years; but as in other Indonesian universities, the average graduate takes much more than 5 years to complete the program.

The university has a development or laboratory school associated with it. The school has both elementary and secondary levels and is part of a national program to develop educational practices that can be used if successful in the national schools.

The university also has two branches, one in Palu, Central Sulawesi, and the other in Bau Bau, Southeast Sulawesi. These have only partial course offerings and are in a sense feeder schools for Ujung Pandang, but they are needed to help prepare teachers for the two more primitive and sparsely populated provinces on the island.

The administrative staff of the university has 196 members. There are 323 permanent faculty members and 453 non-permanent. There are 5610 students. The staff is largely made up of professors with just the Sarjana degree since this was, up to a few years ago, the highest degree awarded by Indonesian universities. The faculty members indicated that their main requirements were staff development programs and improved equipment and instructional materials.

The staff is serious about the three-fold aim of the university so that in addition to the instructional programs, the university has strong thrusts in both research and public service programs.

Some of the research being carried on currently are on the following topics:

<u>Department</u>	<u>Research Topics</u>
Education	{ Evaluation of credit system. { Non-formal education needs in communities.
Social Science	{ Evaluation of centralization of administration at IKIP. { Activities of teachers and non-teaching officials (outside working hours in villages.
Letters & Arts	{ Motivation of students to enter IKIP. { Occupations of alumni.

National Science	(Analysis of drop-outs in each field of study within IKIP.
	(Analysis of curriculum in each field of study in IKIP.
English	(The impact of education of parents on other members of families in villages.

In addition, topics assigned from the Ministry of Education deal with transmigration, curriculum in technical high schools, local dialects, and the development of the suburban area of Ujung Pandang.

The university has a number of public service programs. For example, it has made arrangements for special programs such as the following:

1. For the local police, it tests new police recruits and is doing research on siri, a law reinforcing tradition of the area.
2. For the local military command, it is preparing a history of the struggle for independence in South Sulawesi.
3. With the collaboration of the Republic of Indonesia TV it conducts educational TV programs.
4. A pilot project has been initiated in the form of a community laboratory. Fifth-year students and staff in groups of 10 staff and 4 students explore the learning and community needs in 3 villages and find the learning resources and match the two. This program is an extension of the on-going KKN program carried on by most universities, but this part is unique to IKIP Ujung Pandang.

Home Economics Program

The Home Economics program has two sub-units: Foods and Nutrition and Clothing and Textiles. The curriculum is designed to prepare students as teachers in home economics in elementary, secondary, senior high and vocational high schools, and to help them as individuals to become good family members. A total of 100 credit hours are required for the Sarjana Muda degree and 35 additional credit hours plus a thesis for the Sarjana degree.

For the Sarjana Muda curriculum, 44 credit hours are in required supporting courses: educational methods, psychology, sociology, basic sciences, physical education, and English. Required electives (2 credit hours) may be chosen from Indonesian sociology, demography, ecology, biology, economics, and mathematics. The major requires 39 credit hours. A minor is offered in both foods and nutrition and clothing and textiles (9 credit hours).

Equipment and facilities are rather poor. The model high school is considerably better equipped. The library holdings in home economics need to be increased.

The faculty consists of 8 staff members and 5 assistants (students). All staff have the Sarjana degree. The student, all female, totals 500, 80% are at the Sarjana Muda level.

The Home Economics Department participates in the KKN program. This year 10 students are participating in sewing, cooking, housekeeping, statistics in village head offices, village libraries, crafts, sanitation, food-crop gardens, and illiteracy campaigns. Village leaders help in the selection of village project.

Suggestions for a Possible Assistance Program

1. Staff Development - university needs many more staff members who have specialized with graduate work above the Sarjana level.
2. Special Short Courses at other Indonesian universities to raise instructional level quickly.
3. Special exposure of key staff members to a wider educational frame of reference such as a semester or more at Washington State or another university abroad.
4. Equipment for laboratories. This need not be elaborate but it should be sufficient for all students, and the professors should have guides for using the equipment.
5. Increase the library holdings. This should be done very selectively, to obtain the books which are most relevant to the curriculum and to student needs.
6. Develop more instructional materials in the Indonesian language.
7. Improve and expand the English programs giving greater emphasis to preparing students to study instructional materials in English.

INSTITUTION: SAM RATULANGI UNIVERSITY (UNSRAT)

I. ROLE AND MISSION

There are two ways to discuss the mission of UNSRAT. One is in terms of the stated views of the rector and other relevant persons. The other is in terms of what the cultural, geographical, historical and other factors constrain that mission to be.

Waworoentoe, the rector, does not see UNSRAT as one of Indonesia's centers of excellence, e.g. for advanced graduate training. Rather he sees it as helping to lead the way for North Sulawesi's development, leadership that is much needed from within North Sulawesi because of certain uniquenesses (to be discussed later) that set it apart from other provinces. He also sees UNSRAT as oriented to the Pacific Rim-sharing commodities with other countries of the Pacific. Knowledge produced by UNSRAT (e.g. better copra production) is likely to be relevant to other countries of the West Pacific and vice versa. UNSRAT must be oriented to problems of North Sulawesi because it is doubtful other universities in Indonesia will address these problems.

The various constraints flowing from location and culture, are also great. The Manado area is largely Christian. Copra and cloves, in that order, are the major crops. However, casual observation suggests that significant amounts of other crops (e.g. rice, corn, and assorted fruits and vegetables) are grown. North Sulawesi is not yet self-sufficient in rice production, and this is a major goal. It appears that the laterite soil, relatively steep but with a deep profile, provides substantial opportunity for switching from one crop to another in response to changing market conditions. Several factors combine to suggest high development potential. They are:

- A. A deep water seaport at Bitung, some 30 minutes from Manado.
- B. The building of a highway that already connects the northernmost district (surrounding Manado) with the interior and which will eventually connect all of the regencies (counties) to Manado.
- C. Substantial natural beauty that suggests a tourism potential. Should air connections to the Philippines and other Pacific Islands be developed (one such connection to the Guam area is about to start), Manado could become a convenient Port of Entry to Indonesia.
- D. The existence of agricultural alternatives for much of the land.
- E. A high literacy rate and substantial demand for higher education. 87% of the children are in primary schools, well ahead of the new 5-year plan target.

F. Higher agricultural incomes than in most of Indonesia (impressionistic, but supported by conversations with UNSRAT staff), which suggests that farmers might have somewhat more latitude for willingness to try new crops and methods.

G. Transmigration into the central area of the province, now connected to Manado by highway, which promises to make North Sulawesi self-sufficient in rice production.

H. With one fish freezing and processing plant in place, and a substantial expanse of fish-producing waters, the potential for marine development seems high.

I. Bitung has been designated as the fourth international port for Indonesia. Its northern tip location makes it a desirable place to break shipments for domestic parts in the Eastern Islands.

In sum, North Sulawesi seems poised for development. It is not, except for its remoteness from Jakarta, an out-of-the-way place. It is not a poorly located resourceless territory that can only grow through heavy subsidization of all resource development. Because the cultural heritage is unique, it seems highly unlikely that universities elsewhere in Indonesia could provide university training to provide the large number of educated people needed to guide development. The mission of UNSRAT (and the IKIP) must be to serve North Sulawesi as the primary supplier of educated persons to staff the institutions of government and business.

Finally, UNSRAT has no choice but to add substantial number of staff within the next five years. Much larger numbers of students are in secondary schools than in the past, due partly to natural population growth and partly to better retention rates. We were told that the crunch will hit in five years.

II. STRENGTHS

- A. Serves a comparatively well-educated population.
- B. The Rector is highly imaginative and is providing strong leadership.
- C. It was stressed time and again that men and women have "equal" opportunity in North Sulawesi.
- D. There is a growing KKM (field experience program).

III. WEAKNESSES

Any analysis of weaknesses seems most appropriate if cast within a framework of what is possible. For example, the centralized planning

specifies salary levels by rank and level within rank. A formula reportedly is used to determine the number of faculty and is affected in large part by changes in enrollment figures. It is doubted that the system of staff holding down several jobs can be changed unless a policy decision is made by Jakarta (nor might it even be desirable). Thus the analysis of weaknesses will concentrate on items about which something might be done.

UNSRAT staff consistently pointed to these as major problems:

- A. Poor libraries.
- B. Need for better training in the English language from native speakers.
- C. A lack of equipment.
- D. Need for upgrading of staff.

Their observations are thought to be correct. Furthermore, the issue is not simply a matter of choosing which component to upgrade. The problem is to break a vicious cycle by attacking all four in a systematic way. For reasons discussed below, it would be a mistake to select one of these for a program emphasis while ignoring the others, but first the weaknesses are described in detail.

A. Poor Libraries

The main library at UNSRAT is located in a rather spacious new building. In addition there is a library in each faculty. No estimate was made of the number of volumes in each, but none visited had more book space than the walls of perhaps a 15'x15' room, and most had far fewer volumes.

In all libraries the vast majority of the books were in English, perhaps 70%, and in some libraries more. Not only is there a lack of books in Indonesia, but there are relatively few copies of any one text, with a few exceptions. Almost all books are old; relatively few were published after about 1965.

In response to the questions of whether the students find the English texts helpful, it was explained that students often divide up the work of translating pages of an assignment. And students majoring in English are sometimes hired for that purpose by the students needing translation. (The IKIP librarian expressed a need for a copy machine which would enhance use by students.)

Getting books is no simple matter. They must be ordered from Jakarta, evidently using an inventory list of the books available there. The head librarian at UNSRAT said that they cannot get nearly all the books wanted. In 1975-76 UNSRAT was allocated 10 million Rupiahs for books and only 5 million has been spent so far. They have tried to spend it, but cannot find books on which to spend it.

The collection is spotty, containing a random arrangement of mimeographs and virtually no journals. The head librarian further commented that there were inadequate binding facilities for rebinding tattered volumes and that the university had no trained librarians. In sum, the library facilities are not conducive to effective learning by staff or students.

B. English Language Training

Inasmuch as effective use of what library facilities are available depends upon knowledge of English, a strong training program is essential. However, it is not strong.

The UNSRAT language lab consists of 30 individual learning stations with tape recorders and headphones in an extremely small room. A control booth in an adjacent room has facilities for directing the laboratory. There are no more than 8-10 texts for each level of learning. The instructor said that these cannot be taken out of the classroom. Most students only get two hours of English training each week, which is not enough for effective learning. Still another problem is the lack of staff. The department head was quite explicit in saying that there were simply not enough staff to teach all of the students.

In particular she pointed out that there was only one technician to run the equipment. Still another problem was the lack of native speakers who could help with the instruction.

In sum, the level of English training being provided seems very inadequate, especially inasmuch as most book learning seems predicated on it.

C. Lack of Equipment

Every laboratory visited seemed to lack equipment important to instruction and essential for meaningful research. In virtually every meeting with the various faculties, equipment was listed as one of the top priority needs. In no cases was there enough equipment

for each student to conduct experiments.

The lack of equipment has particular importance inasmuch as good equipment in plentiful supply could help overcome the textbook problem. It could provide alternative means of teaching concepts, an even more important purpose than the supplemental purpose often served in U.S. colleges and universities.

D. Upgrading of Staff

Every administrator and every faculty with whom the team talked placed upgrading of staff as a very high priority need. A few faculty have studied in the U.S., a few have been to other countries and more have studied on Java. But, many (perhaps most) have studied nowhere but Manado. Thus they are the product of the system that has been described, and it is doubtful whether they have been able to overcome the inherent limits of that training.

The four weaknesses discussed are closely intertwined. Putting total emphasis on solving one (and ignoring all others) is likely to result in solving nothing. All four elements need attention.

Although the importance of giving immediate attention to these concerns hardly needs more emphasis than already given, sight should not be lost of the fact that the student body will more than double in the next decade and the bulk of the faculty will be recruited from present undergraduates. It will be far cheaper to upgrade faculty now than five years from now.

The essential problem faced by UNSRAT is one of varied needs:

Library: Very few volumes, mostly in English, and most predate 1965.

Laboratory Equipment: For the most part non-existent. That which is here seems quite outdated. However, a new basic science lab is being constructed.

Faculty Competence: Most faculty are products of their own university. Those who have received training outside the country seem to be administrators. The UNSRAT faculty stated their biggest need to be upgrading of faculty.

Teaching Methods: Inasmuch as students do not have texts, heavy use of audio visual equipment seems called for. The university has some sophisticated equipment, from TV's to sound systems.

Buildings & Laboratories: A great deal of equipment could be absorbed into the present facilities. This is not the biggest current need.

The need is for balanced development, simultaneously improving the library, laboratory equipment, faculty competence and teaching methods by a small degree, rather than trying to take monumental strides in any one area. The program developed should strive to improve a large number of faculty a little bit, rather than small numbers a lot; add many up-to-date texts rather than the most current issues of a few American journals; add substantial amounts of basic laboratory equipment rather than a few highly complex, specialized machines. The effort should be to build each area to the point where there is a critical mass in each area of current weakness, so that the universities can reach a takeoff stage from which they can generate substantial improvement on their own. Once that stage is reached, then specialized knowledge can be received and used.

I. K. I. P. MANADO

IKIP-Manado was established in 1958. It is situated across the street from Sam Ratulangi University. Although the two institutions strongly maintain their separate identities, they cooperate on sharing of facilities and faculty and generally there is very good rapport between the administrations and staffs.

Students are admitted after graduation from general or technical high schools. They must pass an entrance examination in English, Bahasa Indonesia, ideology of the state, and general knowledge: some 95% pass. Enrollments have been increasing from year to year. The ratio of staff to students is 1 to 8. Graduates of IKIP-Manado teach at the junior and senior high school level in the region. The physical plant is quite adequate. Many of the buildings are only a few years old and are in good condition; however, there is a need for considerable more equipment. The faculty members are enthusiastic and dedicated, but only a few have had the opportunity to take graduate work beyond the Sariana level.

The administrative structure is similar to that at other Indonesian universities. The rector has a 4 year term and may be chosen to serve a second term. He is assisted by assistant rectors whom he appoints. The Faculties are headed by deans who are elected for a two-year term by their respective Faculty members. They likewise can only serve two consecutive terms. Under the Faculties, there are Departments which have chairmen appointed by the deans.

Public Service Programs

The university has an active public service program. One of the main activities is the KKN program in which the students live and work in villages.

The KKN program is well developed in 6 areas: practice teaching, community health, ecology, civic education, arts and sports, and non-formal education.

The four month program (August to December) is preceded by one month of orientation. The IKIP works with Extension Service to select a location which must be approved by the Governor. Students are placed, in teams of two, in villages with lodging and food usually provided by local residents. The students work on a project, such as setting out experimental rice plots, one in the traditional way, one in the new way

without fertilizer and a third in the new way and with fertilizer. Another project may consist of convincing villagers of the need for building a pipe to get pure water from a spring.

Three hundred students will be placed this year: six hundred placements have been completed since the program was started in 1973. Two program strengths are (1) close supervision by IKIP faculty (50 faculty members are involved),- and (2) its multidisciplinary nature since staff from all of the faculties are involved. The rector in his statement of IKIP objectives stressed that the IKIP has a function of doing local needs assessments and feeding information about people's needs back to the local government. The KKN seems important for bringing the IKIP faculty into contact with villagers and their concerns. It is one of the IKIP's best vehicles for reaching the rural poor. Improved training of IKIP students will directly reach the rural poor through KKN projects, and indirectly by encouraging IKIP students to take jobs working in villagers, a result the KKN supervisor feel is being achieved.

Research

Research at IKIP Manado, is limited. The topics of current research projects include local dialects, social and academic life of the students, curriculum development in the context of ecology, student self-esteem, and reading ability in the first grade (elementary school).

Home Economics Programs

The Home Economics program is a Department in the Faculty of Education. It has two units: Clothing and Textiles and Food and Nutrition. There are 150 students in the Sarjana Muda and Sarjana programs. The latter is in Clothing and Textiles and has 5 students this year. The faculty are just trained to the Sarjana Muda level, except for one professor with her Sarjana in Clothing and another with a Sarjana in Educational Methods, who is department chairman and former dean of the Education Faculty. The staff totals 13 plus 2 visiting lecturers (Sarjanas) in nutrition from Faculties of Agriculture and Medicine at Sam Ratulangi University.

The curriculum in Home Economics is designed to prepare students as teachers of Home Economics in secondary schools, to help them as individuals, and to prepare them for marriage and family living and for citizenship.

Courses in the Natural and Social Sciences, the Humanities and the Arts are included in the General Education Requirements.

Courses in Teaching Methodology, Psychology and Home Economic are included for professional preparation. Basic sciences are taken in the Faculty of Agriculture at Sam Ratulangi University.

The Curriculum is organized to include:

	General Educ.	Professional Ed. Teaching/Method	Home Economic
<u>Sariana Muda</u>	34 Credit Hr.	34 Credit Hr.	68 Credit Hr.
<u>Sariana Program</u>	36 Credit Hr.	36 Credit Hr.	140 Credit Hr.

The Department will supply the students to the KKN program this year in the areas of foods and nutrition, family planning, sanitation, management, and childcare.

In Food and Nutrition, diets for target groups such as children and pregnant mothers are stressed. Non-formal courses for women have included short courses in baby care, nutrition, clothing and family life education.

An interesting feature of the Food and Nutrition curriculum is an internship in the local hospital under the direction of the Medical Faculty of Sam Ratulangi University.

Equipment in the laboratories is better than expected. Although rather primitive, the food-preparation facilities do represent the kind of utensils, ovens, stoves, that are found in middle class homes. Electrical equipment included a refrigerator (with ice maker) a washing machine and irons. Sewing machines are manual models.

The library holdings are meagre - mainly recipe-type books. The chairman of the Department has her own library at home which included books on educational methods, home economics, philosophy and research methods. These she shares with the students.

In a meeting with the Home Economic staff, a request was made for help in obtaining equipment and books and for the opportunity for one or two of their members to study at WSU for the M.S. degree.

Suggestions for Possible Assistance Program

Priority needs are for staff development and better and more instructional materials and equipment. Some specific suggestions:

1. Visiting professors could come to the university to help develop special program.
2. Faculty members could be sent to the U.S. in groups for special intensive upgrading.
3. Some faculty members could be sent to Javanese universities and universities abroad for specialized graduate training. This training needs to be innovative so that it closely meets the needs of the Manado professors.
4. Special upgrading attention needs to be given to mathematics, natural sciences, English, home economics, physical education, and technology.
5. An equipment maintenance center needs to be established.

INSTITUTION: LAMBUNG MANGKURAT UNIVERSITY (UNLAM)

Established in 1958, Lambung Mangkurat University now has 4274 students and 256 faculty members. The University is physically located in two different places in Banjarmasin and at a third location in Banjarbaru. The Faculties located in Banjarmasin will be brought together in one location when the new campus is completed in 1980, but unfortunately because of requirements for land plots, the Faculties of Agriculture, Forestry, Fisheries, and Engineering will remain in Banjarbaru, some 35 km. to the east.

The university is composed of nine faculties, each quite autonomous, under the leadership of the Rector. These Faculties and their component departments are:

(1) The Technical Faculty consisting of one department - Civil Engineering.

(2) The Faculty of Agriculture consisting of six departments - Socio-economics, Botany, Soils, Pests and Plant Diseases, Agronomy, and Mathematics.

(3) The Faculty of Forestry consisting of two departments - Forest Products and Forest Management.

(4) The Faculty of Fisheries consisting of four departments - Socio-economics, Fisheries Technology, Fisheries Management, and Fish Biology.

(5) The Faculty of Law consisting of three departments - Private Law, Constitutional Law, and Criminal Law.

(6) The Faculty of Economics consisting of two departments - Business Economics (Bus. Adm.) and General Economics. A third, Accounting, is to be added next year. This Faculty also supports the Population Institute and a diploma program.

(7) The Faculty of Social and Political Science consisting of two departments - Private Administration and Public Administration.

(8) The Faculty of Education.

(9) The Faculty of Teacher Training consisting of English language and literature, Indonesian language and literature, Mathematics, Chemistry, Biology, History, and Civics.

The University sees its mission as threefold - the primary one is that of educating students in the areas encompassed by its nine separate faculties by offering programs at the sarjana muda level in all fields and in a majority of faculties by offering new programs at the sarjana level.

A second mission is that of carrying out research on projects of importance to South Kalimantan, and a third mission is that of trying to provide training and information to the people of the villages to help them improve their standard of living.

The strength of UNLAM lies in the high quality of its faculty who are dedicated to carrying out the roles and missions of the university. Of particular importance is the enthusiasm of the younger members of the faculty, especially in the agrocomplex at Banjarbaru.

Weaknesses of the institution lie (1) in the lack of clear plans for the future which ought to be closely aligned with the high national priority to train teachers and with the high BAPPEDA priorities to train manpower in Agriculture, Forestry and Engineering; (2) in the inability of the Central Administration, because of the present autonomy of the Faculties to provide guidance to the Faculties as to the future direction which the university should pursue; and (3) in the overall low level of financial support for faculty salaries, for an adequate number of faculty positions, for equipment, for supplies, for support staff, and for libraries. Additional problems lie in the low ratio of degrees granted per total student enrollment; the poor state of the libraries generally; and the fact that most texts used by students are in a language other than Indonesian.

Projects which BAPPEDA lists as high priority for the University to undertake include:

- (1) Establishment of a department of Architecture and increased support for the Faculty of Technology.
- (2) Help with development of the area through research in Agriculture, Forestry and Fisheries, instead of having Javanese universities do the research.
- (3) Enhancement of the KKN program, the extension program, and demonstration projects.
- (4) Provision of short courses, workshops and seminars to upgrade the quality of personnel in the civil service.

(5) Increase opportunities for children in local area to obtain a university level education without having to go to Java.

(6) Provide a training program in Engineering for laboratory and electrical technicians.

The Ministry of Education of South Kalimantan lists the following as high priority items:

(1) A great need for teachers of Math, Chemistry, and all basic sciences.

(2) A need to increase the enrollment of students.

(3) A need to increase the graduation rate of students now in school.

Obtaining the maximum benefit from the use of present resources must involve reallocation by the rector and deans of the resources available to the university. However, even if the maximum possible efficiency were obtained, a severe shortage of funds would continue to exist. This problem could best be met by the rectors of the BKS as a group by making integrated requests for support to the Ministry of Education.

An analysis of the low rate of graduations both at the sarjana muda and at the sarjana level should be made. The fact that students must now pay for their own research costs for their Skripsi is perhaps one of the reasons for the low graduation rate. Since the sarjana corresponds more closely to the baccalaureate degree rather than the master's degree, consideration should be given to abandoning the Skripsi requirement, making it equivalent to a bachelor's degree.

Activities which should be included in the BKS proposal for AID consideration are:

1. Institution of a series of Management Workshops at two levels:
 - (a) the level of the Rectors and Vice-Rectors and (b) the level of the Deans and Assistant Deans.
2. Institution of a series of workshops on planning followed by the formulation of plans for the future which reflect the needs of the societies which support the universities and the priorities established by the GOI and the state governments and planning agencies (BAPPEDA).
3. Establish an inter-university committee of faculty and administrators to examine the system of the universities, particularly with respect to the requirement that students enroll in a particular faculty at the time of

first admission to the university and the requirement that students must take all of their course work within a particular faculty.

4. Establish criteria for sending selected faculty to U.S. or Indonesian institutions for advanced training.
5. Establish an inter-university committee of faculty in appropriate disciplines to write introductory texts in common disciplines.
6. Investigate the possibility of establishing certain laboratories (soils testing, water quality, etc.) as central facilities to serve the needs of the members of BKS.

The current state of development at UNLAM emphasizes the crucial need for university-wide planning and for centralization of administration. Only after these have been carried out can UNLAM begin to utilize its resources, especially the young faculty members, and to share in BKS activities profitably.

Ministry of Agriculture: Research and Development
Station at Banjarmasin

The regional office is under the direction of the Central Research Institute for Agricultural Research and Development of the Ministry of Agriculture. The office is responsible for research in all of Kalimantan. The center has six experimental areas:

- Two for tidal swamps (2 million hectares of tidal swamp exist in Kalimantan)
- Two for fresh (rainfall) land
- Two for upland grass areas

The responsibility of the research stations will be increased to include Horticulture. The priority area for research is increase of food crop production in the province: rice, corn, cassava, soybeans, peanuts, and sweet potatoes.

The present staff includes 1 Ph.D., 6 M.Sc., 8 B.Sc., and 20 graduates of Agriculture High Schools. For the next 5-10 years, the need is projected to 5 Ph.D., 20 M.Sc., and 30 B.Sc. to staff the five departments. Presently, there are several positions which are not filled, making it impossible to carry out the mission of the station. Several students from UNLAM have been hired before graduation to insure their working for the research

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station upon graduation.

Although there are no direct administrative arrangements with UNLAM, several activities assist in their coordinating programs: (1) students are hired to work on programs; (2) faculty are hired on a consulting basis; (3) experiment station people teach at UNLAM; (4) lists of projects are sent to UNLAM for consideration for student projects; and (5) limited facilities are shared.

The province has two major priority areas: to increase production of food crops and timber. The province derives considerable revenue from export of timber.

The research institute has no laboratory facilities, although some studies are carried on in plots or fields outside. A few simple pieces of equipment are available but no sophisticated instruments. The plans call for a well-equipped laboratory in about 5 years.

In view of the cooperation now exhibited, it is hoped that the two organizations can work together in developing needed laboratories, considering the expense and direct need. Some incentives are required to attract more rural people into educational programs to serve the needs of the ministry.

Department of Education,
South Kalimantan, Banjarmasin

Approximately 400 people are in the regional office of the Department of Education in Banjarmasin. Along with a Planning Department, there are sections representing the major activities of the office: Elementary Education, Secondary Education, Vocational Education, Teacher Training, Community Education, Sports Education, Youth Activities, Culture, Museums, and Historical Sites. There are about one million inhabitants in this region.

The university is under the Director General of Higher Education in the Ministry of Education and Culture. The regional Office of Education reports to the Secretary General, while the department needs come under the appropriate Director Generals in the Ministry of Education and Culture.

The Office of Education, in addition to being responsible for academic high schools, is responsible for some specialized high schools, such as Economics, Home Economics, Social Work, and Engineering. To complicate the responsibility for education, other ministries sponsor specialized high schools, such as Agriculture High Schools by the Ministry of Agriculture. The coordination of education at the local level is further complicated by the fact that the province under the Governor with funds from the Ministry

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of Home Affairs is responsible for financing the primary (1-6 grades) school while the central government is responsible for financing the Junior and Senior High Schools (7-12 grades).

The Community Education Section is responsible for specialized programs to help the rural poor. The section has general courses in family living, vocational training (mechanics, languages, typing, etc.), and for nonformal education (basic literacy), youth training, sports, etc.

There are not enough teachers produced to meet the needs of the region. Teachers come from Java to help meet the need. Approximately 90 teachers with sarjana muda degrees are needed for vocational high schools. The teacher need for the 20 academic high schools in this province (13 public and 7 private) is not known. Approximately 2500 students graduate from high schools annually, 1000 students from academic high schools and 1500 students from vocational high schools.

Teachers are sent to Java for upgrading. It was pointed out that a local program would help develop respect for local people and local institutes. Obstacles to increasing the number of rural students are: (1) cost of traveling to and living in the capital city, (2) parents unable to finance education, (3) communications difficult in rural area, (4) limited number of students who can be received and the unequal ability of graduates from rural and urban high schools, and (5) a lack of student dormitories.

The Ministry of Education has a very difficult task. There seem to be excellent plans, but the magnitude of the task is overwhelming. Although school buildings are important and have been built under government programs, personnel is the major need. The use of high school teacher education graduates for primary grades, with additional education as an incentive, has helped meet needs. Far too few students are taking up studies in high school teaching in scientific and technical studies. No new students entered chemistry and only 10 new students entered math at UNLAM this year.

BAPPEDA (Planning Board)
South Kalimantan, Banjarmasin

The BAPPEDA is the Planning Board for the province and reports to and is responsible to the Governor, not to the National Planning Commission. The BAPPEDA is in a position to recommend support for UNLAM from the Governor. There are 40 full-time people with additional consultants (part-time) to carry on the planning work. Before 1974, most of the people were part-time, but those people did not provide the continuity and attention to work required for planning. There are four departments: physical improvements; economy and finance; social culture and government administration and supervision.

Manpower projections of needed people in the major fields of work have not been associated with development plans because there is such a great need with little chance of meeting those needs in the near future.

The major areas of importance for the area are: Agriculture (Soils and Crops), Animal Husbandry, Estate Crops, Fisheries, and Forestry. These should all be considered of equal importance. The possibility of using soil testing as a means of working with local farmers is not great according to the director. Soil data is available for road building, but they believe that it is too expensive to provide that service for each farmer.

The BAPPEDA identified the following problems for UNLAM:

1. Lack of a good campus facility. Now in three locations - will be in two positions with completion of new campus on 20 hectares of land. Construction has begun with 120 million Rupiahs from central government and 30 million Rupiahs from local government.

2. Lack of teaching staff both in terms of quality and quantity. This is the major problem in the development of the UNLAM.

3. The next 5-year plan focuses on agriculture and the same is true for UNLAM.

4. Students have gone into social science and law in high numbers, but BAPPEDA needs engineers and agriculture graduates.

The hopes of BAPPEDA for UNLAM are:

1. That UNLAM will conduct research in agriculture so information will be available for planning.

2. That UNLAM will place a high priority on research on use of the swampy areas of South Kalimantan and on the use of harvested woodland now growing up in weeds. Emphasis should be on use of land for producing foodstuffs. Rice production could be increased five times.

3. That UNLAM will consider forestry production which is already diminishing.

BAPPEDA has produced a local profile of South Kalimantan with the aid of Paul Dauster (USAID regional planning project) which will be used as a basis for decisions on development. A project is in planning stage for assisting rural poor in crowded areas in three different locations.

There is a joint agreement between BAPPEDA and UNLAM for cooperation in developing the second and third five-year plans. These plans must be

submitted by all agencies supported by the government.

The reports of KKN students are sent to BAPPEDA.

The local society hopes for improvement of the university to attract regional students. BAPPEDA would like to see an improvement in research capabilities so that projects can be done locally instead of contracted to other universities outside the region. This is an area that BAPPEDA feels that BKS should emphasize.

BAPPEDA, like the ministry representatives in Agriculture and Education and Culture, seems to place most of the responsibility for the problem of the lack of trained personnel on UNLAM. Although UNLAM cannot be freed of this responsibility, it is clear that these other organizations must assist in calling the attention of others to the needs of the universities and offer incentives for students to study subjects of high need. Without such an emphasis the BAPPEDA will be plagued with difficulty in meeting plans for development.

INSTITUTION - MULAWARMAN UNIVERSITY (UNMUL)

The University of Mulawarman (UNMUL), known as the Frontier University, was founded in 1962 and is located in Samarinda, East Kalimantan (formerly Borneo). Samarinda has a population of about 150,000; it is located on the north banks of the Mahakam River. Proceeding by road from Balikpapan for one hundred kilometers, one must take a ferry to get to the city. East Kalimantan is the largest in size of the Kalimantan provinces with 21.4 million hectares, 85% of which is covered by trees, and the smallest in population (about 1 million). Much of the lumber is being logged under contracts between the government and foreign companies. The principal food crop is rice (60,000 hectares).

UNMUL is under the direction of a rector (R. Sambas W.) who works with a governing board and a faculty senate in developing policy. There are three assistant rectors: (1) academics, (2) administration, and (3) planning and facilities. A rector's bureau assists the rector in carrying out his duties. More than most universities in the eastern region, activities have been centralized at the university level. The directors for the sarjana - program, community and public service, and research report directly to the rector. The sarjana program is just getting organized for all the faculties. The community and public service unit is responsible for an English-language program and a management consultation service. A printed publication, Frontier, includes faculty papers. One major research activity of an inter-disciplinary and international nature is underway: Man and the Biosphere, a UNDP-IUPI project, to study the tropical forest ecosystem.

The mission of the university is to produce adequately trained people needed for the development of East Kalimantan.

Towards this end the university has four faculties: Political and Social Sciences, Forestry, Agriculture, and Economics, with a fifth, Education (IKIP), to join the university in June 1978. There are nine curricula - Economics, Business Administration, Political Administration, General Administration, Community Development, Agronomy, Fisheries, Forestry Management, and Forest Ecology. Both the Sarjana Muda and Sarjana degrees are offered in all fields; the Sarjana programs rely heavily on visiting professors.

The arrangements for handling the Education Faculty which is being transferred to the university will soon be completed.

The university has two locations in Samarinda and operates a branch campus for economics and social sciences in Balikpapan for 200 students. The administration office and main campus are in town on a limited area where expansion is impossible. An agro-complex about 2 kilometers away serves Agriculture, Fisheries, and Forestry. A new campus is being started on a 60 hectare site, a gift of the provincial government.

A major strength of the university is its leadership and developing young faculty. There are 120 full-time faculty of which 11 are women. Nineteen of the 120 full-time faculty are now studying overseas for advanced degrees. Presently there are no Ph.D.'s. The faculty members are young and enthusiastic.

There are 224 students enrolled in UNMUL. In 1972 there were only 400 students. When the Education Faculty becomes part of the university this will add some 400 additional students. Programs are three years in length for the Sarjana Muda and five years for the Sarjana, except for Forestry programs which are 3 1/2 and 5 1/2 years. Actually it takes an average of at least 4 and 6 years to complete the degrees. A paper is written for the first degree and a thesis for the second degree. Eighty percent of the students come from the seven cities and major towns of East Kalimantan. Seventy percent of the students are from the urban areas. There are no special programs to get rural poor into the university. Fifteen percent of the students are women. Last year the university graduated 150 with Sarjana Muda degrees and 20 with Sarjana degrees, a low percentage of the total enrollment. Most of the advanced degree candidates and some first degree students work while attending school and do not take a full load. There is dormitory space for 40 students at the agro-complex. An additional dormitory for 40 students is being built. By offering very generous benefits the Rector has been able to attract capable young faculty members from all over Indonesia. Housing is available for 70 faculty and staff members.

The university has about 3000 books located in a main library, besides the books in faculty libraries. More books are sorely needed. Journals are practically non-existent. Without improving the library, the returning newly-trained faculty members with advanced degrees may be hard to retain.

The annual budget of UNMUL is approximately 400 - million Rupiahs of which 200 million Rupiahs is for development. Funds come from the central government, the local governor, student fees, and contracts and grants. Students pay 60,000 Rupiahs/per year in fees for the Sarjana program.

The Faculty of Forestry occupies an important role in the region and is in a favored position in the university. It is claimed to be one of the three major forestry faculties in Indonesia. There are 40 faculty members, with 21 regular staff members (3 women) and 19 assistants. The faculty was organized in 1964 after having been a department in Agriculture from the founding of the university in 1962.

There are now 247 students (6 women) with plans for 325 students in 1979 and 1000 students by 1984. This year 80 students entered the first year. One hundred twenty Sarjana Muda degrees and 12 Sarjana degrees have been given since the beginning of the faculty. During the last year-and-a-half there were 38 Sarjana Muda and 10 Sarjana degrees awarded.

The curriculum requires 3 1/2 years for the Sarjana Muda and 5 1/2 for the Sarjana degree. Basic courses are handled jointly with the Faculty of Agriculture: facilities are also shared. The laboratories are located in four buildings which include the botany lab, chemistry lab, zoology lab, physics lab, survey and mapping lab, wood technology lab, soils lab, and crystallography lab. A greenhouse is also available.

The major emphasis is to strengthen and develop the faculty members. Two people are working on PhD's. Three have M.Sc.'s (one more to finish in August, 1978). Eleven of the 21 regular faculty members are working on advanced degrees. All staff assistants have the Sarjana Muda degree. Professors from Bogor and Gajah Mada come to the faculty to present advanced lectures and to supervise research and thesis projects. Flying professors come to the campus for a few days to two weeks (for a 3-hour course).

Both the Sarjana Muda and the Sarjana degrees require research papers. The students spend 6 months in a field program working with rural people - two weeks preparation and three months in the field. Various ministries help teach and orient students for the KKN program.

The Dean of the Faculty of Forestry has met with his counterparts at UNHAS and UNLAM to discuss the possibility of exchange of students. Being in the forest area, the program at UNMUL can expose students to the problems most likely to be encountered by students on graduation. A common first 3-year program at the associate universities would permit other institutions to send students here if the last 2 years of their own program is too small to justify the cost.

There are 300 hectares of forest collection available for teaching and research. Also, the faculty is strongly involved in the Man and the Biosphere Project. Several interesting thesis research projects have been conducted:

The Unusual Influence of Habitat on the Life of Primates

An Approach to Estimating Bionics of Farming Rotation

The Possibility of Converting Alang-Alang Grass to Cattle Grazing

A Review of Soil Characteristics at Loa Jenan

A Study of Climatic Characters of Sesulu, Pasir

Suggested Development and Vegetation Analysis of the Lempake Forest Group

A Study of Possible Development of the Lessir Kroun Species

A major need for staff and students is up-to-date books and periodicals. The Association should consider supporting such a program for certain key faculties. Laboratory facilities and instruments are weak. Without improvement of laboratories, it will be difficult for returning staff members with advanced degrees to serve to their full potential, and they may search for employment with other organizations. Such action would be a great loss to UNMUL.

The Faculty of Agriculture staff consists of 11 people, including one woman, and 7 assistants, including four women. Five people are working on advanced degrees (2 in England and 3 at UPLB): three on M.Sc's; and 2 on Ph.D's, including one woman. There are 14 part-time staff. Nine senior lecturers come from Java for various lengths of time, up to 2 weeks (for a 3-hour course), to assist in offering the Sarjana program for the first time.

There are 179 students in this faculty, of which 68 students are new this year. Of these 8 came from agricultural high schools. There are 20 women in this program. Eighty percent of the students come from East Kalimantan.

Until this June, 39 Sarjana Muda degrees have been awarded and 5 Sarjana degrees (with Gajah Mada).

The facilities are shared with the Faculty of Forestry, in an agro-complex. A 3-hectare plot is available as an experimental and demonstration field. An improved soils laboratory is desperately needed.

The Fisheries program is in the Faculty of Agriculture. Two of the 11 staff members are in fisheries. Twenty-eight students are in the program. All students have been promised jobs. The first year is with the Agriculture students.

The Faculty of Agriculture has planned to initiate a program in Animal Husbandry, but has been unable to locate faculty. A program may be initiated next year utilizing part-time faculty.

UNMUL is a rapidly growing institution with a young, vigorous, and ambitious faculty. A dynamic program of staff development, greatly encouraged by the rector and deans, is building a base for a strong institution. Faculties are cooperating with each other in research, instruction, and public service. The cooperation and sharing of facilities is particularly evident between the Faculties of Forestry and Agriculture. The university rector recognizes the importance of cooperation through the organization of his office to include research, public services, and graduate studies to develop and carry out university projects.

The Association could be of assistance to UNMUL by:

- (1) Encouraging the continued development of staff now in progress.
- (2) Helping to develop laboratory facilities, particularly in a few selected areas, which could serve a regional as well as local need.
- (3) Encouraging a greater emphasis on attaining and maintaining a much improved library. Particular emphasis should be placed on current technical journals.
- (4) Helping to disseminate research publications and student reports and theses to member institutions.
- (5) Organizing a project to prepare instructional materials leading to books in basic areas, not covered by other programs, of interest to several Association universities.

Forestry Department of Ministry of Agriculture,
Samarinda, East Kalimantan

The primary income for East Kalimantan is from timber, followed by oil. The exports for timber in 1977 amounted to 478 million U.S.S, primarily to Japan and Korea. In addition to logs, lumber, chips, and veneer are exported, and a plywood plant now is being built. The office in Samarinda is responsible for a forest nursery. However, the experiment station in Kalimantan is under the direction of the ministry office in Bogor.

The office works closely with the Forestry Faculty of UNMUL. They feel that UNMUL should maintain a capability to do research which is more likely to be unbiased and more thorough than what would otherwise be done. They would like to see the Forestry Faculty be one of the top educational units in S.E. Asia. They respect the university. Faculty and students are involved in many forestry programs: KKN, research projects, planning and evaluation, teaching, student projects, etc.

The office supplies data to BAPPEDA for planning purposes. The Forestry office reports to the Director General of Forestry in Jakarta and to the local governor. There are 886 people under the local office, of which 68 people have Sariana Muda degrees and 27 have Sariana degrees. The work is carried out through seven departments in the Samarinda office and 10 forest districts.

Several employees work on graduate programs at UNMUL. As of this June, there is practically a government freeze on hiring new people.

The objective of the Forestry office is to increase the value of forest resources for East Kalimantan. Effective exploitation is a major activity. UNMUL has been involved in evaluating the effect of central government regulations and in evaluating ecological consequences of various management schemes. The forest resources serve as a giant laboratory for UNMUL and the Forestry Department. Selective cutting is used for logging in which trees 50 cm. in diameter and above may be cut. The Forestry people anticipate a 35-year cycle of regrowth. A major problem in the forest is burning by local people and migrants to clear for new fields. Approximately 10-15,000 hectares per year have been burned.

The Forestry district, with the aid of World Bank, sponsors a one-year training course for graduates of high schools. In addition, several short courses are given.

BAPPEDA (Regional Development Planning Board)
Samarinda, East Kalimantan

The BAPPEDA is responsible to the local governor of East Kalimantan for provincial planning. Its relation with UNMUL is informative rather than direct as the university rector reports to the Director General of Higher Education of the central government. The BAPPEDA makes money available to the university for studies, specialized educational programs, and, in particular, recently provided 60 hectares of land for the new campus of UNMUL.

The province has a population of 1 million residents. For planning purposes the province is divided into three parts. The basic industries are along the coast: oil,

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fertilizer, LNG, plywood plant, etc. Timber and oil are the major resources for cash income. (400,000 barrels per day are pumped, 25% of Indonesian production). All oil income goes to the central government. About 75% of the royalty income from wood goes to the provincial government. The royalty is \$5 per m³. Eight million cubic meters of wood are exported per year.

An objective of the province is to become self-sufficient in rice. One-half of the rice consumed is imported (60,000 ton per year). The German Government sponsors a planning activity with BAPPEDA that is devoted to developing the lower half of the province for food production, including not only rice but also estate crops. UNMUL has been involved in economic studies of the region and in conducting and participating in seminars on development. Studies on transmigration and resettlement are also being made.

The development of the central portion of the province is slow because of difficulties in transportation and communications. A road is planned to cut across the province into the central lake area.

A 24 megawatt electric generator facility serves Samarinda, which now uses only 5 megawatt of capacity. Electric power is a major basis for development.

The major need for trained people is in the fields of forestry, agriculture, fishery, estate crops, and mining. BAPPEDA hopes UNMUL will be the major university in supplying people for the development process.

INSTITUTION - PATTIMURA UNIVERSITY (UNPATTI)

Pattimura University is located at Ambon in the Maluku Islands and Province some 700 miles east of Ujung Pandang. The city of Ambon is located in one of the finest natural harbors in the world so throughout history has been coveted by various powers. During World War II it was a major Japanese naval base and suffered great destruction from Allied bombings. In early colonial times it was the center of the spice trade, and the Malukus were known as the Spice Islands.

The provincial authorities firmly believe that the future of the province lies largely in developing and exploiting the sea resources since the province is made up of hundreds of small islands. The present Governor points out that the province is 90% water.

The islands are rather sparsely populated with only somewhat over one million people. The city of Ambon has a population of approximately 100,000.

The sea resources include fish, shell fish, and sea weed. There are known mineral resources on Halmahera Island which are beginning to be exploited. Lumber brings in major export earnings. All indications are that there is considerable potential for developing agricultural resources.

Pattimura University is presently located at 5 different sites spread about the city, but it has the possibility of integrating all of the programs on the Poka campus some 11 kilometers from the center of the city. At Poka the Russian aid program built a complex of two large classroom buildings and a library complex consisting in all of some 13,000 square meters. These buildings were not completed when the Russian aid program was terminated in the mid-sixties, and they have been only minimally used. Poka is across the bay from Ambon, so formerly could be reached only by a long trip, over a poor road around the bay or by crossing the bay on a sailboat. Recently a ferry service has been inaugurated so that Poka is only a short ride from the center of Ambon.

The Poka campus also has been under-utilized because it lacks electricity and water. A cable has been laid under the bay so that electricity soon will be available, and province authorities are seeking ways to provide water for the area.

Currently only the Agriculture and Forestry Faculty, the Animal Husbandry and Fisheries Faculty, the Technical Faculty, and the central library are located on the Poka campus, but gradually other Faculties are to be moved there since the other university facilities are in rather bad condition.

The Faculty of Agriculture and Forestry and the Faculty of Animal Husbandry and Fisheries

The Faculties have an enrollment of 276 students (Agriculture and Forestry - 176, Fisheries - 100). The staff consists of 25 full-time members, 20 part-time members, and 10 assistants. The staff is so limited that it is possible only to offer a three year Sarjana Muda program. The better students then are sent to IPB or Purwokerto University to complete their Sarjana degrees. The Faculties award an average of 10 Sarjana Muda degrees each year.

The Faculty has ample office, classroom, and laboratory space, and has received some equipment for a Soil Laboratory. From the Australian aid program it has the necessary equipment for a small climatology station.

Adjacent to the Poka campus is the Ambon Center of the Indonesian National Oceanographic Institute and there are close, positive relations between the faculty and this Center. Under the USAID Science and Technology Loan/Grant Project one activity is to provide assistance to the Ambon Oceanographic Center and the Fisheries program of the university. Near the campus there is also the State Fisheries Training Center which has been built and equipped with external assistance and has excellent facilities. The Oceanographic Center and the University have some access to these facilities also. The Government of Indonesia plans to make Ambon a major oceanographic center.

The Oceanographic Center has modest research and experimental equipment including a ship for research. It has an ambitious research program which includes the basic problems and obstacles to the development and exploitation of the sea resources of the area. The Center has a good start on a collection of sea animal and plant life around the islands and has published some significant reports on applied research. The close relationship among the Institute, the University and the Training Center are expected to produce good results if they can receive appropriate external assistance and continued GOI budgetary support.

Other Faculties

The first faculty was the Teacher Training Faculty but now there are also Faculties of Law, Economics, Social Science/Political Science, Technical Studies, and Education. In Indonesia, it has been customary to separate the teacher training program from the education program which trains educational administrators, supervisors, counselors, etc. In Ambon the Faculties of Teacher Training and Education are now even on separate campuses.

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The total student enrollment is about 2000 with about 190 full-time staff members. The staff is very limited so that only the three year Sarjana Muda program is offered in most program. Students go to other provinces to complete their Sarjana degrees.

Since the Faculties are located at various sites, each has its own small, very inadequate library. All of the Faculties feel a very acute need to upgrade their staffs and instructional programs. All recognize the lack of adequate instructional materials and library facilities. The university tries to stress English instruction and has equipment for a language laboratory. Since there are no installation instructions, the equipment has never been used.

The university now shows sign of making some significant progress. The administration has been able to centralize many of the functions formerly executed by each Faculty. The possibility of utilizing the long dormant Poka campus and the proposed oceanographic project have made for considerable optimism on the part the nucleus of very capable dedicated university leaders. They now are seeking external assistance for staff development, provision of appropriate instructional materials and central library buildings, and the provision of crucial laboratory and experimental farm equipment.

**Eastern Island Association of Universities
(BKS - Badan Kerjasama Pendidikan Tinggi Negeri
Se-Indonesia Bagian Timur)**

The Eastern Island Association of Universities is made up of 8 institutions, two in the eastern part of Kalimantan (formerly Borneo), four in Sulawesi (Celebes), one in Ambon in the Moluccas, and one in Irian Jaya (Western New Guinea). Six are universities. They are:

Universitas Cenderawasih	"UNCEN"
Universitas Hasanuddin	"UNHAS"
Universitas Lambung Mangkurat	"UNLAM"
Universitas Mulawarman	"UNMUL"
Universitas Pattimura	"UNPATTI"
Universitas Sam Ratulangi	"UNSRAT"

Two are Teacher Training Institutes or IKIP's (Institut Keguruan dan Ilmu Pendidikan): IKIP Ujung Pandang and IKIP Manado.

Table 1 presents basic data on these eight institutions.

The data comes from several sources, primarily the Directorate General of Higher Education and a recent BKS survey, and is not always strictly comparable. Faculties and universities gather internal data which is sent to Jakarta. The Directorate General has its own data-collecting effort, and the BKS itself has just been the focus of a recent survey carried out under the sponsorship of the Directorate General of Higher Education by a team from UNHAS. Not all the data from that survey has been analyzed yet and so the figures are not yet entirely trustworthy. However, these figures do serve to give a general picture of the public higher education situation in eastern Indonesia.

Higher education has a longer history on Sulawesi than on the other islands, reflecting the island's important position historically. Founding dates refer to the year in which local faculties received national recognition and public status. More faculties were added after the founding date, or, as in the case of UNHAS, faculties were combined. The leading status of UNHAS in the region is apparent from the data, since it has the largest number of staff and students and the highest budget.

TABLE 1 SUMMARY OF DATA OF INSTITUTIONS OF BKS 1977/78

	IKIP Manado	IKIP Ujung Pandang	UNCEN	UNHAS	UNLAM	UNMUL	UNPATTI	UNSRAT
I. GENERAL	including branch in Gorontalo 1955	1965	1962	1956	1962	1962	1962	1961
Founding Date								
* Routine Budget 1978/79	557,780,000	510,172,000	362,590,000	1,167,193,000	436,920,000	149,421,000	326,993,000	584,270,000
* Development Budget 1978/79	217,710,000	210,450,000	75,000,000	936,648,000	181,151,000	225,631,000	199,185,000	452,530,000
* Full-time Faculty (including assistants)	354	292	88	645	278	105	183	373
* Women	113	53	16	98	44	14	48	93
Other full-time employees	98	112	82	578	98	30	230	116
Total Student Body	2467	4052	1215	8603	3806	2143	1800	5158
Women	1246	1521	163	1932	1032	n.a.	451	1510
Total Graduates:								
Sarjana Muda	706	1135	346	not counted	** 967	303	443	1241
Sarjana	142	312	0	** 2169	** 195	26	78	478
Number of faculties	6	6	4	5	9	4	8	9

* Data from Directorate General for Higher Education.
All other data comes from recent survey of BKS institutions carried out by UNHAS team,
preliminary report, June, 1978.

** From beginning through 1977/78. Other data is for years 1973 - 1977/78 only.

Budgets are set in a two-way process. The universities present budget applications for routine and development funds to the Directorate General which then modifies the budgets in accordance with national guidelines. University income also includes student fees and contributions from the provincial government. Figures are not currently available on these funds, but they make up only a small part of the entire university budget.

Full-time faculty are staff members who are civil servants receiving a regular university salary. "Full-time" does not yet apply to work hours. Regular faculty have civil servant ranks of III (a-d) and IV (a-d). Most of the faculty in eastern Indonesia are still in the III category. Assistants are graduate students in their final two years of study. Other full-time staff are administrators, office workers, technicians, etc.

Total student body reflects the total number of students who have registered and paid a portion of their fees; they may not all be taking classes. Many senior students are already working, and it may take them several years to complete the thesis requirement. The percentage of women students ranges from 15 (UNCEK) to 50 percent (IKIP Manado).

University programs have two levels - the intermediate degree, the sarjana muda, which is a three year program, and the advanced degree, the sarjana, which is a four or five-year program. The BKS members are moving gradually towards having full sarjana programs in all fields. UNHAS now counts sarjana graduates only; this reflects the national trend towards elimination of the sarjana muda degree. Numbers of sarjana graduates are still very low due to reliance on university programs in Java, inadequate staff and facilities in the region, and the newness of many sarjana programs, such as those at UNCEK. Figures on total numbers of graduates are not strictly comparable; except for UNHAS and UNLAM, the figures are for the years 1973-1977/78 only.

The faculty table (Table 2) shows the spread of faculties in the region and indicates the tremendous strain on resources, human and material, that exists to support sarjana programs at each institution in each field represented. The faculties may be further broken down into departments, both as major fields for the students and as discipline concentrations for the academic staff.

The BKS institutions are growing very rapidly, and it is estimated that the total student body will have doubled in the next ten years. Several of the BKS institutions now have new campus projects to enable them to handle the growing demand for higher education. UNHAS is the most advanced in its new campus planning process; the Asian Development Bank is preparing a loan agreement for twenty million dollars to begin in 1979. UNLAM, UNMUL, and UNPATTI are also working on planning and constructing new campuses.

TABLE 2 Faculties in the BKS Institutions

	IKIP Manado	IKIP Uj.Pandang	UNCEN	UNHAS	UNLAM	UNMUL	UNPATTI	UNSRAT
Medicine				x				x
Law			x	x	x		x	x
Social/Political Sciences			x	x	x	x	x	x
Economics				x	x	x	x	x
Languages and Arts								x
Educational Sciences	x	x	x		x		x	
Agriculture			x		x	x	x	x
Forestry				x	x	x		
Fisheries					x		x	x
Animal Husbandry								x
Engineering				x	x		x	x
Natural Sciences								
Teacher Training			x		x	*	x	
Social Political Science Teaching	x	x						
Language/Arts Teaching	x	x						
Natural/Exact Science Teaching	x	x						
Engineering Teaching	x	x						
Sports Teaching	x	x						
	6	6	4	5	9	4	8	9

* to be added later this year

NAMES OF INSTITUTES/RECTORS
IN THE REGIONAL ASSOCIATION OF EASTERN UNIVERSITIES (BKS)

<u>University/Institute</u>	<u>Rector</u>	<u>Location (City, Province)</u>
1. Univ. Hasanuddin (UNHAS)	Prof. Dr. A. Amruddin	Ujung Pandang, South Sulawesi
2. IKIP Ujung Pandang	Drs. Abdul Karim	Ujung Pandang, South Sulawesi
3. Univ. Lambung Mangkurat (UNLAM)	Prof. Anwary Dilmî	Banjarmasin, South Kalimantan
4. Univ. Mulawarman (UNMUL)	Ir. Sambas Wirakusuma, M.Sc.	Samarinda, East Kalimantan
5. Univ. Sam Ratulangi (UNSRAT)	Waworuntu, M.Sc.	Manado, (North Sulawesi)
6. Univ. Cenderawasih (UNCEN)	Dr. Roebini Atmawijaya	Jayapura, Irian Jaya
7. IKIP Manado	Drs. E.A. Worang	Manado, North Sulawesi
8. Univ. Pattimura (UNPATTI)	M. Lestaluhu, S.H.	Ambon, Maluku

BKS LOCAL REPRESENTATIVES

1. Ir. F.H.M. Wokas	UNSRAT
2. Drs. S.A. Lawalata	IKIP Manado
3. C.M. Pattiruhu, S.H.	UNPATTI
4. Drs. M. Idwar Saleh	UNLAM
5. Ir. R. Sambas Wirakusuma, M.Sc. and Drs. Hadaitullah	UNMUL
6. Drs. Siswo Sugiarto	UNCEN

INSTITUTION - CENDERAWASIH UNIVERSITY (UNCEN)

Cenderawasih University has two widely separated campuses. The main campus is at Jayapura (formerly Hollandia), the provincial capital. On that campus are the Faculties of Law (including Economics and Sociology) and Education and the new Anthropology Program. The Agriculture Faculty is on the campus of Manokwari, some 500 miles west of Jayapura.

Faculty of Agriculture

The Agriculture campus is on the outskirts of the lovely residential city of Manokwari, former capital during Dutch colonial rule, which has an estimated population of 25,000 inhabitants. The campus is adjacent to the Agricultural Experiment Station and a few hundred meters from the new and ample facilities of the state agricultural high school.

The campus owns about 31 hectares, and the facilities include administration offices, a library and a periodicals reading room, and a few classrooms. A new building containing a lecture hall is nearing completion. There is some very limited student and staff housing.

The library, with approximately 2000 volumes, is located in two make-shift rooms. Most of the books and periodicals are in English. The book collection is open to students only on a very limited basis.

The labs have only very minimal equipments, and have no electricity nor water on regular basis so that their usefulness is limited.

Adjacent to the campus is the Provincial Experiment Station which earlier this year was turned over to the university and gradually is to become a part of the university operation. For one year the Provincial Government will support the station, but after that its funds must come from the Ministry of Education as do the regular university funds.

The Station has 400 hectares in this main facility and has two smaller field stations, Wamare 22 kilometers away and Ransiki in the highlands reachable only by air.

The station was built by the Dutch in 1961-62 at a cost of 7.7 million Dutch guilders. It was supposed to serve the agricultural research and training needs of the province. The station has extensive well-constructed buildings and staff housing. There are some 10,000 square meters of laboratories and offices plus a guesthouse and storage area.

There is some good experimental equipment though not enough for full operation.

At the main center less than one-fourth of the land has been improved and used. The main crops there include several types of useful trees, and coconuts, cocoa, coffee, cloves, nutmeg, rubber, and vanilla. There are smaller plots with forage grasses, legumes, and tubers. For example, there has been much experimentation with sweet potatoes, the main foodstuff of the highland people. The new university students this year-instead of the normal hazing were required to clear and prepare some land for a special experiment with several varieties of tomatoes.

The Warmare Station is located in a transmigration area with the special task of working with the transmigrants and original settlers of the area. The Pansiki Station is devoted to the experimental cultivation of upland rice.

Although the experimental facilities are formally joined to the university, the station still has its Director while the Faculty is under its Dean. Both the Director and the Dean are under the Rector, but he has the two widely separated campuses to direct and his home is in West Java. To help in the integration of the Station and Faculty, the Rector has made the assistant Dean of the Faculty the Secretary-General, or number two man, of the Station.

The Faculty, which has 134 students, 8 full-time staff and 28 part-time staff members, consists of three departments: Forestry (64 students), Agriculture (70 students) and Animal Husbandry. The last, however, is dormant because of lack of staff and has had no students since 1972. Last year the Faculty granted 12 Sarjana Muda degrees but so far has awarded no Sarjana degrees although there are now 6 students in that program. About one-half of the students come from the area adjacent to Manokwari. The rest come from various parts of Irian Java with some students from other provinces including Java.

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Efforts in research for both faculty and students have in the past been very limited partially because of the separation of the university from the Experiment Station.

The community service program (KKN) involves advanced students and faculty members in community development projects during the three months before the final third year examinations. This program will become more important as more students reach the graduation stage.

Until a little over a year ago the state agricultural high school shared the facilities of the Experiment Station, but World Bank funds were used to construct modern, very ample facilities a few hundred meters from the station at an estimated cost for buildings and furnishings of US\$700,000. The high school (grades 10-12) has about 130 students from all parts of the province. A minority of its graduates go on to the university, the rest serve in various governmental agricultural jobs such as extension agents.

With reasonable coordination and cooperation between the three facilities, there should be ample buildings and land to meet the needs of the next 5 years. Some additional equipment will be needed for the university laboratory courses and for research. The main requirement is for more and better qualified staff. Also there is a shortage of instructional materials and library holdings, especially in the Indonesian language.

The remoteness of Manokwari from the main Jayapura campus makes communication very difficult although there is daily side-band radio communication.

The Agricultural Faculty has received help from the BKS and the Asia Foundation to bring senior professors from other Indonesian universities to teach intensive courses which cannot be covered by regular staff members. The Asia Foundation has assisted the library collection and now is funding the services of a young rural sociology professor. His wife on a regular staff salary also is teaching ecology courses. The Summer Institute of Linguistics assists with radio communications and provides an English professor.

Jayapura Campus

The greater Jayapura community consists of Jayapura, the neighboring town of Abepura, and the airport town of

Sentani. The three together have a population of perhaps 100,000 inhabitants. The main campus of Cenderawasih University is in the residential community of Abepura.

Jayapura has daily plane service from Jakarta via Ujung Pandang. Because of numerous stops the trip takes all day. Goods and materials are shipped from Jakarta, but this trip may take well over two weeks.

The main Cenderawasih campus grew out of an education/teacher training college. The educational/teacher training program enrolls 485 students and the Faculty of Law with Economics and Sociology programs has 573 students.

The student distribution by year is as follows:

First Year Students	395
Second	298
Third	384
Fourth	80
Fifth	120
<hr/>	
Total	1,277

The unusual distribution between the fourth and fifth year is apparently common in Indonesian universities. To graduate the students have to write a thesis so that there is a tendency for students to bunch up in the last year since it may take several years before they complete their thesis.

The Jayapura faculty is made up of 101 full-time (including 17 women) and 113 part-time members (8 women). Two members hold Ph.D.'s from U.S. universities. Both are in anthropological linguistics. One, an Irianese, returned only very recently.

The university proposes to make anthropology a main thrust since the future of the province depends to such a large extent on how the Neo-stone-age-cultures are amalgamated with the culture of the new-comers to the province. The Asia Foundation has provided support for an anthropological journal which publishes research reports on the culture of the provinces. The Summer Institute of Linguistics provides professors in Linguistics and Anthropology.

The campus consists of about 20 hectares with some 6,500 square meters of buildings for classrooms, laboratories, offices and the library. The classrooms and offices are adequate through spartan. The laboratories are modestly equipped. The language laboratory building is in poor condition because of leaks and poor design.

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The library, with a trained librarian, is in good order and is being used though its collection is largely in English. It has an estimated 5,000 volumes.

There are some discussions concerning a move to a new campus since the old campus provides little room for expansion, but this move will be sometime in the future if it does occur.

The main problems of the university relate to staff development, instructional materials, publication of materials, and facilities (including staff housing).

Irian Java Provincial Planning Office, BAPPFPA

The Provincial Planning Office is the planning body for the Governor's office. It has close relationships with the university since it uses university personnel for special planning studies. The university has also been very instrumental in helping with emergency situations such as the major earthquake crisis in 1976.

Joint Development Foundation for Irian Java

The Joint Development Foundation is a quasi-governmental organization funded by the GOI with UNDP and former FUNDWI (Fund for Development of West Irian) monies. The Foundation seeks to be a catalyst for development by providing small to medium-sized loans (125 to 15,000 dollars) for small-holder agricultural and fishing development. It receives some assistance from the Asia Foundation to help in the application of appropriate technologies such as ferrocement boat-building. The Foundation has had only minimal relations with the university, but such relations are expected to increase.

THE SCOPE OF AGRICULTURAL EDUCATION, RESEARCH, AND EXTENSION WORK
IN EASTERN INDONESIA

1. Introduction

Agricultural development is the first priority of the Indonesian development plan. Eighty percent of the Indonesian population lives in rural areas, and over half the current labor force is involved with agricultural production. The infrastructure of education, research and extension to support agricultural development is still small in comparison to the magnitude of the task.

Eastern Indonesia as defined for the purposes of higher education includes part of Kalimantan, Sulawesi, Maluku, and Irian Jaya. This represents a major area of Indonesia in terms of land and water as is clear from the map, but, as Table One shows, it has only ten percent of its population.

TABLE 1

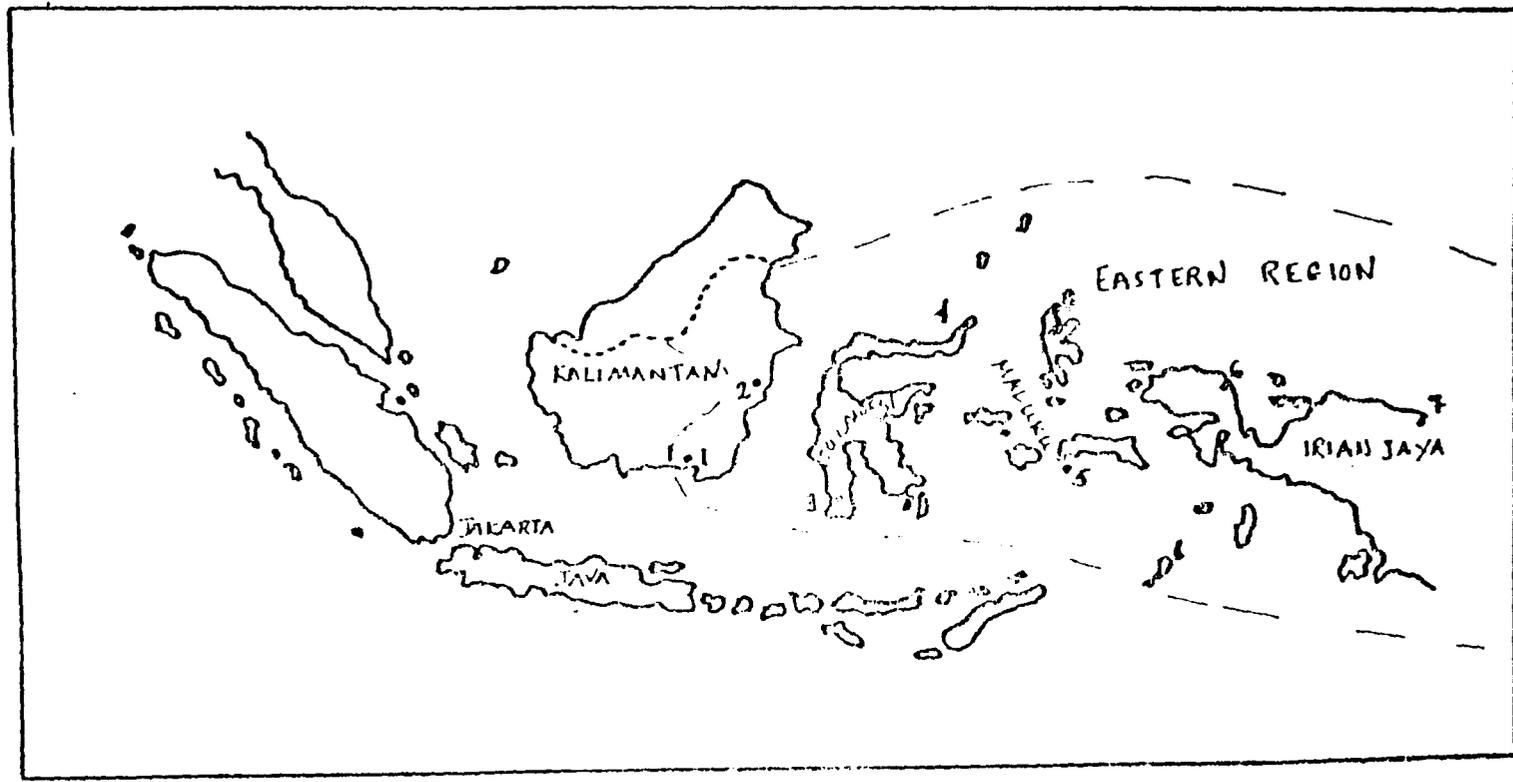
Population, Rural Population and Density of Population
By Province and Islands 1971

<u>Province-Island</u>	<u>(000) Population</u>	<u>Density (person per sq.km)</u>	<u>Rural Population (% of Total)</u>
Sulawesi			
North Sulawesi	1,718	71	80.5
Central Sulawesi	914	10	92.0
South Sulawesi	5,189	63	81.9
Southeast Sulawesi	714	22	92.7
South Kalimantan	1,699	49	73.3
East Kalimantan	734	4	58.9
Maluku and Irian Jaya	2,012	4	85.4
Maluku	1,089	13	86.7
Irian Jaya	923	2	83.7
Sub-total	12,980		
Indonesia (1971)	119,232	59	82.6*

* In 1971 the rural population was 98,485,632

Source: 1971 Census

STATE INSTITUTIONS OF HIGHER EDUCATION
IN EASTERN INDONESIA



- 1. Banjarmasin, South Kalimantan - Lambung Mangkurat University (UNLAM).
- 2. Samarinda, East Kalimantan - Mulawarman University (UNMUL).
- 3. Ujung Pandang, South Sulawesi - Hasanuddin University (UNHAS)
IKIP Ujung Pandang
- 4. Manado, North Sulawesi - Sam Ratulangi University (UNSRAT)
IKIP Manado
- 5. Ambon, Maluku - Pattimura University (UNPATTI)
- 6. Manokwari, Irian Jaya - Cenderawasih University (UNCEN)
Agricultural Faculty
- 7. Jayapura, Irian Jaya - Cenderawasih University (UNCEN)
Main Campus

In general, population density is sparse throughout the region; distances are immense, and the geographical obstacles to communication and interaction are formidable.

Forests, mountains, and, above all, water determine the nature of the region. This region is the least industrially developed of all of Indonesia, although prospects for mining are high. Now the income of the area is heavily dependent on agricultural products -- in the broadest sense including both forestry and fisheries. Table Two shows the comparative gross domestic product per capita of the eastern provinces as compared to the national average.

TABLE 2
GROSS DOMESTIC PRODUCT PER CAPITA IN MONEY
AND REAL TERMS BY PROVINCE - 1972

<u>Province</u>	<u>% of National Population</u>	<u>GDP per Capita in Money Terms (000 Rp)</u>	<u>GDP per Capita in Real Terms (000 Rp)</u>	<u>GDP per Capita in Real Terms (US \$)</u>
East Kalimantan	0.6	221	143	345
Maluku	0.9	41	31	75
Irian Jaya	0.8	37	28	67
South Kalimantan	1.4	36	32	77
Southeast Sulawesi	0.6	28	27	65
North Sulawesi	1.4	25	22	53
Central Sulawesi	0.8	25	25	60
South Sulawesi	4.3	24	23	55
Indonesian average	100.0	34	34	82

Source: Hendra Asmara, "Regional Income Disparities," Bulletin of Indonesian Economic Studies (BIES), Volume XI, No. 1, March, 1975, pp. 41-57.

The enormous disparity in income for East Kalimantan reflects the extraordinary income from timber and oil revenues in that region. Oil revenues go directly to the central government, but some timber royalties go to the provincial government. North Sulawesi income is

seasonally much higher due to the wealth the clove crop brings into the area. Most of Sulawesi, however, is below the national level of per capita income. Eastern Indonesia on the whole has not yet received the huge development inputs that the rest of Indonesia so far has received. The potentials of the region are vast in terms of forest, mineral, and sea wealth, but they are mostly still untapped and unexplored.

The human resources to make use of the region's natural resources are not sufficient; nor is the educational structure capable now of training the experts needed to guide local development or the middle-level workers needed to carry out the mission of the government departments for agriculture, forestry, fisheries, and animal husbandry. The region is still dependent on Java and the universities of Java for much of its trained manpower. Many development inputs will have to come from outside the region, but there will have to be trained manpower and expertise in the region ready to receive and utilize such inputs to the best advantage of the region. The belief is still strong and probably valid that local people can best plan for their regions, given the enormous differences that exist between the islands of Indonesia.

The situation is beginning to change as major development planning projects focus on the islands of eastern Indonesia. The Canadians through CIDA have carried out one such study for Maluku and are in the process now of completing a major planning study for all of Sulawesi. A Japanese team is also involved in the agricultural planning of South Sulawesi, and a West German team is active in East Kalimantan. Many of these projects have come about because of the nation's concern with transmigration, and these islands offer potential sites for large transmigration projects. Major projects are already underway in South and Central Sulawesi and in Kalimantan. Such projects require extensive research to determine whether or not the environmental conditions are suitable for settlement. Again the provinces are dependent on outsiders to carry out most of the research. Consequently, there is now a rapid proliferation of research and planning projects for the rural and regional development of eastern Indonesia. The national and provincial governments are faced with the task of coordinating, evaluating, and implementing this often bewildering supply of data and plans.

What resources now exist in eastern Indonesia for the training of the leadership and expertise necessary for the development of the region? The basic organizational structure for agricultural education, research, and extension will be outlined below. The ramifications for eastern Indonesia will be explained and the facilities available in the region detailed. An understanding of the complexity and duplication involved in these systems is essential before detailed plans and

projects can be made for one component of the system.

2. Organizational Structure

Responsibility for agricultural education is divided between the Ministries of Agriculture and of Education. The Ministry of Agriculture provides training for its lower - and middle-level workers through specialized agricultural high schools and in-service training centers. The Ministry of Education provides university programs at the undergraduate and graduate levels, although a few agricultural high schools are under the jurisdiction of this Ministry. Research and extension are the responsibility primarily of the Ministry of Agriculture, although the universities also are involved in such activities. There is a special Minister for Research who is supposed to set national directions for research. As there are few institutionalized linkages between the ministries yet, a major problem arises in directing these programs in terms of coordination, communication, and cooperation.

Table Three summarizes the basic facilities and resources available for agricultural education, research, and extension in eastern Indonesia.

TABLE 3

Agricultural Education and Research Facilities
in Eastern Indonesia

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Province	High Schools	In-Service Training Centers	University Sarjana Programs	Research Centers
South Sulawesi	State -1 Local gov't-agric.-3 Private -agric.-3	Agriculture - 1 Forestry - 1	Agriculture Animal Husbandry Fisheries Forestry Extension-three year diploma	1-Food Crops
Southeast Sulawesi	Local gov't-agric.-1	-	-	-
Central Sulawesi	Local gov't-agric.-1	-	-	-
North Sulawesi	State -fisheries-1 Local gov't-agric. -1 Private -agric. -1	Fisheries - 1	Agriculture Animal Husbandry Fisheries	1-Estate Crops
South Kalimantan	State -agric. -1	Agriculture - 1	Agriculture Fisheries Forestry	1-Food Crops
East Kalimantan	Local gov't-agric. -1	Forestry - 1	Forestry Agriculture Fisheries	1-Forestry
Maluku	State -agric. -1	Fisheries - 1	Agriculture Fisheries Forestry Animal Husbandry	1-Oceanography
Irian Jaya	State -agric. -1	-	Agriculture Forestry	1-Agriculture
Department Responsibility	Ministry of Agriculture Department of Education & Training	Ministry of Agriculture Department of Education & Training	Ministry of Education, Directorate General for Higher Education	Ministry of Agriculture Department of Research & Development

a. High Schools

Of the eleven high schools under the Ministry of Agriculture that train agricultural field workers for extension activities, five are located in eastern Indonesia. Four of these schools focus on crop production while one focuses on fisheries technology. These schools have been aided extensively by the World Bank in terms of building construction and equipment supply, and their facilities at this time usually far surpass those of the universities. Table Four shows the current enrollment for the four high schools that focus on crop production.

TABLE 4

Student Body of State Agricultural High Schools
1978

<u>Location</u>	<u>Students by grade</u>			<u>Total</u>
	<u>I</u>	<u>II</u>	<u>III</u>	
Gowa, South Sulawesi	90	79	75	244
Ambon, Maluku	94	86	56	238
Banjar Baru, South Kalimantan	45	38	37	120
Manokwari, Irian Jaya	41	30	24	95

In all of eastern Indonesia there are only seven hundred new extension workers being trained now. The high school graduates mostly become the lowest-level of extension workers with primary responsibility for all face-to-face work with farmers. A few high school graduates do go on to university, but they are not encouraged to because the high school curriculum is considered academically weak with more of a practical focus than the general high schools. The curriculum of the agricultural high schools is standard. Courses are divided into three kinds: basic general studies (12%), basic agricultural and extension studies (45%), and agricultural production (43%). Agricultural production focuses on crop production but also offers electives in animal husbandry and fisheries. On the whole the agricultural high schools are lacking in qualified teachers to match the facilities provided through the World Bank loan, although some teacher training was included in the loan.

All other agricultural high schools in the region come under the jurisdiction of the province governments or of private organizations. There are no Ministry of Education agricultural high schools in eastern Indonesia. Often the church-supported agricultural high schools are among the best in Indonesia and receive generous aid from the European mission-boards.

b. In-Service Training

In-service training for agriculture department workers also is the responsibility of the Department of Education and Training in the Ministry of Agriculture. Until recently all training activities for the nation were centered in Java. Now centers are being opened on the other major islands to focus on the special needs and resources of each area. Six training centers are located in eastern Indonesia. The schedule of training activities is still set in Jakarta. Like the high schools, the training centers are still short of qualified staff. Whereas the high schools train the lowest level of extension workers, the training centers are responsible for providing on-going training for all middle-level workers. Of all the educational levels this is the least-defined and most poorly equipped. In manpower terms this is the level of worker most in demand and least in supply.

c. Research

Research and experiment stations in eastern Indonesia come under the jurisdiction of the Department of Research and Development in the Ministry of Agriculture. The main research centers for each area of production are located in Bogor. Main laboratories and libraries are also in Bogor, but gradually the regional centers are being upgraded to be able to handle substantive research problems. In some cases the research centers have more highly-trained staff members -- to the doctoral level -- and better equipped laboratories than the universities.

The research centers are supposed to work closely with both the agricultural extension services and the universities. Because such linkages are not yet formalized, meaningful cooperation takes place on an incidental basis depending on personal connections among the personnel of the several institutions involved.

d. Universities

The history of higher agricultural education goes back to 1940 only when the Agricultural Faculty at Bogor was established. Since the achievement of Indonesian independence in 1949 the Agricultural University at Bogor (IPB) has been the center of growth for high-quality agricultural education in all the agrosience and related fields. IPB is both the pioneer and model for agricultural education

in Indonesia and has received continuous foreign assistance since the 1950's through the University of Kentucky, MUCIA, and the University of Wisconsin programs. Strong schools of agriculture have also developed at Gadjah Mada (UGM), Padjadjaran and Brawijaya Universities. These universities are now leading the way in developing a four-year undergraduate curriculum (in contrast to the traditional five-year curriculum) graduate programs, and new entrance and enrollment procedures for high school graduates.

Higher agricultural education is to be coordinated by the Consortium for the Agricultural Sciences under the Directorate General for Higher Education. Of the eleven subject-matter consortia this is the most active one in developing basic policy and programs, improving curricula, upgrading lecturers, and composing course materials. Like most programs in the past the Consortium has tended to focus on the Javanese universities. The philosophy of both the Indonesian government and the donor agencies has been to upgrade IPB and UGM to the point where they could begin to play a major role in upgrading the provincial universities. Already significant numbers of staff and students from the provincial universities have received additional training at IPB.

TABLE 5

Agriculture Education for Development
GOI/USAID/MUCIA

<u>Institution</u>	<u>Actual Phase I</u> (1970-1976)		<u>Projected Phase II</u> (1977-1981)		<u>Total</u>		<u>In-Country</u>
	M.Sc.	Ph.D.	M.Sc.	Ph.D.	M.Sc.	Ph.D.	Ph.D.
IPB	15	20	6	40	21	60	13
UGM	21	4	4	25	25	29	11
Six Provincial Universities	<u>3</u>	<u>3</u>	<u>4</u>	<u>20</u>	<u>7</u>	<u>23</u>	<u>30</u>
	39	27	14	85	53	112	54

GOI/Other Donors (Estimated)

	<u>1972-1976</u>		<u>1977-1981</u>		<u>Total</u>	
IPB	1	3	6	3	7	6
UGM	17	3	18	6	35	9
Six Provincial Universities	<u>10</u>	<u>12</u>	<u>3</u>	<u>6</u>	<u>15</u>	<u>18</u>
	28	18	27	15	57	33

Table Five presents USAID's program for staff development in the agricultural sciences for IPB, UGM, and six of the provincial universities. Of the universities in eastern Indonesia only Hasanuddin University is included in this program. For the provincial universities a much higher number of staff are scheduled to follow the in-country graduate programs because of the problems often encountered in language ability. Currently in the six universities of eastern Indonesia there are less than 5 Ph.D.'s; about twenty people are studying in Ph.D. programs.

Each of the universities included in the regional association of universities in eastern Indonesia has programs in the agricultural sciences. Approximately ten percent of the student body is enrolled in these programs in contrast to the national average of five percent. These programs began in the late 1950's or early 1960's as intermediate programs to the sarjana muda (three years) level only. After students completed the first three years of coursework they were sent to Bogor to do their sarjana (two additional years) programs there. Generally it took the student anywhere from seven to eleven years to complete what was supposed to be a five-year program. As students finished and returned to their home universities they were taken on to the faculty staff. Thus programs in the provincial universities followed very closely the program of the staff's alma mater. As local staff reached a level of minimal proficiency, the provincial faculties began to separate themselves from the early close dependency on IPB and UGM. Students were sent to Bogor for increasingly short amounts of time as more and more of the academic program was offered by the local universities; more staff members are now beginning to go to other universities abroad - primarily Australia, the Philippines, and the United States - for advanced training; foreign donor agencies are making more contacts directly with the provincial universities.

The core of the university program in the agrosociences is generally agronomy. The agriculture program has six basic departments that organize classes -- soils, crops, plant pathology, rural sociology/economy, mechanization, and the basic sciences and statistics. All the faculties follow the minimum curriculum prepared by the Consortium of Agriculture with local variations. Smaller programs exist in animal husbandry, forestry, and fisheries. Formerly each program was structured as a separate faculty with its own staff and facilities in the European faculty model. Now it is recognized that such a system necessitates an intolerable level of program and resource duplication, and the universities are moving towards increasingly integrated programs in the agricultural sciences.

3. Manpower Projections for the Agricultural Sciences

Although present manpower planning projections are still highly tentative, the gap between manpower needed and that currently being

produced by the agricultural educational system at all levels is startling. It is estimated that the state university system is capable of producing less than half of the educated manpower force needed over the next five years. In the ten-month period from January through October 1977 a total of only 2762 sarjana muda and 1431 sarjana degrees in the agrosiences were granted in all of Indonesia.

Table Six presents the manpower projections used by IPB in its planning.

TABLE 6: Agricultural Research Workers Needed and Available in Indonesia (Institut Pertanian Bogor, Institutional Development Project, 1979-89)

Year	Researchers		Scientists		National Population (million)
	Available	Needed	Available	Needed	
1970	520	1550	3300	9166	117,469
1975	900	2500	5750	15972	132,708
1985		7416		48444	167,972
2000		39000		249917	240,369

Specific projections of manpower needs for each level of agricultural worker are not at this time available, but perusal of the data on high school and university output points to the tremendous and increasing shortage in trained manpower at all levels. The problem is especially acute off Java where government departments are often forced to recruit graduates from Java since the local universities turn out so few graduates per year.

4. University Resources in Eastern Indonesia

Table Seven summarizes the resources of the university programs in terms of staff, students, and graduates (1977/78 data). Each university has a slightly different faculty structure to fit with its local conditions. The Cenderawasih University agrosience program is located in the town of Manokwari, five hundred miles from the main campus; its programs are all in one faculty. Hasanuddin University, the leading university in the region, has just recently reorganized its programs under one faculty structure in order to eliminate waste in resources; this is considered a very important reform in Indonesian

university administration. Lambung Mangkurat University has its programs all in separate faculties in a town forty kilometers from the rest of the university. Mulawarman University has two faculties, although eventually the agriculture faculty will offer programs in fisheries and animal husbandry, too. Pattimura University has two faculties combining the four programs; the animal husbandry faculty has almost all of its students in fisheries whereas the staff is in animal husbandry; these faculties are across the bay from the rest of the university. Sam Ratulangi University has its programs in separate faculties but on one compact campus.

TABLE 7

University Resources	Cenderawasih University	Hasanuddin University	Lambung Mangkurat University	Mulawarman University	Pattimura University	Sam Ratulangi University
<u>AGRICULTURE</u> Full-time faculty (including assistants)	18	64	28	18	26	57
Student body	65	1000	220	180	170	340
Graduates 1977/78 Sarjana Muda Sarjana	12 -	- 15	10 4	13 -	7 -	13 3
<u>FORESTRY</u> Full-time faculty (including assistants)	organization together with agriculture	11	28	41	organization together with agriculture 9	-
Student body	60	20	185	245	25	
Graduates 1977/78 Sarjana Muda Sarjana	- -	organization together with agriculture	16 9	38 10	- 4	
<u>ANIMAL HUSBANDRY</u> Full-time faculty (including assistants)	organization together with agriculture but no program now.	27	-	-	11	27
Student body		250			5	150
Graduates 1977/78 Sarjana Muda Sarjana		20			1 6	3 13

University Resources	Cenderawasih University	Hasanuddin University	Lambung Mangkurat University	Mulawarman University	Pattimura University	Sam Ratulangi University
<u>FISHERIES</u>						
Full-time faculty (including assistants)	-	16	12	organization together with agriculture 2	organization together with Animal Husbandry 1	12
Student body		15	95	28	100	150
Graduates 1977/78 Sarjana Muda Sarjana		organization together with Animal Husbandry	1 -	- -	- -	- -

These universities all share the same basic problems which inhibit educational progress. The farther from Java the more the usual problems are compounded by distance and the difficulty of communication. The most crucial problem now recognized by the universities and the foreign donor agencies is the lack of qualified teaching staff. The factors behind this problem are multiple and complicated; the result is crippling for any kind of university program. Until recently it has usually taken students, at the minimum, seven to eight years to complete the basic five year program, and the percentage of students who completed a given program may be only as high as 25% of those who enter. Each year students are lost to the excessive and often irrational demands of the system, especially at the end of the first, third, and fifth years when the examination and thesis requirements are the heaviest.

All of the universities are deeply concerned with the problem of how to increase their output, and the Ministry of Education is setting high goals for the next five-year plan (1979-1984). Present output is estimated at about three to five percent per year (total sarjana graduates/total student body). The government target for output in the agricultural sciences is 11% per year by 1985. This may be difficult to reach as the student body is expected to increase at an average rate of six to seven percent per year. There is a real danger that quality will be sacrificed in order to raise output figures and reduce drop-out and repeater rates. Solutions to these problems cannot be adopted nationally; individual attention will have to be given to each of the universities in eastern Indonesia.

None of the universities in the eastern region can begin to match IPB in laboratory, library, or staff resources. Although individual university autonomy is highly valued, the realization is growing that interdependence is crucial. The role of IPB is now at a higher level than previously. Local universities have assumed almost complete responsibility for the academic programs they offer; they now depend on IPB for staff training and planning consultation. The universities in the region are also beginning to act on the realization of their own interdependence for program development and resource upgrading.

This is the point of entrance for the work of the foreign donor agencies in the region. Attention is focused on staff development, curriculum design, and the use of new teaching methods, instructional materials, and facilities. At this time the major foreign agencies involved with these universities are the Ford Foundation and the Asia Foundation who pioneered the relationship with these universities, the Australian government which has an extensive program in the agro-sciences at Hasanuddin University, and USAID, which has several projects involving this region.

5. Relation of the Universities to the Provinces

Besides common problems in the efficiency of the educational process, each university faces very different local challenges because of the vast breadth of eastern Indonesia. Underlying all the programs is a central concern with rice production and the diversification of food crops, but the universities are gradually moving towards a sense of focus on local rural issues. Each region has its own local emphases on kinds of agricultural production and environmental issues. Thus in South Sulawesi the main areas of concern are rice production, cattle-raising, and marine resources. In North Sulawesi focus is on estate crops, such as coconuts and cloves. In East Kalimantan the main program is forestry. In South Kalimantan the university must deal with the peculiar geography of the area, the large tidal and swamp areas which require special treatment. Maluku is to become the national center for production of marine resources. Irian will be opened up for forestry and estate crops. The special concerns of the university are meant to reflect these local needs and resources. Such focuses will cross-cut the faculties, rather than follow traditional disciplinary lines. Very gradually the universities are moving towards a new awareness based on greater sensitivity to local issues and on the greater need for a broader understanding of environmental issues and resource management. Hasanuddin University has just created a special unit to manage research and development projects in these areas.

Another major change in the thinking of people in the agrosience faculties concerns manpower planning. Until recently almost all graduates were needed to become university lecturers. Now that the need for personnel is almost met at most faculties, university planners can turn their attention outward to the larger needs of society. The crucial need now is for well-trained middle-level skilled workers. Neither the agricultural high schools nor the universities can fulfill this need now with their current educational programs. Since the emphasis in the university curriculum has been on theoretical knowledge more than on practical skills, neither sarjana muda nor sarjana graduates are as able to do extension type work in the field as is needed. University graduates will tend to fill first the research and management jobs in the capital cities of each province. Gradually the universities are beginning to consider opening special diploma programs of two or three years in length to train middle-level extension workers. Hasanuddin began such a program in 1976 in cooperation with the local Department of Agriculture. Sam Ratulangi University is planning to open such a program next year.

Agricultural research is carried out both by the universities and by the specialized research centers of the Ministry of Agriculture. Both in South Sulawesi and South Kalimantan there are research centers for food crop production, especially rice. The branch in Maros works very closely with IRRI and has excellent facilities and a well-trained

staff. The Banjarmasin branch is moving in that direction. Both centers can offer rich resources to the national universities. The Oceanographic Institute (LOK) has opened a branch at Ambon at the university campus. The university fisheries program is largely reliant on the research center for its staff and facilities. The research center at Manokwari has just come under the jurisdiction of the university this year. In all cases full cooperation between the university, the research centers, and the government departments for food crops, estate crops, forestry, animal husbandry, and fisheries is the goal; due to severe bureaucratic difficulties in cross-ministry work, however, effective cooperation, except in the case of Pattimura, awaits future realization. National policy is now moving to define the division of research duties between the universities and special research centers, and the universities are hoping to get a significant share.

Besides the major roles of the universities in education and research, a third important function is advising the local government, especially the provincial planning board (BAPPEDA). University staff are active in the government departments to do research, plan, and supervise. The faculties of the agrosciences also offer short courses for the staff members of the provincial departments of agriculture. Government officials are always invited to attend university seminars to discuss research results. In the private domain agroscientists are also in great demand, as all private companies or estates must have experts on their staffs in order to qualify for licensing.

6. Regional Goals for University Agricultural Programs

The planning activities of the regional association of universities in eastern Indonesia (BKS) must be focused on (a) the development of a strong basic program (first three years of course work) in the agrosciences at each of the universities, (b) the development of strong specialist sarjana programs at appropriate universities, (c) staff development based on the discipline needs of the specific faculty and university, (d) specialty area development based on regional needs, (e) cooperation with the government departments of agriculture for research, training, and planning, (f) balance of students between the fields of agriculture, forestry, animal husbandry, and fisheries, (g) balanced recruitment of students between diploma and degree programs.

SOCIAL ANALYSIS

PART I: The Region

The eight universities of the eastern island region serve an area roughly one-third the total of Indonesia. The population, however, except in a few urban centers is sparse with an estimated 13 million inhabitants as opposed to 135 million for all of Indonesia. Table 1 gives the population data of the 1971 Census for those provinces in which the universities are located.

TABLE 1

Eastern Region, Population by Province 1971

	<u>Population</u> (in thousands)	<u>Percent Urban</u>
South Kalimantan	1,699	26.7
East Kalimantan	733	41.1
North Sulawesi	1,718	19.5
South Sulawesi	5,189	18.1
Maluku	1,089	13.3
Irian Jaya	<u>923</u>	16.3
Total	11,351	

As Table 1 also reveals, the population is very largely rural so that the future of the area depends to a very great extent on the development of the rural sector. The progress in this sector will require creative leadership which not only can identify technologies which are beneficial but which understands the cultural constraints of the various ethnic groups which will be involved. Because the islands of the eastern region are spread over a wide area and the provinces have been in times past very isolated from one another, there are great language and cultural differences which must be taken into account. A brief social description of each province will illustrate this.

South Kalimantan

The native peoples of Kalimantan are the Dayaks, of whom there are a number of distinct tribes with language variations. Their material culture

is quite unsophisticated. Sago is the main food crop though there is some dry-rice cultivation; and around the towns, largely as a result of external influences, there is some wet rice or paddy rice grown. Communal living is still prevalent with the village consisting of a few long houses. Individual dwellings, however, are becoming more common.

The Dayaks are generally animists in terms of religions beliefs, but Christian missionaries have made some converts, and in the cities some are Moslem. In the cities and larger towns there is a mixed population with sizeable numbers of Malays, Chinese, Bugis, and other groups.

The province is limited in resources and has a per capita income under the national average.

East Kalimantan

Much of what is described in regard to the Dayaks above applies also to East Kalimantan but in addition to the Dayaks in the northern part of the provinces there are Nuruts and Tidangs which are at about the same cultural level as the Dayaks but quite distinctive ethnically.

East Kalimantan is mountainous and much is in tropical rain forests so that the rural population is sparse and scattered. The rain forests is a very valuable source of lumber, and the exploitation of lumber resources and also of oil resources make East Kalimantan the richest Indonesian province per capita. The oil resources serve basically as a source of funds for the national government, and the income from lumber benefits primarily the people of the urban areas so that there tends to be a very uneven distribution of wealth with the rural folk receiving a very small share.

North Sulawesi

North Sulawesi is populated by the Minahasa group which is made up of some 11 quite distinctive sub-ethnic groups. Because of its nearness to the Philippines, over the years North Sulawesi has had close relations with the Southern islands of the Philippines chain. There are indications of migrations from the Philippines as well as a sizeable interchange of genes. The language dialects bears similarities to Philippine languages.

Of all the Indonesians the Minahasans were perhaps most influenced by the Dutch culture. Most became at least nominal Christians, and the Dutch recruited many of their colonial soldiers from the area. This area also tended to receive more favorable treatment from the Dutch so education facilities here were better, and Minahasans were used in the colonial civil service.

The Minahasans are involved in both wet and dry-rice farming. There is considerable vegetable farming and copra and cloves are also main crops.

The port of Bitung is becoming an important center for tuna fishing. Because the area is so heavily dependent on agriculture with few other resources, the per capita wealth is well below the national average.

Largely because of the colonial influence, the educational level tends to be the highest in the country. The university and IKIP in Manado have a real challenge to find ways to exploit more fully the province's human resources since because of a perceived or real lack of opportunities, there is a tendency for potentially creative people to migrate to Java.

South Sulawesi

South Sulawesi is the most densely populated of the provinces of the eastern region, containing about half of the population of the entire region. Its inhabitants are primarily of two ethnic groups, the Bugis and the Makassarese, who are concentrated around the capital, Ujung Pandang. The area is suitable for paddy rice which is the main agricultural pursuit.

Both the Bugis and Makassarese tend to be very outgoing and energetic. They are very status-conscious with a definite class hierarchy, but there is also considerable social mobility based on economic success. They have long been a sea-faring people. The Makassar pirates are famous throughout history. The old, wide, lumbering Bugis schooners, sailing ship unchanged in design for well over 300 years, still carry on the bulk of the inter-island commerce for all of Indonesia. Since these people are travelers it is not surprising that as the population has become more dense there has been sizeable emigration.

Both Bugis and Makassarese are predominantly Moslem.

The area is well below the national average in per capita income.

Maluku-Spice Islands

The malukus are a chain of islands mid-way between the islands of Sulawesi and Irian Jaya (New Guinea). Essentially there are three rather distinctive groups. The southern group is very poor with meager resources. This group of small islands has been pretty well out of the cross-currents and has been little influenced by the Dutch or any other foreign culture.

The people are animists in their religious belief and have retained most of their unsophisticated cultural elements.

The central group consists of the small island of Ambon, and the larger islands of Ceram and Buru. They have been the center of trade since the Fifteenth Century. Ambon, a horse-shoe shaped island around a bay, has one of the largest, finest bays in the world. Competition for this bay

has made it the scene of many conflicts. It was a major Japanese base in World War II, and the city of Ambon was largely destroyed by allied bombing. The Russians in the early 1960's were reported to have been interested in the bay for an atomic submarine base.

The Dutch had considerable influence in the area, and recruited many of their colonial soldiers from the area, including the soldiers who fought against the republic forces in the War for Independence (1945-1949).

The Christian and Moslem population are evenly divided.

The northern Maluku is made up primarily of the large spider-shaped island of Halmahera. This area has poor soil and the several ethnic groups have remained at a primitive level in agricultural methods. They are animists in their religious beliefs, although in the towns there are a few Christians and Moslems.

In the last few years, the area has been found to have mineral resources such as iron and nickel, and this has resulted in an opening up of the area to more modern cultural systems.

Irian Jaya

Irian Jaya is the western half of the island of New Guinea. It is a large, mountainous island with the largest mangrove swamp area in the world along its southwest coast. It has a sparse population of somewhat over one million people, most of whom are still in a neo-stone-age cultural level.

There are three major ethnic groups: the people of the northern coast, the people of the highlands, and those of the coastal mangrove swamp. Within these major groups there are many smaller ethnic groups, some very distinctive.

The agriculture is exceedingly primitive. The main foodstuff of the coastal people in addition to sea food is sago, and the basic diet of the highland people is sweet potatoes.

There are a few small cities along the coast, and these are populated half by immigrants from Java and South Sulawesi and half by Irianese.

The university in Irian Jaya has a tremendous challenge in trying to make as smooth as possible the acculturation process as the stone-age cultures collide with modern, aggressive societies as the province is becoming known for its oil and other mineral resources.

Both Catholic and Protestant missionaries are very active in the province, and they represent a new breed of missionaries since many have had anthropology training in addition to their religious indoctrination.

PART II: The Role of Higher Education in the Social Development of Eastern Indonesia: State Universities and IKIP's

Before it is possible to study in detail each of the eight institutions of state higher education in eastern Indonesia, certain broad guidelines to delimit the field of study are necessary. Previous studies have investigated only the internal conditions of the universities or IKIP's without considering the place higher education occupies in the regional or provincial context. Previous studies have also tended to erase regional differences. While the bulk of our data will be concerned with factors internal to higher education, we must fix the setting first.

The development of higher education in eastern Indonesia is uniquely bound up with local history after the achievement of independence in 1949. The Dutch left almost no base of higher education in Indonesia. They established higher education only in the fields of medicine, law, and engineering before World War II; the agricultural faculty was founded in 1940. Off of Java there was hardly even any education of high school level.

However, educational differences between regions in eastern Indonesia were marked. Of all the areas of Indonesia/Manado/Minahasa in North Sulawesi had the broadest level of education by 1940. Statistics on attainment of elementary education, female education, and literacy are the highest in Indonesia. Manado was the center of Dutch religious and educational attentions, and Manadoese were very active in the Dutch civil service before World War II. Similarly the Ambonese were active in the Dutch army. In contrast to Manado, Makassar (Ujung Pandang) had one of the lowest levels of educational attainment, although it was the colonial administrative center of eastern Indonesia. People from the eastern islands with university degrees were indeed rare; the total number was perhaps twenty-five.

After independence groups of Dutch and Indonesian scholars and local students began to form themselves into private faculties; together they struggled for the establishment of state universities in each province. The founding of provincial universities was an important step politically in honoring the independence of the Outer Islands from Javanese cultural and economic domination. One by one during the 1950's and early 1960's the provincial universities were officially recognized by the central government.

In the early days often, the young intellectual leaders of each area were by necessity deeply involved in the political struggles and rebellions of their regions. Indonesia was reft by centrifugal forces, seeking balance between the Javanese center and the diverse Outer Island regions. During the 1950's all of Sulawesi and Maluku were racked by rebellion; and peace did not come to South Sulawesi until 1966. Consequently, many university leaders were caught up by the political vicissitudes of their region.

Transition during this period the universities grew by gradually adding more and more faculties in diverse fields. There often was no more solid basis for the formation of a new faculty than a few people with strong push in Jakarta. The original faculties were usually in law and economics.

Transition over the years the relationship between the teacher-training faculties and the universities has vacillated between integration and separation. The first teacher-training faculty for all of eastern Indonesia was originally established in Tondano, North Sulawesi in March, 1955, before any of the universities. Now each province has a teacher-training facility - either with independent status as in Manado and Ujung Pandang or with faculty status as in the state universities of the rest of the provinces.

Only since the achievement of national stability in 1966 have the provinces experienced a period of relatively peaceful, planned growth. By 1970 the universities were established in their basic forms, a form still intrinsically pre-war Dutch colonial but moving towards flexibility and responsiveness. Only now, after a generation of growth, are the universities at a point where they are ready to systematize their educational processes. For the first generation of students and graduates, educational progress in the provinces relied on personal contacts, political affiliations, family relations, and ties to Java. The provincial universities were the stepchildren of the large universities in Java in terms of any educational improvements that went on until about 1974. A system was ostensibly worked out whereby the five major universities in Java, then called the "Centers of Excellence," would transmit aid and attention to the provincial universities, but these universities were so involved with their own development problems that the provincial universities believed that they receive little help. This neglect and condescension spurred the growth of regional pride and demands for equal attention. In the Second Five-Year Development Plan (1974-1979) the central government was able to begin to answer these demands.

To counteract the centrifugal pulls of local politics, economics, and culture that had such strong influence on the development of the provincial universities, the Ministry of Education has now established a national system for the planning, programming, and budgeting of higher education. One by one the provincial universities, no matter how distant, are being pulled into the national network. They now share the same guiding principles - the Tri Dharma - of education, research, and community service. In analyzing these three components it rapidly becomes apparent that the universities, despite their local coloring, share the same basic problem.

The critical problem is that of output. Why are so few students graduating from universities?

The question is simple, the answers complex. Already mentioned are the factors of the lack of any educational base at the time of independence

in 1949 and the ensuing political turmoil which lasted until 1966. The first generation of university graduates were desperately needed to staff their home-faculties in the provinces as the provincial universities expanded their programs from the sarjana muda to the sarjana level in order to establish some independence from the Javanese universities. No one involved in the universities during the first decades of growth could afford to work full-time in the universities. Salaries were too low. Survival and advancement depended on widespread networks of connections both in government and private business. The demands of local development also forced anyone with university education to take part in all areas requiring intellectual leadership. Universities were only one of the many institutions newly growing in Indonesia.

Because of the way the universities had originally grown - adding individual faculties one by one - administration was fragmented. Often the faculties functioned like separate schools. Within one university there was no way to enforce uniform standards and regulations. Rivalry developed between faculties for rare resources. A great deal of duplication of effort and resources resulted since each faculty carried out its own program of education independently of the others. Thus, there might be four separate basic chemistry classes run by four faculties. Staff belonged to the faculty, not to the university. The same was true of laboratories and libraries and funds.

Around each state university, small private universities mushroomed to meet the ever-increasing demand for higher education. On the whole, the private universities are still staffed primarily by lecturers from the state universities. In all of Indonesia now there are forty-one state institutions of higher education - universities and teacher-training colleges (IKIP's) - and over 330 private institutions. Besides the spreading system of higher education under the Ministry of Education, there are also Islamic universities in each province under the Ministry of Religion. Specialized academies under the direction of various other ministries were established to train personnel specifically for their ministries.

This was the situation which the Ministry of Education confronted several years ago when it began efforts to coordinate and regulate higher education. Significant progress has been made in the creation of a national system. The concept of having the "Centers of Excellence" universities in Java aid the smaller universities was revised. Two kinds of associations now are working to organize and systematize higher education, by subject-matter and by region.

The first kind established were the consortia by subject-matter that are to set basic curricula, improve teaching and research methods, hold meetings for deans, and in general upgrade the quality of education in that particular field. Of the eleven consortia, the consortium for agricultural sciences is regarded as the most active and successful.

Major amounts of aid went first to the Agricultural University in Bogor and Gadjah Mada University in Yogyakarta; now the effects of that aid are beginning to be felt at other universities. The work of the consortia was originally hampered by the difficulties of communication between Jakarta and the Outer Islands and by the suspicions that exist between Javanese and non-Javanese.

The second and newer kind of association now being encouraged by the Ministry of Education is that by region. Two years ago the Association of State Institutes of Higher Education in Eastern Indonesia was established. Again problems confronting the association in terms of communication and cooperation are formidable. The region, extending from Irian Jaya to South Kalimantan, includes about fifteen major ethnic groups, two major religions, a hundred languages, and radically differing historical and economic patterns. Only the sea and modern Indonesian development ethos unite these areas. By and large these areas are still mutually ignorant of each other, and the building of trust between the institutions of this region is a slow process.

The regionalization of state higher education is aided by a similar regionalization process of private universities by the Ministry of Education. The rector of Hasanuddin University is the head of both educational regional associations in eastern Indonesia. Also, similar regions have been established for defense and economic development purposes. The exact boundaries of these regions are not the same, but the major purposes of greater coordination of planning efforts and better utilization of resources are the same. In all institutions now the push is towards regionalization and rationalization of management.

How should the development of the universities and IKIP's be related to local, provincial, and regional development? Definitions of university development come from the Directorate General for Higher Education and increasingly stress the crucial need for coordination of university planning with provincial planning. Definitions of provincial planning originate both from the national level and from the provinces, principally from the provincial planning boards (BAPPEDA), the provincial offices of the government departments, and the universities themselves. As of now the role of the universities in the business of planning and development is not precisely drawn. In each province the relationship between the university, the BAPPEDA, and the local government departments differs. In all cases it was university people who worked with the fledgling BAPPEDA's to design the Second Five-Year Province Development Plans in 1973.

Since the early 1970's, the need for good regional planning has been stressed. Only local leadership, it is felt, can be truly responsive to local needs, given the vast cultural differences inherent in the modern Indonesian state. The universities are expected to provide the planning expertise, research capability, and manpower training for local development.

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The central government has realized the importance of the Outer Islands as suppliers of natural resources critical to the welfare of Indonesia's future - oil, timber, nickel, fish, coconuts, cloves, etc. The provinces, too, are aware of their critical role in national development and of the related necessity of educating a group of people locally who can direct local development in the best interests of the region. Both the planning boards and the provincial government departments look to the universities to produce the necessary educated personnel for their activities.

Thus far, however, this kind of cooperation between the universities and provincial government offices has taken place at an individual level only. For example, in one province the dean of the economics faculty is also the head of the BAPPEDA; in others the most senior university personnel are active advisors to the BAPPEDA. The planning board and government departments will contact the university to do some of their research. There is no institutional policy yet - either at BAPPEDA or at the university - on the specific role the university ought to play in the planning process or on the development priorities the university ought to develop based on its research. Specific manpower projections - crucial for fitting the growth of the universities to the local needs - are not yet available from the government departments or from BAPPEDA. Also guidelines on research directions and priorities do not exist yet at the provincial level.

All of the services carried out by the universities are also implemented by other agencies. Several of the regions in eastern Indonesia - Sulawesi, Maluku, and East Kalimantan - are the focus of foreign regional planning projects working with the Indonesian government. A few university people are involved as counterparts in these projects, but no comprehensive program was developed whereby the universities could benefit from the presence of the accumulated expertise.

Whatever planning gets done must be based on research results, and the necessary research is carried out by both the relevant government departments and the universities/IKIP's. There is no policy yet on division of responsibility for research, although the Ministry of Education is beginning to evaluate the research capabilities of each institution. The distribution of research results depends to a large degree on the funding source, thereby crippling potentially valuable communication between the university and the local government. Research funded by the Ministry of Education in the field of agriculture may not be sent to the local agriculture department office.

The universities/IKIP's see themselves as centers of learning, thought, and research for the region and the nation. They are supposed to be producing the educated elite who will become leaders locally and nationally. Professional leadership training is judged the most crucial role of the universities. But the universities/IKIP's are not able yet to produce the graduates needed by both the public and private sector. University output must be measured not only in terms of graduates and research results but

also in terms of the high proportion of wastage that occurs every year. The quality of the education students receive must be evaluated, too, in terms of its relevance to local conditions. The main problem concerning university output is often stated only in numerical form; the problem of quality is equally crucial.

Since their inception universities have played a dual role outside the formally educative realm. They were the natural gathering places of young student leaders in the nationalist movement. As such they were the natural centers of change in customary thought and attitudes. There youth could begin to play an important national role as critics of the forces in power. But the universities have not yet rid themselves of their colonial and feudal heritage. The stress in education has been primarily academic and theoretical. University students are clearly members of the elite who no longer need manual skills. This paradox is still apparent today in the gap between the student's sharp criticism of the government for its inegalitarian distribution of wealth and their own unfamiliarity with village conditions. On the one hand, the universities are the bearers of change through new knowledge; on the other, they are the preservers of the social status quo through the cementing of the middle class.

Because of that element in the educational system which encourages reinforcement of a middle class status quo oriented to the city rather than to the village, the quality of the educational process becomes even more critical and sensitive. The universities are training leaders; leaders will inevitably be of the higher classes. But the responsibility of the universities is to provide the kind of training most suitable to the needs and priorities of regional development. Somehow the extraordinarily high investment in each graduate must pay off in terms of the development goals of Indonesia. What attitudes towards development are being implanted in the student by the university educational process? What attitudes towards work and personal advancement?

The universities and IKIP's are balanced between local, regional, and national demands. These are the forces that will mold the nature of the universities in the coming years. Students have to learn to be responsive to three sets of interlocking problems, to be aware of the relationships between three contexts - the Indonesian, the eastern Indonesian, and the provincial. Theoretical knowledge and skills must be brought to conform to the demands of these contexts. As the new Minister of Education, Daud Joeseof, stressed in his recent meeting with the rectors, students must be taught above all how to analyze. He is calling for a revolution in educational practices because up until now all Indonesian students have been taught to memorize, and it is this skill that they pass on when they in turn become teachers.

In an attempt to radically improve the quality of higher education the aim is to integrate all universities into a national system. Budgeting and planning are being carried out in the same way for the first time at all universities and IKIP's. Even though there may be many weaknesses in the implementation of the system (PPBS), it is still a major step forward in terms of national control over these most scattered institutions of higher education. National control represents national interest, and investment in the improvement of these institutions has escalated tremendously over the past few years.

In the eastern Indonesian university system, Hasanuddin University (UNHAS) is clearly the center of growth. It has assumed the leadership role regionally, befitting its location in Ujung Pandang, and it is beginning to assume a national role because of its reforms in university administration. It has been granted special status as a pilot project in university development; this means, it has much more freedom to set its own directions than do other universities. The other institutions in the region are less stable because they are younger, smaller, and faster-growing in still-unsteady increments. Over the past few years UNHAS has been developing its own expertise in the field of university administration, and the quality of management is recognized as a crucial component in educational reform.

The other universities in the region are moving towards centralization - first of finance, then of faculty development. The Ministry of Education expects UNHAS as a center of growth to share its new expertise with the other members of the Regional Association. In terms of university development most of the other universities in the region are at the point where Hasanuddin University was perhaps four years ago. In recognition of the widely varying stages of development of these institutions and of the limited amount of funding available, the Ministry has set a schedule for a ten-year cycle of university planning and development. The cycle consists of four stages: (1) planning and (2) preparation for implementation (three years), (3) implementation (five years), and (4) evaluation (two years). Each university will begin the cycle at a different time, depending on how its planning capability is judged. In the eastern region only UNHAS is at the implementation stage.

In accordance with its policy to nationalize the higher education system, the Ministry has set targets to help meet the major issue of low output and high demand. The student body is set to rise by six to seven percent per year; output is supposed to increase from the current rate of 5% to 11% by 1984 (total graduates/total student body). The proportion of students needed in each major field has been determined as follows:

Natural Sciences and Engineering	17%
Agricultural Sciences	12%
Health Sciences	11%
Teacher - training	22%
Social Sciences and Humanities	38%
	<u>100%</u>

Enrollment and manpower projections are still extremely tenuous. Final projections have not been set yet because each department is still in the process of designing its plan for the next five years. Each Ministry plan must then be approved by the National Planning Board in accordance with the estimated national budget. Data from the provinces tends to be unreliable. Higher education in the next ten years will be experiencing a real demand-explosion due to the regular growth of population in Indonesia and to the tremendously expanded opportunities for elementary education. Most provincial education offices are not yet able to take all the factors into account in their planning, so the information the universities have to base their application-and-enrollment estimations on is not complete. The universities however, are definitely oriented outwards now to the needs of the local society in setting their development priorities.

The demands from the society - both from the ever larger body of high school graduates and from the public and private hiring sectors - must be balanced with the universities' internal capacity for sound growth. Both at the Ministry and at the regional level there is agreement that the universities/IKIP's in eastern Indonesia must be developed cooperatively. Resources - human, financial, and material - are simply not sufficient to be duplicated eight times over. The Regional Association (BKS) is the vehicle for cooperative planning and programming, so that the institutions can develop in a way most responsible to the region.

At this point the Regional Association is not able yet to perform this function. Its mission is still new and vague. A five-year plan was drawn up at the last meeting in December, but it has no system for implementation. The current BKS budget can only cover the semi-annual meetings of rectors and assistant rectors and a small exchange of lecturers. There is no full-time secretariat yet. In order to make the Regional Association a viable body for university development, the Ministry of Education requested help from USAID. Washington State University has been contracted to carry out the project over five years. A team from WSU has just completed a preliminary visit to the region in order to design the project. The objectives of the project are dual and mutually interrelated. The first is to improve the planning and programming capabilities of the universities, both individually and regionally; the second is to improve the quality of the educational programs in agriculture and aquaculture. The final goal is to produce university graduates capable of filling the regional need for well-trained leadership.

Inherent in the concept of well-trained leadership is a close and -- critical knowledge of rural conditions in Indonesia. Indonesian society is seventy percent rural; university students are seventy percent urban in origin. One of the major goals of university education must be to acquaint both teaching staff and students with rural conditions and needs. The university population makes up a large proportion of the intellectual leadership of a region. The research and planning they do for the region need to be rooted in local conditions, not in Western books. One of the

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main ways in which students and staff are introduced to village life is through the field service program (KKN) whereby all students are required to work in a village for three months before they graduate. KKN students produce village data for the provincial planning board and the local government which have little access to direct village studies.

In all of the universities and IKIP's of the region strong pioneering work is going on to develop effective KKN programs. Essential to the success of the program is a close relationship with the local government and the numerous government agencies that have responsibility for shares of rural development. The KKN students have the advantage of being able to approach problems and solutions in much more integrated ways than the government agencies can. The students and their supervisors (from both the universities and the local governments) can quickly identify major problems, bring the appropriate agencies together, and begin to take steps to solve the problems. KKN projects run the gamut from nutrition and baby health to fishing techniques and irrigation. Many villages suffer from lack of easy access to water supplies, and water may have to be carried ten kilometers or so. This has wide implications for health, sanitation, and food production. KKN students have helped villagers build simple piping from bamboo to transport water. Gradually specific student skills are beginning to be utilized, so that medical students work with community health programs and engineering students with road-building and irrigation programs.

Some university programs like agriculture already had regular periods of village work in their curricula, but KKN offers a truly multidisciplinary experience. Both staff and students benefit by working closely with members of all university faculties, not only with people of their own discipline. KKN generally provides teacher-training students with their first opportunity to teach in rural schools and become acquainted with the conditions and challenges involved. Suddenly students are confronted with the need to make their educations immediately useful and useable. Although many of these students will not return to work in rural areas, except perhaps to conduct research, the major lessons of their KKN experience will be important influences on their attitudes as they move into positions of leadership. Only through KKN can the students gain an appreciation for the vast complexities of rural development. Students from the technical fields learn the crucial importance of social and cultural elements; students from the social sciences learn the importance of technical skills and agricultural knowledge. Three months may be too short or too long a time, but the importance of the experience cannot be over-stressed.

The KKN program has made clear to many people both in the universities and in the local government the need for much closer coordination and cooperation in the management of the many research and community service programs. In each province steps are being taken in this direction. At UNHAS all research and development projects have been organized into three centers: rural studies with demography, community health, appropriate

technology, and KKI; environmental and natural resources management; organization and management with a consultancy bureau for small businesses. The rural studies center is focusing on one of the poorest regions in South Sulawesi to develop integrated village programs such as quality salt production, supply of drinking water, etc. In East Kalimantan the university is participating in the United Nations project, Man and the Biosphere, to study the impact of forest exploitation on the tropical rain forest ecosystem. In Irian Jaya a well-equipped research station has just been turned over to the university by the Ministry of Agriculture. All the universities are beginning to develop specialties in critical local problems. For example, Ambon will focus on marine resources, Manado on export crops, and Banjarmasin on the use of tidal swampland.

As a result of all these activities, university educators are becoming more oriented towards the need for training extension workers and managers of extension programs. Up until now the university curriculum has not introduced students to the skills necessary for such work. As manpower planning has become a major concern in regional development, it has become very apparent that different strata of education are necessary. The investment in six years of training for the sarjana degree is too high, and many of the jobs do not require such theoretical training. The crucial need is for middle-level skilled workers or managers. This problem is recognized nationally now, and the Ministry of Education is in the process of establishing guidelines for diploma programs (1-3 years of training after high school). Several of the universities have already opened such programs in cooperation with the relevant government departments. UNHAS already has such programs in agricultural extension, electronics, mechanics, business operations, English and secretarial skills.

The Regional Association Project will focus on several main components of the university system in order to achieve its objectives. Improvement of the agriculture/aquaculture programs depends to a great extent on improvement of university administration and management of university resources. Staff is the crucial resource. Major attention will be focused on how to improve the quality of the staff. In most cases, the staff of a particular university are also graduates of that school. Their experiences are very similar, and new inputs are rare. Further training is vital for the teaching staff. There are broad opportunities now for advanced training, both in Indonesia and abroad, offered by all the donor agencies. The major problem in eastern Indonesia is the small number of staff presently capable of taking advantage of such programs due to their poor English-language ability and the uneven quality of previous training. Significant planning must go into the identification of training needs and candidates. Planning must also be focused on the recruitment of staff from a wide base in order to insure representation of broad educational background. Certain universities have made significant progress in these areas, but the Regional Association will need to promote such programs.

Besides university staff - both administrative and educational - the major group to be affected by the BKS project will be the students of these universities. They are the next generation of leaders, and the quality of education they receive is of crucial importance. Programs need to be developed to recruit and support significant numbers of students from rural high schools. Support is especially important for the first year as government scholarships only begin in the second year. UNHAS has already begun such a program. Another point at which students need special support is when they are doing research for their theses. Besides sponsoring much broader communication and contacts among teaching staff, efforts should be made to involve students, too, in such exchanges.

Indirectly the next major group to share in the benefits of this project will be the government agencies and the planning boards. As the university staff become more skilled in doing research, their input to the government will increase greatly in its value and usefulness to the regional development process.

Benefits of this project will spread outwards in a widening spiral as the quality of the universities themselves improves. At the core of the spiral is the Regional Association and its eight member institutions. Basic emphasis will be on the planning and programming processes essential both to university administration and agricultural education. Included will be administrative staff, teaching staff, and students. All of them have links with other systems - other faculties, schools, government agencies, and private businesses. Each student before graduation works in a village; thus, thousands of villagers are involved through the KKN program in communication with the highest institutions of education. Knowledge and experience gained in KKN are brought back to the university and government to improve their programs.

PART III: Women in Development: Implications for the BKS Project, Indonesia

At the 1975 World Conference of the International Women's Year, Mexico City, development was defined in terms of its broadest objectives: "to bring about sustained improvement in the well-being of the individual and of society and to bestow benefits on all" (1) According to Boserup and Liljencrantz (2) if such goals could be met, women and men throughout the world would benefit greatly. The integration of women into the development process should follow the principle that those whose lives are to be affected by social and economic policies should have a say in the decisions. Programs should be developed which will bring women into the national economy, thus improving their status and strengthening the total development effort.

One of the stated objectives of the BKS Development Project is "to develop ...the ability (of the universities) to play an effective role in the development of rural economy in east Indonesia ...," which implies two-way communication between the universities and the people and effective educational methods for the rural poor.

Why must women be considered in rural development?

1. First, women are valuable human resources (3). Indonesia is predominantly rural country (83% of the population). Fifty-one percent of the rural population is female. Seventeen percent of rural household heads are women (4). Rural people are usually very poor. This varies, however, from region to region in the Outer Islands, i.e. the average annual income in North Sulawesi is \$200, in Minahasa, \$500, as compared to \$150 nationally.

Most rural women are difficult to reach being isolated by distance, terrain, climate, cultural customs, strenuous daily work, malnutrition and illiteracy (3).

Life expectancy for rural Indonesia is 45 years (4) but this is lower in the Outer Islands than in Java, reflecting the differences in medical services. The crude death rate in the Outer Islands is 17/1000 (4). The UN Economic and Social Commission for Asia and the Pacific estimates a higher than average female mortality (5).

2. A second reason for consideration of women in rural development is the high potential for expanding women's contribution to agriculture and the labor force. In Indonesia, participation in agricultural work is fairly evenly divided between men and women. Women continue to plant, harvest, and sell the produce. In non-agricultural areas, women run much of the retail trade and small commercial enterprises. Their role in the batik industry - manufacture, distribution and sales - is particularly significant (6). It is estimated that the labor force in South Asia and Oceania will double between 1970-2000 (7).

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3. Women's responsibilities are still linked closely to domestic tasks including the preparation and selection of food for the family. Eating customs increase or decrease nutrients available to various family members. This has a critical relationship to health and wealth, physical and intellectual development. Limited nutritional studies to date have defined Indonesia's most serious nutritional problems as malnutrition of the child in the first years of life and of the mother, particularly during pregnancy (8, 9, 10). Emphasis on these groups has been recognized in Repelita II and has been a stated objective of the Applied Nutrition Program and the country's health delivery system. The specific nutritional deficiencies are calories, protein, vitamin A, iron (anemia) and iodine (goiter). Correction and prevention of these deficiencies are largely responsibility of women through their agricultural production and food selection, preparation, processing and storage activities.

4. Women teach children and mold values, attitudes, beliefs, and goals. Important as this is to development, 50% of the Indonesian women 10 years and older (54% of rural women) are illiterate. Women and girls do not have equal access to education (5). Comparative enrollment data reflect the increasing disparity: at the primary level 46% of those enrolled are girls; by junior high school, 37% of the students are female; by senior high 31%; and by university, only 29% are women. For economic reasons and because of traditional beliefs, girls are kept at home to help with the children and the domestic chores in favor of boys continuing with their education. Limited educational facilities affect all Indonesian children but girls more so than boys are in a better position to take advantage of them (4).

What is women's role in development?

Women in rural areas perform at least half the income-earning activities and many other activities connected with household maintenance and family welfare which are not usually accounted for in statistics of rural productivity (4). Net time allocation studies indicate women can put in three more hours daily than men.

Once the produce reaches the market, women do the selling, elementary processing and storage when necessary. Women are the traditional sellers of meat, cloth, and other household items.

Rice has been the main crop, but women also grow or assist with other crops such as vegetables, livestock, and estate crops (4).

Women also derive income from food preparation, food preservation, and handicrafts. Recently, they are supplementing family incomes through out-of-home jobs with work as florists, beauticians, clerks, or teachers.

With few exceptions, women in Indonesia control household finances and dominate the family decision-making process. Women are economically responsible for whatever they grow as well as their off-farm endeavors. Major agricultural outputs are paid out of the family budget and the disbursement of funds for agricultural expenses is administered, generally, by the wife (4).

Women's role in cooperatives has been primarily in the same sectors as men: savings and loans, purchasing wholesale and raw materials and distribution. Their largest involvement has been in the batik industry but they have participated as members and leaders of neighborhood cooperatives. The government stimulates the formation of village cooperatives as self-help in the storage of surplus rice and encourages village women to form cooperatives for marketing handicrafts and their own produce. It is a matter of policy of the Ministry of Transmigration and Cooperatives that one of the major sectors of future development is women's cooperatives (4).

Legally, Indonesian women have the same rights as men, i.e. property and business ownership, access to credit and jobs, legal and tax liability, jobs. However, their freedom to perform has been curtailed by family obligations, social conventions, poverty, and lack of the full realization of their rights. These kind of deterrents must be reduced before women can fulfill their potential in the development process.

Design of Women's Education

Since women play a prominent role in the agricultural labor force, they should receive practical instruction in farming principles as well as the men (11). Women should be trained as managers and decision-makers in agriculture, thus gaining the self-confidence needed to enter higher levels of leaderships (12).

Some experts feel that one of the best ways of developing rural enterprises for large numbers of women lies in the field of food processing and preparation, particularly as it expands into canned and frozen products. This could include fish, sea and fresh water, meat, and agricultural products, such as, vegetables, fruit, rice, corn, and coconut (4).

It is desirable for rural women to have opportunities and training for non-agricultural work because women who migrate adapt more easily to working in towns if they have had some non-agricultural work in the villages (11). However, a primary objective of educating rural women in agricultural or non-agricultural jobs is to obtain their full potential in increasing production to be sure that an improvement in men's earning power in agriculture is not offset by a decline in women's work and hence in women's earning power.

In the future, more women, married and single, probably will be seeking jobs outside the home. One big factor will be family limitation through

the nationally recognized family planning program. Both rural and urban women should be given other ideals and other ways of asseting themselves, besides having large families, both in their own eyes and in relation to the male members of the community. Another reason for increasing numbers of women in out-of-home jobs is the high divorce rate. Recent sample surveys in the rural areas would put the rate of divorce at 37%. One means of achieving the job rate for women is to improve education and vocational training for girls and to encourage girls to make use of opportunities for careers in both rural and urban situations. As a larger proportion of women have jobs, it becomes more important to devise new educational and training programs to reduce the productivity gap between male and female labor (12).

The systems of non-formal and informal education already in progress in the IKIP institutions in eastern Indonesia should be effective in improving education opportunities for women. The non-formal type should be directed to those girls who drop out of school at the elementary, junior and senior high levels. Literacy is essential for the rural development process. Vocational training also can be accomplish through non-formal education.

Informal education through extension and the KKN program of all universities and IKIP's can upgrade food production, processing and preparation, improve financial decision-making, make the life of rural women less onerous and improve the family's quality of living through better management patterns, health and sanitation practices, clothing and home improvements. Women should be provided with information so they can more readily understand their situation, role in society, and cultural factors.

For formal, non-formal, informal and extension education to reach its potential, education at the university level must be strengthened. Well-trained teachers must be provided at the elementary, secondary and high school levels. More extension workers are needed for agriculture and home instruction. Those who supervise KKN must be up-to-date in philosophy and subject matter expertise. Nutrition and food processing should be expanded in university curricula. The social and basic sciences which undergird agriculture, home economics and rural development also must be upgraded. Library holdings and equipment needs are priority items.

Statistics on female enrollments and faculty members in the BKS school are presented in Table 1. Women represent from 13 to 51% of the total enrollment and from 13 to 31% of the staffs. Only small percentage are in administrative positions.

Men and women university faculty in many ways have equal opportunities in terms of salary and rank. Opportunities for advanced study by women either within Indonesia or abroad are hampered by family responsibilities. The extended family does help somewhat in meeting child care and home responsibilities while the mother is away.

Women faculty members have expressed grave concerns about pressures inflicted by the multiple roles they must play - professional, family, organizational.

Recommendations for BKS

1. That special emphasis be placed on extending graduate education opportunities for women faculty in agriculture, nutrition, food processing, home economics.

2. That women also be encouraged to study in the fields of political sciences, economics, marketing and administration to be better prepared for community, regional and national leadership roles.

3. That a greater than proportionate number of women, i.e. 25-33% be granted advanced study opportunities within country and abroad.

4. That universities aggressively expand their cooperative activities with BAPPEDA, Agricultural Extension, and the Department of Education in an effort to more fully achieve the potential in non-formal and informal education for women.

5. That professional women be allowed to form professional organizations, i.e. International Federation of Home Economics, International Federation of Nutrition, International Family Planning Council.

6. That opportunities be created for women in university professions to actively participate in regional and international professional meetings and to exchange programs and experiences with professional counterparts in other developing countries, such as Korea, Thailand and the Philippines.

7. That research be initiated within country with the assistance of appropriate counterparts from other countries on such topics as:

(a) The cultural resources to which women have access that give them influence.

(b) The "felt needs" of rural women - do they want improvement in cottage industries, in trade, in factory work, in agricultural methods?

(c) Evaluation of the family planning program.

(d) Socio-economic status of women in the Eastern Islands.

(e) Data, by sex, on land ownership for different kinds of land.

(f) Specialized rural activities in the Eastern Islands.

(g) The number and kind of women - specific credit institutions and the actual availability of credit to women.

(h) The number of women - specific cooperatives, women's role in cooperatives in terms of leadership and membership.

(i) The effects of men's rural-urban migration on village women.

(j) Evaluation of networks of communication among women.

(k) Evaluation of current nutrition education programs including costs, effectiveness, and coverage as a basis for continually refining and upgrading the programs.

(l) Fortification of salt with iron and iodine.

(m) Regional information collection relating specifically to identified target groups, their nutritional status, and the social and economic correlates.

(n) Energy budgets of pregnant and lactating women under different living and working conditions.

(o) A systematic examination of rules and customs regarding pregnancy and lactation to establish which are beneficial to mother and child.

(p) The extent to which conditions which women live and work under have a bearing on the availability of food and nutritional levels of their families and communities.

In the development and execution of the above lines of research, women must be involved as visiting consultants and in-country appropriately trained counterparts. Men can work effectively as part of the team, but if only men define the problems, design the research, select the methodology and the evaluation process, the women's viewpoint could be lost. Evidence that this could happen exists in the fact that most agricultural planning has been done by males, and women's potential for local food production and hence in improving nutritional status has not been fully recognized.

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EASTERN ISLANDS AGRICULTURAL EDUCATION
Annexes

III
1

EASTERN ISLANDS AGRICULTURAL EDUCATION

Project No. 497 - 0280

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AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACTSHEET To Be Completed By Originating Office				1 TRANSACTION CODE <input checked="" type="checkbox"/> A - Add <input type="checkbox"/> C - Change <input type="checkbox"/> D - Delete			
3 COUNTRY/IDENTITY INDONESIA			4 DOCUMENT REVISION NUMBER <input type="checkbox"/>				
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8 PROPOSED NEXT DOCUMENT A <input type="checkbox"/> 2 - PMP B DATE <u>11 27 77</u> A <input checked="" type="checkbox"/> 3 - PP				9 ESTIMATED COSTS \$1000 or equivalent: <u>5,000</u> FUNDING SOURCE AID Agency: _____ OTHER: 1 _____ US: 2 _____ C Host Country _____ D Other Donor(s) _____ TOTAL: _____			
10 ESTIMATED BY OF AUTHORIZATION/OBLIGATION A INITIAL FY <u>7191</u> B FINAL FY <u>7191</u>							
11 PROJECTED BUDGET AID APPROPRIATED FUNDS (000)							
A AID PROVISION	B PRIMARY PURPOSE CODE	C PRIMARY TECH CODE		E FIMST FY		LIFE OF PRO	
		G Grant	H Loan	F Grant	U Loan	M Grant	N Loan
(1)	BT	090	590	1,000	3,000	1,000	
(2)							
(3)							
(4)							
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12 SECONDARY TECHNICAL CODES (maximum six codes of 1000, 2000, 3000, 4000)							
13 SPECIAL CONCERNS CODES (maximum six codes of four positions each)							
14 PROJECT GOAL (maximum 240 characters) An indigenous integrated capability for undertaking and maintaining national agricultural development (production, employment, distribution).							
15 OBJECT PURPOSE (maximum 400 characters) The development of agricultural and sea resources projects in the member institutions of the Eastern Indonesian Association of Institutions which will contribute to increasing productivity and incomes of the eastern region.							
16 PLANNING RESOURCE REQUIREMENTS (maximum)							
PRP TA 6 M/M \$50,000			P.P. 3 M/M \$25,000				
18 ORIGINATING OFFICE CLEARANCE Signature: _____ Title: Acting Director				19 Date Issued <u>10/16/77</u>			
20 Date of Review (DD, MM, YY)							

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACESHEET <i>To Be Completed By Originating Office</i>				1. TRANSACTION CODE <input type="checkbox"/> A - Add <input checked="" type="checkbox"/> C - Change <input type="checkbox"/> D - Delete		PID	
3. COUNTRY/ENTITY INDONESIA				4. DOCUMENT REVISION NUMBER 1			
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9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY: 79 b. FINAL FY: 79				10. ESTIMATED COSTS (continued)			
				FUNDING SOURCE		Basis of Project	
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				b. OTHER USE		1	
				c. Host Country		4,000	
				d. Other Donor(s)			
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(3)							
(4)							
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070							
13. SPECIAL CONCERNS CODES (maximum six codes of four positions each)						14. SECONDARY PURPOSE CODE	
XII TNG SR							
15. PROJECT GOAL (maximum 240 characters) An indigenous integrated capability for undertaking and maintaining national agricultural development (production, employment, and income distribution).							
16. PROJECT PURPOSE (maximum 480 characters) Upgrade Eastern Indonesian Universities so that they produce agricultural leadership, manpower, research and extension activities needed for region's rural development especially in terms of employment, income, food production/consumption of the rural poor.							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds) PRP TA 6 M/M \$50,000 P.P. 3 M/M \$25,000							
18. ORIGINATING OFFICE CLEARANCE						19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution	
Signature: Thomas C. Niblock							
Title: Director						Date Signed: MM DD YY	
						MM DD YY	

4

OCT 22 8 22 AM '77

ANNEX B *EHR*
only file

NNNNVV ESA917ERA737
OO R UKOQJ
E R LE HC #3959 2950123
NR UUUUU ZZ H
O 22055Z OCT 77
FM SECSTATE WASHDC
TO AMEMBASSY JAKARTA IMMEDIATE 2563
BT
UNCLAS STATE 253989

UNCLASSIFIED
CN : 12170/W
RCD: OCT.22,1977/0822

ICT : AID-9
INFO: CHARGE ECON ADMIN PAS CHRON

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AIDAC

E/Q 1152: N/A

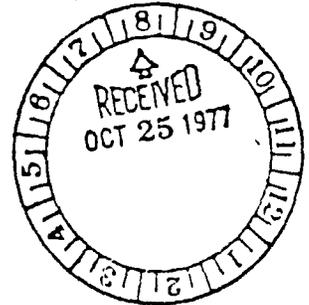
TAGS:

SUBJECT : EASTERN ISLANDS AGRICULTURAL EDUCATION PROJ-
ECT (497-0293)

REF: STATE 247329

APAC APPROVED USAID/GOI PROCEEDING WITH DEVELOPMENT
OF SUBJECT PROJECT WITH UNDERSTANDING THAT NATIONAL
PLAN FOR HIGHER AGRICULTURAL EDUCATION BE DEVELOPED
SIMULTANEOUSLY. MORE DETAILED SEPTEL FOLLOWS. C/
GREEN PARTICIPATED IN MEETING. VANCE

BT
#3989



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2 EMP

Subj. file



NNNNVV ESA269EIA 692
PP RUKOQJ
DE RUEHC #1345 3280711
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P 240321Z NOV 77
FM SECSTATE WASHDC
TO AMEMBASSY JAKARTA PRIORITY 124
BT
UNCLAS STATE 281345

UNCLASSIFIED
CR : 13483/W
RCD : NOV. 25, 1977/0957

ACT : AID-9
INFO : CHARGE AID/CN
ECON C/CON
SUPPLY SES/14/

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E.O. 11652: N/A

TAGS:

SUBJECT: EASTERN ISLANDS AGRICULTURAL EDUCATION Z ID,
497-0293

REFS: (A) STATE 253989, (B) JAKARTA I2206, (C) STATE
1838

, (D) STATE I60874

1. AS INDICATED IN REF C, APAC APPROVED SUBJECT PID WITH UNDERSTANDING THAT A MASTER PLAN FOR AGRICULTURAL EDUCATION WOULD BE DEVELOPED. THIS WOULD BE SEPARATE ACTIVITY FROM PP DEVELOPMENT BUT SHOULD BE SUFFICIENTLY ADVANCED AT TIME OF PP REVIEW TO CONFIRM THAT SUBJECT PROJECT IS CONSISTENT WITH PLAN AND THEREFORE OF HIGH PRIORITY TO GOI. MASTER PLAN COULD BE ALONG LINES DESCRIBED IN PP FOR AG EDUCATION FOR DEVELOPMENT, P. 27, SECTION G, WHICH PROPOSES DEVELOPMENT OF PLAN SPECIFYING (1) DEGREE LEVELS AND PROGRAM EMPHASIS TO BE ESTABLISHED AT EACH FACULTY, (2) VARIOUS PUBLIC SERVICE AND APPLIED RESEARCH PROGRAMS TO BE DEVELOPED, AND (3) TIME-FRAME FOR DEVELOPMENT.

2. FORMULATION OF PLAN WILL REQUIRE SUB-SECTOR ANALYSIS TO PROVIDE BASIS FOR GOI CHOICE AMONG ALTERNATIVE

COURSES OF ACTION WITHIN RESOURCE CONSTRAINTS THAT BEAR ON HIGHER AGRICULTURAL EDUCATION - BUDGET, STAFF, FACILITIES, ETC. IMPORTANT TO REGARD THIS ANALYSIS AS INFORMATION BASE FOR PLANNING RATHER THAN END IN ITSELF. ACCORDINGLY, MORE THAN MANPOWER STUDY IS NEEDED; ANALYSIS SHOULD EXAMINE INSTITUTIONAL CAPABILITIES AND POTENTIALITIES, DESIRED STANDARDS, RESOURCE AVAILABILITIES AND REQUIREMENTS, AND PROFESSIONAL LABOR MARKETS (INCLUDING UNIVERSITY FACULTIES) TO BE SERVED BY HIGHER AGRICULTURAL EDUCATION NETWORK. ON OTHER HAND, PLAN DOES NOT REQUIRE SOPHISTICATED STATISTICAL ANALYSIS OR ELABORATE DATA COLLECTION EFFORT. BREADTH AND DEPTH OF OVERVIEW TO BE DETERMINED BY INFORMATION NEEDS OF SUBSECTOR PLANNERS.

USAID PROJECT	
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REMARKS	
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6

3. OPTIONS FOR PROVIDING DGHE OUTSIDE ASSISTANCE IN ANALYSIS AND MASTER PLAN INCLUDE MUCIA UNDER LOAN BAI, BASE-LINE SURVEYS BY BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT (TITLE XII ENTITY), ADDITIONAL EXPERTISE FUNDED BY PDSF. VARIOUS COMBINATIONS DISCUSSED WITH CHUCK GREEN. PLEASE ADVISE MISSION/GOI PREFERENCE. VANCE

BT

#1345

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX C

Project Title & Number: EASTERN ISLAND AGRICULTURAL INNOVATION

 Life of Project:
 From FY 77 to FY 83
 Total US Funding: \$7,500,000
 Date Prepared: 7/77

NARRATIVE SUMMARY	OBJECTIVES, STRATEGIC INITIATIVES	MEASURABLE INDICATORS	ASSUMPTIONS																																												
<p>Program or Sector Goals: The broader objective to which this project contributes</p> <p>Program or Sector Goals: An indigenous Indonesian capability for undertaking and maintaining national agricultural development (production, distribution, storage, and marketing) which promotes general rural development and more equal distribution of income, especially in the eastern region.</p>	<p>Measures of Goal Achievement:</p> <ul style="list-style-type: none"> - Increase in: <ul style="list-style-type: none"> 1. Agricultural Production 2. Crop diversification 3. Facilities for storage, distribution, and marketing 4. Distribution of income 5. Per capita income in rural areas 6. Nutrition level 7. Education levels of staff at the government departments/planning boards/research and training centers 8. Job opportunities in rural sector 	<ul style="list-style-type: none"> - Annual reports of provincial government offices and planning boards, especially for agriculture and education. - Five Year Development Plans and Annual Plans of the provinces, the region, the nation. - Targets in Development Plans. - Personnel records of government departments. 	<p>Assumptions for achieving goal targets:</p> <ul style="list-style-type: none"> - GOI supports the development of eastern Indonesia both for the benefit of the nation and of the region. - GOI supports more equitable distribution of income as result of rural/regional development. - Eastern Indonesia is able to develop the resources (human and material) to undertake and maintain regional development. - Development goals of each province fit with the environmental capabilities of each province. 																																												
<p>Project Purpose:</p> <p>Upgrade the Regional Association of Eastern Indonesian Universities and its member institutions so that they are able to produce the leadership, trained manpower, research, and extension activities in the agricultural field necessary for the rural development of eastern Indonesia, especially in terms of the employment, income, and food production-consumption capabilities of the rural poor.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status:</p> <ol style="list-style-type: none"> 1. The quality and scope of Eastern Island basic three-year (science fields and Diploma courses of study in agriculture will have been strengthened to meet most regional needs. 2. Each university will have developed certain areas of agricultural specialization at the four-year Sarjana level. 3. Experimental farms will be a university institutional, research and outreach requirements. <ul style="list-style-type: none"> a. IIRP and university curricula, teaching methods, and materials will be suitable to regional development. b. Laboratories and libraries will meet at least minimal requirements for serving the various instructional programs. c. IIRP and university public service programs will be adapted to community needs and will be active in improving living conditions of rural poor. d. Response and repeat rates will have been reduced significantly. 4. Research centers of each university will be responding to the actual needs of their community and area of specialization in coordination with the Ministries of Agriculture and Education. 5. The Association will be holding regular meetings and implementing improvement programs agreed upon with the Directorate General of Higher Education in a timely manner. 	<ul style="list-style-type: none"> - Annual reports of the Regional Association. - Annual plans, reports, goals, budget of the member institutions. - Reports, plans, goals of the Ministry of Education, and the Ministry. - Long term plans of the member institutions and the Ministry. - Research results of the Regional Association on educational development in the region. - Reports of the Directorate of Agriculture, Basic Science, and Education. 	<p>Assumptions for achieving purpose:</p> <ul style="list-style-type: none"> - Cooperation will benefit the member institutions. - GOI/Ministry of Education support an active role for the Regional Association. - Member institutions will support an active secretariat for the Regional Association. - GOI will increase budgetary support to the eastern region for higher education according to plan. - University programs can be adjusted to match regional needs. 																																												
<p>Outputs:</p> <ul style="list-style-type: none"> - Basic agronomy courses, syllabi common to member universities accepted and in use. - Specialized programs established at appropriate universities depending on internal capabilities and provincial needs. - Codes of trained staff at each university. - Experimental farms improved and equipped. - Basic laboratories at each university equipped and functioning. - Libraries will have additional materials in agronomy and will be better used. - Instructional materials available in use. - Networks established to upgrade specific fields. - Communications instruments in use to increase relations among member universities. 	<p>Magnitude of Outputs:</p> <ul style="list-style-type: none"> - All agronomy courses will have established curricula and course syllabi. - Each university will have chosen one field for specialization. <ul style="list-style-type: none"> Trained staff: 25 professors upgraded 1 degree, 35 professors with short-term specializations 16 experimental farms Laboratories: 6 at each university. Libraries: Each university library to receive 7,000 agricultural books and 15 journals. Instructional Materials: Printed notes for all courses, 30 1/2 million credits in use, 10 million either on video-tape or printed program materials. Networks: 9 (agriculture, animal husbandry, forestry, fisheries, fish, etc., etc.) Financial management: monthly newsletter, Quarterly Reports Communication: monthly newsletter, Quarterly Reports (see Activities, Goals, Costs) 	<p>Reports from Contractor. Minutes of association meetings. Annual Review.</p>	<p>Assumptions for achieving outputs:</p> <ul style="list-style-type: none"> - Inputs will be on target. - English training can be provided so that there are sufficient suitable candidates. - Universities will release key staff members for training. 																																												
<p>Inputs:</p> <p>Technical Assistance (Man) In Indonesia Sector support Inflation (10%)</p> <p>Total</p> <p>Training (Man)</p> <p>Instructional Materials</p> <p>Travel</p> <p>Other costs</p> <p>Contingency (10%) Inflation (10%)</p>	<p>Implementation Target (Type and Quantity) (\$1000)</p> <table border="1"> <thead> <tr> <th></th> <th>FY</th> <th>LC</th> <th>GOI LC</th> </tr> </thead> <tbody> <tr> <td>Technical Assistance (Man)</td> <td>1650</td> <td></td> <td>366</td> </tr> <tr> <td>Training (Man)</td> <td>280</td> <td></td> <td></td> </tr> <tr> <td>Instructional Materials</td> <td>363</td> <td></td> <td>134</td> </tr> <tr> <td>Travel</td> <td>2300</td> <td></td> <td></td> </tr> <tr> <td>Other costs</td> <td>1300</td> <td>170</td> <td>553</td> </tr> <tr> <td>Contingency (10%)</td> <td>800</td> <td>100</td> <td>300</td> </tr> <tr> <td>Inflation (10%)</td> <td>240</td> <td></td> <td>250</td> </tr> <tr> <td>Contingency (10%)</td> <td></td> <td>100</td> <td>1400</td> </tr> <tr> <td>Inflation (10%)</td> <td>244</td> <td>128</td> <td>232</td> </tr> <tr> <td>Total</td> <td>702</td> <td>364</td> <td>753</td> </tr> </tbody> </table>		FY	LC	GOI LC	Technical Assistance (Man)	1650		366	Training (Man)	280			Instructional Materials	363		134	Travel	2300			Other costs	1300	170	553	Contingency (10%)	800	100	300	Inflation (10%)	240		250	Contingency (10%)		100	1400	Inflation (10%)	244	128	232	Total	702	364	753	<p>Reports from Contractor. Minutes of Association meetings.</p>	<p>Assumptions for providing inputs:</p> <ul style="list-style-type: none"> - USAIN/GOI follow schedule for completion of project activities/disposal of funds. - Contractor capable of and committed to developing sound Indonesia-based expertise in short time.
	FY	LC	GOI LC																																												
Technical Assistance (Man)	1650		366																																												
Training (Man)	280																																														
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Total	702	364	753																																												

EASTERN ISLANDS AGRICULTURAL EDUCATION - Indonesia - Jan. 31, 1979

60(1) - COUNTRY CHECKLIST

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

A. GENERAL CRITERIA FOR COUNTRY

- | | |
|--|--|
| 1. <u>FAA Sec. 116.</u> Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in consistent pattern of gross violations of internationally recognized human rights? | Yes. See Social Analysis in Project Paper. |
| 2. <u>FAA Sec. 481.</u> Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully? | No. |
| 3. <u>FAA Sec. 620(b).</u> If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement? | Yes, the required determination has been made. |
| 4. <u>FAA Sec. 620(c).</u> If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government? | We are not aware of any cases that make Indonesia ineligible under this Section. |

5. FAA Sec. 620(e). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?
- The majority of business and property owned by U.S. citizens which was nationalized during the Sukarno regime (principally in 1964 and early 1965) has been returned to U.S. owners or mutually acceptable settlement negotiated. A Presidential Decree dated December 14, 1966 indicated its willingness to return nationalized assets.
6. FAA Sec. 620(a), 620(f), App. Sec. 108, 114 and 606. Is recipient country a Communist country? Will assistance be provided to the Socialist Republic of Vietnam, Cambodia, Laos, Cuba, Uganda, Mozambique, or Angola?
- No to both questions.
7. FAA Sec. 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?
- No.
8. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?
- No.
9. FAA Sec. 620(l). If the country has failed to institute the investment program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason?
- Indonesia has initiated the investment guaranty program.
10. FAA Sec. 620(o), Fishermen's Protective Act, Sec. 5. If the country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters.
- Indonesia has not seized any U.S. fishing vessels.
- a. has any deduction required by Fishermen's Protective Act been made?
- b. has complete denial of assistance been considered by AID Administrator?

- 3
11. FAA Sec. 620(g); App. Sec. 603. (a) Is the government of the recipient country in default on interest or principal of any AID loan to the country? (b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds? No to both questions.
12. FAA Sec. 620(s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Considerations of these points is to be coordinated with the Bureau for Program and Policy Coordinator, Regional Coordinators and Military Assistance Staff (PPC/RC). 15% of FY 77/78 budget was for defense. Imports of military equipment in FY 76/77 were .03%-0.6% of total imports. GOI is not importing sophisticated weapons systems. (See JAKARTA 8629, 6/30/77).
13. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? No.
14. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? Indonesia is not delinquent on U.N. obligations.
15. FAA Sec. 620A, ^{App. Sec. 607} Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism? No.
16. FAA Sec. 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA? No.

17. FAA Sec. 669, 670. Has the country, after Aug. 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after Aug. 3, 1977 although not a "nuclear-weapon State" under the non-proliferation treaty? No to both questions
18. App. Sec. 608. Is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operable, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? No.

B. FUNDING CRITERIA FOR COUNTRY

1. Development Assistance Country Criteria

- a. FAA Sec. 102(b). Have criteria been established, and taken into account, to assess commitment and progress of country in effectively involving the poor in development, on such indexes as: (1) small-farm labor intensive agriculture, (2) reduced infant mortality, (3) population growth, (4) equality of income distribution, (5) unemployment, and (6) increased literacy? Yes.
- b. FAA Sec. 104(d)(1). If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development, and assistance to urban poor? N/A

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6C(2) - PROJECT CHECKLIST

Listed below are, first, statutory criteria applicable generally to projects with FAA funds, and then project criteria applicable to individual fund sources: Development Assistance (with a sub-category for criteria applicable only to loans); and Security Supporting Assistance funds.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? IDENTIFY. HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653(b); Sec. 634A.

(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;
(b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure ~~_____~~)

(a) Project was in FY 78 Congressional presentation,
(b) Since funding will be more than original estimation, Congressional Committees will be formally notified.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance.

Yes, applicable. but a capital

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No legislation required.

4. FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?

N/A

A. (cont'd)

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? N/A
6. FAA Sec. 209, Is project susceptible of execution as part of regional or multi-lateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. No.
7. FAA Sec. 601(a), Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. Project is to improve the technical efficiency of agriculture.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). as an Education activity the project will not particularly effect U.S. private trade and investments. (Long term training will be in U.S. educational institutions).
9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services. Well over 25% of the cost of the project will be local currency costs funded by the GOI and are included or to be included in development budget. See "Financial Analysis".

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A. (cont'd)

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency and, if so, what arrangements have been made for its release? No U.S. owned excess currency available.
11. ISA 14. Are any FAA funds for FY78 being used in this Project to construct, operate, maintain, or supply fuel for, any nuclear powerplant under an agreement for cooperation between the U.S. and any other country? No.
12. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes.

2. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b); Sec. 111; Sec. 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insure wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

Project will improve GOI's institutional capability to more effectively carry out education projects to help the rural poor.

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

- (1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;
- (2) (104) for population planning under Sec. 104(b) or health under Sec. 104(c); if so, extent to which activity extends low-cost, integrated delivery systems to provide health, nutrition and family planning services, especially to rural areas and poor;

Project will improve GOI's institutional capability to more effectively carry out agricultural education and to deliver its benefits to small farmers.

N/A

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

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

N/A.

(a) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;

(b) to help alleviate energy problem;

(c) research into, and evaluation of, economic development processes and techniques;

(d) reconstruction after natural or manmade disaster;

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

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

c. FAA Sec. 107. Is appropriate effort placed on use of appropriate technology?

Yes.

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

Recipient country has agreed to contribute well over 25% of the project costs.

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

N/A

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

See Social Analysis of Project Paper.

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

Yes.

2. Development Assistance Project Criteria (Loans only)

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

Indonesia has the capacity to repay the loan.

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

N/A

DC(3) - STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

- 1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed? Yes. The Project Agreement will contain this provision.
- 2. FAA Sec. 604(a). Will all commodity procurement financed be from the U.S. except as otherwise determined by the President or under delegation from him? Yes.
- 3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the U.S. on commodities financed? Yes.
- 4. FAA Sec. 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? N/A
- 5. FAA Sec. 608(a). Will U.S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items? Yes, whenever practicable.
- 6. FAA Sec. 901(b). (a) Compliance with requirement that at least 50 per cent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. The Project Agreement will contain this provision.

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7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

TA will be provided by private sector on contract basis. No other federal agencies will provide facilities or services.

8. International Air Transport, Fair Competitive Practices Act, 1974

If air transportation of persons or property is financed on grant basis, will provision be made that U.S.-flag carriers will be utilized to the extent such service is available?

Yes

B. Construction

1. FAA Sec. 601(d). If a capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interest?

N/A

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

N/A

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million?

N/A

C. Other Restrictions

1. FAA Sec. 122(e). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?

Yes.

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? N/A
3. FAA Sec. 620(h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U.S.? Yes.
4. FAA Sec. 636(i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U.S. or guaranty of such transaction? Yes.
5. Will arrangements preclude use of financing:
- a. FAA Sec. 604(g). To pay for performance of abortions or to motivate or coerce persons to practice abortions, to pay for performance of involuntary sterilization, or to coerce or provide financial incentive to any person to undergo sterilization? Yes.
- b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property? Yes.
- c. FAA Sec. 660. To finance police training or other law enforcement assistance, except for narcotics programs? Yes.
- d. FAA Sec. 662. for CIA activities? Yes.
- e. App. Sec. 104. to pay pensions, etc., for military personnel? Yes.
- f. App. Sec. 106. to pay U.N. assessments? Yes.

- g. App. Sec. 107. to carry out provisions of FAA Sections 209(d) and 251(h)? (transfer to multilateral organization for lending). **Yes.**
- h. App. Sec. 112. To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? **Yes**
- i. App. Sec. 601. to be used for publicity or propaganda purposes within U.S. not authorized by Congress? **Yes.**

EASTERN INDONESIA UNIVERSITY ASSOCIATION PROJECT (BKS)

WSU/USAID PRELIMINARY PROPOSAL - JUNE 1978

The Association of eight state universities/IKIP's in Eastern Indonesia was formed (1) to strengthen the role of the member institutions as centers of development of science and culture in the framework of national development, and (2) to develop the capacity of the member institutions to improve their productivity, efficiency, effectiveness in education. Association (BKS) attention and activities were to be focused both internally on university processes, resources, and programs and externally on the needs of eastern Indonesian development.

Following the formation of BKS, with the encouragement of the Director-General of Higher Education, USAID contracted with Washington State University to work with the Government of Indonesia to strengthen and improve the efficiency of BKS. Since the main goal of the project is to increase the university's role in aiding the rural poor, primary emphasis will be on programs in the agrosciences - agriculture, animal husbandry, forestry, fisheries. Attention will be given also to related subjects such as home economics and nutrition, appropriate technology, and the basic sciences common to all these fields of study. At the same time crucial university services such as planning and programming, methods of teaching and preparation of materials, research and extension activities will have to be strengthened. General improvement in educational planning and administration is necessary for improvement of the programs in agrosciences.

The project will assist the Association to meet its objectives through group projects, group influence on funding agencies, and group impact on the community and region in which the institutions are based. Several major kinds of activities will assist the Association and its members. Programs will be developed in detail with considerable discussion before and after implementation to assure that the objectives are being met. A cautious start-up of the project will be followed to assure sound project development. Activities must be planned which will:

1. Strengthen BKS through an active, fulltime secretariat, with additional resources.
2. Increase communication among BKS Members by involving staff (faculty) members from all levels of the university.
3. Develop a university approach to many aspects of management as contrasted to the faculty approach.
4. Increase integration and efficiency of instruction, research, and public service within the universities and in the region served.

5. Develop language materials and capabilities.

6. Develop more commonality and interchange among faculty members in agrosiences.

The importance of a cautious project start-up cannot be overemphasized. Detailed analysis, planning, and discussions including many Indonesians, the agencies of other governments supporting projects in Indonesia, and various U.S. agencies are all essential. The Association and its members, widely dispersed in the Eastern region, must be involved at each stage of planning and execution. The Secretariat of the Association needs to be funded at a much higher rate, and the project must get its people on board with language skills. Abrupt initiation of projects could cause antagonisms and delay the project. The selection of people, both Indonesian and American, must be done with care. All of these items require time.

It must be stressed that all proposed activities are still options.

The final form of the project depends upon the reactions and suggestions of the involved parties - especially the Ministry of Education and the Rectors and institutions of the BKS. All responses will be considered for inclusion in the preparation of the final statement.

The BKS project with its limited funds will continually assess the needs and results to support those activities which provide the greatest opportunity for meeting the objectives. Presently available programs in Indonesia will be utilized where appropriate. In all cases, a search will be made to identify and use experts and authorities already in Indonesia to assist in workshops, seminars, and discussions. The management consultant group of Management Education and Development (LPPM), local universities such as Bandung Technology University (ITB), Bogor Agricultural University (IPB), University of Gadjah Mada (UGM), etc., foreign government programs, government agencies are sources of in-country expertise.

Major activities envisioned for the BKS project fall into three main categories which will be outlined and detailed below.

I. Strengthening the Association (BKS)

A full time secretariat is needed to develop a strong and functional role for the Association. The WSO team will work with the President and Secretariat in carrying out agreed upon programs and providing additional strength to the Association. Developing the planning capabilities of the BKS and its members is of the first priority before any major programs can be undertaken. To this end the BKS project will focus on identifying viable means of carrying out planning activities in such a loosely connected association as the BKS. Flexibility in programming

will be essential to maximize the productivity of the project. The Association will assist in planning efforts, the identification of appropriate institutional networks, and the formation of those networks. The project must be administered in such a way that those networks will be supported which become activated and productive based on the initiative of the Indonesian university staff and administrative personnel. The Association will insist on appropriate planning to precede major activities. The planning of Association activities must fit in with the planning and budgeting process being initiated by the Ministry of Education. A network of university planners might well be the first and most important association activity, preceding similar networks for library, staff development, curriculum planning, etc. Support activities for the basic planning and coordinating function of the BKS need to be considered at the beginning of the project. Such support services include:

A. Information System and Data Bank

Since many of the Association planning activities will need a base of data and information to provide for realistic program development and evaluation, an early activity of the project will be to develop a standard format for data accumulation and reporting. The format will be developed with the participation of the planning people from each institution.

B. Communications

The Association will promote the development of improved communications by appropriate means. A newsletter, prepared on a regular basis, will be distributed to rectors and faculties. More sophisticated methods, such as telex, radio links, satellite channel, will be considered.

C. Specialist Networks

The meeting of various groups will be encouraged to promote an interchange of ideas and to encourage improvement. Networks of librarians; teachers of English; specialists in agriculture, forestry, fisheries, home economics; advisors to KKI (to serve the rural poor directly); and others, as appropriate to objectives of the project, will be sponsored. In each case, proceedings of meetings and workshops will be evaluated, published if appropriate, and widely distributed.

D. Evaluation

Continuous project evaluation will be conducted, utilizing the information and data base to be established, as related to the objectives of the project. Flexibility in programming will be maintained to permit taking advantage of new opportunities. Both quantitative and qualitative

assessments will be made of the various activities. Included in the evaluation will be an assessment of upgrading of faculty members, infusion and impact of materials and equipment, improvement of institutional services, improvement of productivity of faculties and universities, increase in availability and use of books and instructional materials, development of communications among the BKS members, and involvement of a larger number of faculty members in Association objectives and activities.

II. Strengthening the Agrosciences

The planning, coordinating, programming, and evaluating services developed by the Secretariat of the BKS will lead directly into the activities undertaken by the networks. Each network will be responsible for identifying its needs and initiating proposals for meetings, research and activities to the BKS. Two major kinds of networks are apparent already at this stage in planning: (1) networks that deal directly with the agrosciences; (2) networks that provide support services for the development of the agrosciences. Activities to meet the needs of these networks will follow the same demarcation: (1) activities to upgrade the quality of the educational process in the agrosciences; (2) activities to improve the quality of the support services and facilities.

Major attention will go to the first category, and the major input in this area is advanced training for the faculty involved in teaching the agrosciences. For the long term, participant training will be most effective in building the institution. The services available and environment present for those who return from participant training will determine the future effectiveness and efficiency of the institution of BKS.

A. Advanced training possibilities in the agrosciences

Before detailed planning for this is possible, several kinds of information are essential. A review of existing programs in Indonesia and SE Asia must be carried out, and the training programs that WSU is capable of undertaking must be determined. At the same time a review of local and regional needs in the development of eastern Indonesia will have to be undertaken to identify the discipline areas in which each university needs strengthening. Only on the basis of this information can responsible placement of individual faculty members for further training be implemented.

1. Group Training

Groups of approximately twenty staff members per year (total=80) with representation from all of the member institutions of the Association may be given intensive training in the United States.

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As an example, twenty people involved in soils in the universities and chemistry in the IKIP's might make up one group. Intensive English study, experience of teaching-research-public service activities, use of university services, etc. might be included for one-half of the program. The other half of the program would be in the subject matter, soils and chemistry. The intensive participation would provide an interactive program before and after the training designed to increase the absorptive capacity of Indonesian universities and to increase the international interests and understanding of WSU faculty members and students. The timing and status (degree, non-degree) of this program are still flexible. Final definition of the scope of this part of the program awaits the reaction of the rectors.

2. Individual graduate training

Selected Indonesian faculty members will be provided the opportunity to study toward advanced degrees in the United States. Participants will have completed the Sarjana (5 year) degree and will have received at least 500 on the TOEFL test. The disciplines selected for advanced study will be in subjects related to the project objectives. Participants should make a commitment to sharing experiences with associates in the BKS institutions upon return. Participant programs for graduate study at Indonesian or other Asian institutions will also be supported.

3. Non-degree training

Many opportunities exist in this area for BKS participation. Possibilities include both group and individual involvement in special subject matter workshops or in special skill and support services areas.

a. Short-term individual participant training - Individuals will be supported for a short-term period, either in-country or externally, to obtain training for specialized needs. Computer programming, record-keeping, laboratory development, or management could be involved.

b. Short-term intensive institutes - Specialized training institutes, cutting across subject matter fields, will be given. Included are the following: teaching methods, research methods, instructional media, administrative and management methods, library development and management, extension technique, project proposal development, student field service programs (which have a direct impact on the rural poor.) For such programs certain repair parts, instruments, equipment, supplies, books, and other instructional aids will be considered for purchase on a limited basis. Emphasis will be placed on projects which serve more than one institution.

c. Teaching methods - Seminars and workshops will be conducted on improvement of teaching methods in which staff members from:

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at least two or three institutions will participate. Use of existing texts and development of materials and use of various teaching techniques will be covered.

Efforts will be made to increase the availability of the written, word, particularly for students and faculty, in Bahasa Indonesia. The use of existing translation services will be encouraged as will be the development of texts and laboratory manuals in Indonesian and their distribution.

d. Research Projects - Money may be made available to BKS to cover partial salary of a few faculty members, either to provide released time or additional pay, for doing research, writing, or specialized programs. It is anticipated that this activity might start during the second year after the procedures and methods of awarding support are established by the secretariat of the Association.

III. Strengthening Support Services

From the above outline of training possibilities the overlap between subject area development in the agrosociences and support services is apparent. Certain services, however, that need considerable support can be isolated for special attention.

A. Administration

Crucial to the planning function of the BKS is the administrative abilities of each of the member institutions. Each level of the administrative organization will be considered - rectors and assistant rectors, deans and assistant deans, registrars and bursars - in the system of networks to be identified by the BKS. Each year administrators from BKS institutions may be supported for several months to serve internships with administrators at U.S. universities. A program will be developed to familiarize the administrator with the operation and management of a U.S. university.

B. Support Services

Aside from administration and management, support services fall into three areas - language-teaching, libraries, and laboratories.

1. Language - To successfully carry out the project, U.S. participants must learn the Indonesian language and Indonesians must learn the English language. The ability of Indonesians to understand and speak English will determine the effectiveness of the participant training programs and use of books and other instructional materials in English. Existing programs to teach English will be utilized whenever possible. However, as the success of the project is so dependent on the ability of Indonesians to speak and read English, special or

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supplementary programs to emphasize or enlarge present programs will be supported. Because many of the books and papers of value to faculty members are in English, help must be provided to the universities for improving language skills. Each of the universities has a 20 or 30 station language laboratory. Assistance will be considered for the following:

- (a) periodic meetings, of teachers of English, devoted to teaching methods,
- (b) activities and publicity to encourage faculty members and students to learn English,
- (c) use of graduate students to teach English,
- (d) use of the specialized short-term program to teach English,
- (e) maintenance and repair of equipment,
- (a) additional tapes and related instructional materials.

2. Library Improvement - The development and use of the library are fundamental to the development of quality university programs. Basic books and journals will be identified and support sought. The library material must be properly handled and used. Programs to improve the skills of the librarians and increase the student and faculty use are vital. Bibliographic methods will be taught and encouraged as a part of proposal to the Association. Librarians will be expected to file faculty papers, student project reports, and institutional reports.

3. Equipment - Material inputs must be made cautiously. A lack of electricity and/or running water in many laboratories would make it difficult to use certain instruments or equipment, even if personnel were available to operate and maintain them. Sending library books and publications could be wasteful without an organized, well managed central library. The universities may not be yet ready to effectively absorb large external inputs. As the faculties become able to effectively use material inputs, equipment and instruments may be purchased for such subjects as soil science. Spare parts, complete instructions, and instructional devices may also be supplied.

4. Technician training - Laboratories, now in operation or to be developed, will need technically trained people to install and maintain equipment. Examples of the type of laboratories envisioned are language, soil analysis, water quality, and meteorology. Faculty members using the equipment will have been expected to be familiar with the equipment through workshops, in-country national programs, or the short-term or long-term intensive participant training programs.

Suggestions and responses to the activities described in this summary will be greatly welcomed for inclusion in the final project paper.

Acknowledgement is given to the rectors and their associates at each of the eight institutions of BKS who made special preparations for the team and graciously gave of their time and resources and provided the detailed data upon which the report is based.

The above report is a summary of the preliminary project paper for the BKS project. The Washington State University team members were: Dr. Vic Bhatia, Director of International Programs; Dr. Don A. Dillman, Head of Rural Sociology Department; Dr. Margaret Hard, Director of Research in College of Home Economics; Dr. C.J. Nyman, Dean of Graduate Schools and Research; Dr. Martin Waananen, Assistant Director of Instruction, College of Agriculture; Dr. R. Burt Yarberry, School of Education; and Dr. Carl W. Hall, Dean of Engineering. AID personnel involved were Dr. Charles E. Green and Frances Hays.

FOREIGN INVOLVEMENT AND ASSISTANCE TO
EASTERN ISLANDS

MICIA (USAID)

- 1. Training Program - MSc./PhD.
- 2. Package courses in agricultural sciences, primarily for TMUJ

ASIA FDN

- 1. UNHAS : training: short terms in EFASIA; books.
- 2. UNMUI : English teaching expert for 3 years to set up language center; training programs.
- 3. UNGen : anthropology magazine; Manihari groups - provision of foreign teachers (2 for 2 years); training; books.
- 4. 3000 program for all institutions.

FORD FDN

- 1. THAS : training for agriculture and economics faculty (VSC/PhD) in USA, Philippines, and Indonesia; management programs; equipment; scholarships money.
- 2. THAT : training for agriculture and economics faculty; equipment.

ANGRAALTA

1. A.A. program focuses on THAS for development of the agricultural faculties - provides experts for the short courses - directs research - long-term teachers - active program in Germany - provision of one foreign teacher at THAS for one year - focus on theories and English teaching.

CGI (USAID) Program

1. Training program - short courses and degree programs open for candidates from all institutions.

JAFAN

1. Training program (VSC/PhD), mostly has taken candidates from THAS and TMUJ.

GTWAAI

1. German language training at Grable Institute, German for Staff from THM Menadi, Institut, TWO future teaching, Master.

FRANCE

- : 1. Training programs in France in various fields - candidates from UnHas, Unsrat and others.
- 2. Language - training for teachers of French from IKIP Manado, Unsrat UnHas.
- 3. University of Paris wants to open affiliation with UnPatti for Anthropology research.

GREAT BRITAIN/BRITISH COUNCIL:

- 1. Training programs - non-degree and degree, open to candidates from all institutions.
- 2. Provision of English-teaching volunteer at UnHas.
- 3. Library work at UnHas - provision of teachers for library diploma program.
- 4. Language - teaching planning at UnHas.
- 5. University management program.

ASIAN DEVELOPMENT BANK (ADB):

Campus development at UnHas, team at UnHas now to do planning for loan for new campus development.

CANADA (CIDA)

: Regional planning studies on Sulawesi and eastern Indonesia (including Maluku) - some university staff involvement in these studies.

SIEMER INSTITUTE OF LINGUISTICS:

Involvement with UnCen for linguistic research-provision of equipment.

Involvement by Foreign Aid Agencies by province:

S. Sulawesi

- 1. Canadian regional planning team
- 2. Japanese agricultural planning team

3. Iuwu development project - USAID - transmigration
4. Dutch irrigation project for Iuwu
5. Canadian road and bridge development project
6. IRRI - agricultural research station at Maros
7. FAO

N. Sulawesi

1. USAID planning with Bappeda - project development in Tolang.
2. Canadian regional planning team.
3. Irrigation project in Dumoga.

Maluku

1. Potential USAID project for oceanographic development, IOM and UnPatti.
2. Canadian regional planning.

E. Kalimantan

1. West German planning team for transmigration and agriculture development.

S. Kalimantan

1. USAID planning project with Bappeda.

Major industrial involvement - resource exploitation:

S. Sulawesi

1. Inch - Michel
2. Tonasa Cement
3. Gowa Paper Mill
4. Sugar

N. Sulawesi

1. Coconut oil processing plants - mostly joint-ventures with Japan.
2. Fish - freezing plant with Japan

Maluku

Fishing: mostly companies from Japan and Philippines.
Timber: Japan and Philippines

S. Kalimantan

Fishing - large Japanese Company
Timber
Rubber

E. Kalimantan

Timber: mostly Japanese, Philippines, and US Companies
Oil

Irian

Timber, fishing, coconut, chocolate, rubber, oil and mineral
still undeveloped.

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

INDONESIA

Eastern Islands Agricultural Education
A.I.D. Project No. 497-0280

Pursuant to Part I, Chapter 1, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a Loan and a Grant to Indonesia (the "Cooperating Country") of not to exceed Five Million Five Hundred Thousand United States Dollars (\$5,500,000) (the "Authorized Amount") to help in financing certain foreign exchange and local currency costs of goods and services required for the project as described in the following paragraph.

The project (hereinafter referred to as the "Project") consists of assistance, including professional services, training, and related materials and equipment to upgrade selected science, technology, research and technical service centers, policies and programs in the Eastern Islands of the Cooperating Country in the agricultural education sector.

Of the Authorized Amount, Five Million Dollars ("Loan") will be loaned to the Cooperating Country, and Five Hundred Thousand Dollars ("Grant") will be granted to the Cooperating Country to assist in financing certain foreign exchange and local currency costs of goods and services required for the Project. The entire amount of the A.I.D. financing herein authorized for the Project will be obligated when the Project Agreement is executed.

I approve the total level of A.I.D. appropriated funding planned for this Project of not to exceed \$7,500,000, of which \$5,000,000 will be Loan funded and \$2,500,000 Grant funded, including the funding authorized above, during the period FY 1979 through FY 1981. I approve further increments during that period up to the total of \$7,500,000, subject to the availability of funds in accordance with A.I.D. allotment procedures.

I hereby authorize the initiation of negotiation and execution of the Project Agreement or Agreements by the officer to whom such authority has been delegated in accordance with A.I.D. regulations

and Delegations of Authority subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate:

1. Terms of Repayment and Interest Rate

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

2. Other Terms and Conditions

Except as A.I.D. may otherwise agree in writing:

(1) Goods and services, except for ocean shipping, financed by A.I.D. under the Project shall have their source and origin in the United States or the Cooperating Country when grant financed, or in the Cooperating Country or countries included in A.I.D. Geographic Code 941 when loan financed. Ocean shipping financed by A.I.D. under the Project shall be procured in accordance with current A.I.D. policy.

(2) Appropriate provision shall be made to the effect that, as condition precedent to the use of loan funds, the Cooperating Country shall submit

- Evidence that the Directorate General of Higher Education has formally recognized the Association of Eastern Islands Universities as the agency for implementing this project.

Clearances:	Date	Initial
Herbert E. Morris, OC/Asia	7	_____
Dennis Brennan, Asia/PD	_____	_____
Robert Halligan, Asia/DP	_____	_____
Harry J. Petrequin, Asia/ISPA	_____	_____

Signature _____
Assistant Administrator
Bureau for Asia

Date

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(2) Appropriate provision shall be made to the effect that, as conditions precedent to the use of loan funds:

- Evidence that the Directorate General of Higher Education has formally recognized the Association of Eastern Islands Universities as the agency for implementing this project.
- Evidence that the Borrower has committed itself to contribute on a timely basis at least 25% of the required funds, either in cash or in-kind.

3. The Loan shall be subject to such other terms and conditions as A. I. D. may deem advisable.

Date

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Technical Assistance & Training Schedule

	<u>AID</u>	<u>GOI</u>
	\$000	
First Year		
1-1/2 years long-term experts	105	10
1/2 year graduate assistants	5	3
3 month short-term experts	<u>21</u>	<u>4.5</u>
	131	25.5
Second Year		
5 years long-term experts	350	60
4 years graduate assistants	40	24
6 months short-term experts	<u>42</u>	<u>9</u>
	432	93
Third Year		
7 years long-term experts	490	84
7 years graduate assistants	70	42
4 months short-term experts	<u>40</u>	<u>8</u>
	600	134
Fourth Year		
4 years long-term experts	280	48
3 year graduate assistants	50	30
4 months short-term experts	<u>20</u>	<u>4</u>
	350	82
Fifth Year		
1-1/2 years long-term experts	105	10
1-1/2 years graduate assistants	15	3
3 months short-term experts	<u>21</u>	<u>4.5</u>
	141	17.5

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<u>Totals</u>	<u>AID</u>	<u>GOI</u>
19 years long-term experts	1,330	220
10 years graduate assistants	180	100
20 months short-term experts	<u>140</u>	<u>30</u>
	1,650	350

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TRAINING SCHEDULE

	<u>U.S.</u> \$000	<u>G0I</u>
First Year		
U.S. 5 years academic	60	15
10 months non-academic	22	2.5
3rd Country 4 years academic	24	12
Indonesia 7-1/2 years academic	<u>30</u>	<u>22.5</u>
	136	52.0
Second Year		
U.S. 15 years academic	100	45
30 months non-academic	60	7.5
3rd Country 3 years academic	40	24
Indonesia 22-1/2 years academic	<u>90</u>	<u>67.5</u>
	300	144.0
Third Year		
U.S. 21-1/2 years academic	25	64.5
20 months non-academic	40	0
3rd Country 5 years academic	30	15
Indonesia 25 years academic	<u>100</u>	<u>75</u>
	200	160.0
Fourth Year		
U.S. 24 years academic	200	70
20 months non-academic	40	0
3rd Country 3 years academic	12	6
Indonesia 15 years academic	<u>60</u>	<u>45</u>
	312	121

		<u>AID</u>	<u>GOI</u>
Fifth Year			
U.S.	14-1/2 years academic	174	43.5
	20 months non-academic	44	5
3rd Country	1 year academic	6	3
Indonesia	10 years academic	<u>40</u>	<u>30</u>
		264	81.5

<u>Total</u>			
U.S.	50 years academic	980	240
	100 months non-academic	220	25
3rd Country	20 years academic	120	60
Indonesia	50 years academic	<u>320</u>	<u>240</u>
	Grand Total	1,620	565

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Subject: Determination that A.I.D. will Contract Directly for Technical Assistance Services. Eastern Islands Agricultural Education Project.

Summary

In accordance with the provisions of Section III of the attachment to AIDTO Circular A-564 dated 9/29/76, and on the basis of the exceptional circumstances described in the following paragraphs, it is recommended that consultant services for the Eastern Islands Agricultural Education Project be procured under an A.I.D. Direct Contract.

The circumstances are as follows:

1. This will be a follow-on contract to an AID contract which was made to secure a land-grant university to collaborate with the GOI and the Mission in planning the project. It is both logical and desirable that the same contractor be used for the follow-on contract.
2. Both the host country entity and the contractor have expressed a preference to continue their present arrangement.

Recommendation

On the basis of the foregoing, it is recommended that you determine hereby that A.I.D. will contract directly for the procurement of technical assistance for subject project, and that the exceptional circumstances cited together with your determination, be incorporated in the Project Paper.

Approved: [Signature]

Disapproved: _____

Clearances: R. Cohen, PRO [Signature]
 AB Evans, OMF [Signature]
 WG Bollinger, DD [Signature]

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INITIAL ENVIRONMENTAL EXAMINATION
EASTERN ISLANDS AGRICULTURAL EDUCATION PROJECT

Project Location: Indonesia

Project Title : Eastern Islands Agricultural Education

Funding : \$7.5 million

Life of Project : 1979-1983

IEE prepared by : USAID/Indonesia

Environmental Action Recommended: Negative Determination

Mission Director's Concurrence:



Thomas C. Willock

11-3-78

Date

Assistant Administrator's
Decision : Approves: _____

Disapproved: _____

Date: _____