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FINAL REPORT

INTERIM EVALUATION OF

THE ASEAN HUMAN RESOURCES DEVELOPMENT PROJECT (398-0287)

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ACKNOWLEDGMENTS

This evaluation was conducted in the field exclusively. The evaluation team spent three weeks consulting with personnel in the A.I.D./ASEAN Liaison Office, Bangkok, Thailand and with the Directors, Staffs and Trainees of the three ASEAN Regional Centers in Thailand and the one in Malaysia. The team was received with openness and candor by all concerned with these activities. They were most generous with the time and many courtesies extended to each team member.

The assistance provided by Mr. Robert T. Dakan, Ms. Suthira Suwanarpa, Project Management Specialist, and Ms. Pornthip Donbundarn, Administrative Assistant of the A.I.D./ASEAN Liaison Office, was outstanding. Since it assembled for the first time in Bangkok, the team depended more on the briefings and direction given by this office than in most such evaluations. Their readiness to assist as required in making necessary contacts, travel arrangements and facilitating secretarial services was greatly appreciated.

At the behest of the A.I.D./ASEAN Liaison Office, all of the ASEAN Center Directors prepared material which allowed team members to immediately address the requirements of the Scope of Work of this Evaluation. The extensive data they provided, supplemented with their comments and observations, greatly facilitated producing an evaluation of the scope and depth required. The insights which could only be obtained from their perspectives and experience were invaluable.

Given the professional competencies of each of the four team members evaluating ADPC, A.I.T., PLANTI, and TROPMED, they were requested to bring their insights and perspectives to bear so that these institutions might consider them in their future planning, even though AID support terminates with the completion of this project. The team sincerely hopes that its findings, conclusions and recommendations are accepted in the constructive spirit in which they are offered. It was indeed gratifying to note that each of these institutions has developed programs which have come to be recognized for their professional and practical worth within the ASEAN region. Their activities and direction have attained a momentum which assures their future viability.

The Directors and Staffs of the Asian Institute of Technology (A.I.T.), the ASEAN Agricultural Development Planning Center (ADPC), the ASEAN Plant Quarantine Center and Training Institute (PLANTI), and the ASEAN/SEAMEO Tropical Medicine and Public Health Project (TROPMED) have all played important roles in developing a meaningful ASEAN-A.I.D. working relationship. Their experience and professional judgements will now be critical ingredients in assisting ASEAN in new areas of mutual endeavor with the United States and other dialogue partners.

ACRONYMS

ASEAN	Association of South Asian Nations
ALO	ASEAN Liaison Office
ADPC	ASEAN Agricultural Development Planning Center
A.I.T.	Asian Institute of Technology
ASC	ASEAN Standing Committee
AUI	ASEAN - U.S. Initiative
BOP	Board of Planners (within ASEAN Committees)
CABI	Commonwealth Agricultural Bureau
CIDA	Canadian International Development Agency
COFAF	ASEAN Committee on Food, Agriculture and Forestry
COSD	ASEAN Committee on Social Development
COST	ASEAN Committee on Science and Technology
DAAD	Deutscher Academischer Austausch Dienst (FRG)
DANIDA	Danish International Development Agency
DG	Director General
EOP	End of Project
FAO	Food and Agriculture Organization of The United Nations
GOI	Government of Indonesia
GOM	Government of Malaysia
GOP	Government of the Philippines
GOS	Government of Singapore
GTZ	Deutche-Gesellschaft Fur Technische Zusammenarberit (FRG)
HRD	Human Resources Development
IAEA	United Nations International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development (World Bank)
KUL	Catholic University of Louvain (Belgium)
LAN	Local Area Network of Computers
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
PACD	Project Assistance Completion Date
PIL	Project Implementation Letter
PP	Project Paper
PITO	AID/ASEAN Private Investment and Trade Opportunities Project
PLANTI	ASEAN Plant Quarantine Center and Training Institute
PQ	Plant Quarantine
RTG	Royal Thai Government
SEAMEO	Southeast Asian Ministers of Education Organization
SEAMES	Southeast Asian Ministers of Education Secretariat
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
USAID/ASEAN	USAID Liaison Office with ASEAN
WHO	World Health Organization of the United Nations

EXECUTIVE SUMMARY

1. Mission Initiating: The ASEAN/USAID Liaison Office developed the Scope of Work for this evaluation in accordance with criteria set forth in Annex I of Phase II of the Regional ASEAN Human Resources Development Project (398-0287) signed on March 3, 1987, and subsequent PILs. The evaluation was carried out by a five-person team contracted by OP/OS/ANE from TvT Associates through PDC-0085-I-9087-00. Three weeks of field work were completed in July 1991 with the Final Report entitled, "Interim Evaluation: ASEAN HUMAN RESOURCES DEVELOPMENT PROJECT (398-0287), submitted within 30 days thereafter.

2. Purpose of the Activity Evaluated: The broadly stated objective of the ASEAN HRD Project (Phase II) was to ". . . accelerate the transfer, adaptation and development of technology in selected areas that contribute to regional economic productivity." Four ASEAN regional institutions were addressed in individual subprojects under this activity to collectively train some 1,988 participants at the Master's Degree and Diploma level and in specially designed short-term training courses addressing specific regional requirements. The performance of each of these four regional institutions had to be assessed on its own merits under this activity. Each institution was assessed from the standpoint of demonstrated competency in program management, technical capability, financial integrity, and relevance to regional needs. By their nature, these ASEAN activities are designed, presented and implemented by the institutions themselves after having undergone the scrutiny and endorsement of the ASEAN organization in a rather complex approval and monitoring process. A.I.D. and other donors can monitor this process as well as the implementation of the activities financed at each of the ASEAN Centers and through the ASEAN Committees exercising oversight and program review functions. Such relationships with a regional organization are very different from a USAID field mission's traditional role in project implementation and must depend largely upon the *modus operandi* of ASEAN itself.

3. Purpose of the Evaluation and Methodology Used: This interim evaluation was undertaken to assess the progress to date of each of the four ASEAN Regional Centers in carrying out the A.I.D.-financed portion of its activities against benchmarks set forth in the PP. The annual Action Plans of these Centers, as approved by their Boards of Directors and endorsed by the A.I.D./ASEAN Liaison Office, were assessed against progress accomplished to date. Each Center undertook thorough preparatory work since the team had to produce a draft report within two weeks after its arrival. Such a time constraint was

a fundamental factor in determining the methodology employed in the evaluation. The professional competencies of each of the team's members was brought to bear in a subjective fashion in a review of files, design documents, reports of ASEAN Boards of Directors and ASEAN Committees, visits to each of the ASEAN Centers, interviews with Center Directors, their staffs and personnel trained and being trained, and analysis of the ASEAN Centers' responses to the initial draft of this report.

4. Findings and Conclusions: The basic assumptions underlying the rationale for Phase II of the ASEAN HRD Project proved to be essentially valid considering project accomplishments realized to date. Findings and their resulting conclusions are set forth in regard to each ASEAN Regional Center and the ASEAN organization itself as a recipient and implementing agent for regional assistance:

The Asian Institute of Technology (A.I.T.). During the current Phase II of the project, A.I.T. has continued to excel and expand as a regional center of excellence in postgraduate engineering education patterned to address Southeast Asian's professional engineering needs. Its capacity to undertake applied research has also grown impressively. The short-term training courses financed under this project, which were tailored to focus on emerging regional priorities as they were identified, and to seek greater private sector participation in their exploration and resolution, have been highly regarded by those participating.

- AID financing of A.I.T.'s scholarship and training programs is now 4.49 percent of external support received. As A.I.T.'s reputation grows, so does its capacity to solicit contributions from public and private sources throughout Asia, Europe and North America. A.I.D. financing, which was the principal external source of support at the inauguration of A.I.T. in 1967, is now being supplanted by other donors and is about to be totally eclipsed by the dominant role of Japan as a donor and provider of personnel at this institution.

The SEAMEO Tropical Medicine and Public Health Project (TROPMED), under the joint aegis of ASEAN and SEAMEO continues to conduct short and long-term courses addressing the changing priorities in Public Health in the ASEAN region occasioned by rampant urbanization and rapid industrialization. It is moving into environmental health concerns with a view to involving more private sector institutions (health insurance companies; pharmaceutical firms and industries themselves) on the preventive, rather than the curative side of occupational and urban health issues. TROPMED's limited staff, which has hardly expanded since its inception 25 years ago, will require contracted outside assistance for this task. It should upgrade its facilities to retain more of an institutional memory before embarking upon expansion. With its SEAMEO sponsorship and its location at and support from Mahidol University, TROPMED should remain a viable regional entity.

- The ASEAN Agricultural Development Planning Center (ADPC). Its location at and affiliation with Kasetsart University also assures the viability of ADPC. Its training component at the M.S. level is viewed as highly successful even though it is still marked by almost total dependence upon the faculty of Kasetsart University. It remains dependent because the internationalization of its own staff has been constrained by a lack of increased extensive ASEAN or other external support. It is meeting its training goals in short-term courses as well; a decade is too short a timeframe to attempt any statistical sampling or assessment of institutional networking stemming from training conducted by ADPC to date.

- The ASEAN Plant Quarantine Center and Training Institute (PLANTI) has embarked upon an expansive program of research and training under the ASEAN HRD Phase II Project. This has enhanced its role and reputation in the ASEAN region as the focal point for plant quarantine. Within the region, it is building a coordinated network of national plant quarantine services and extending its communications and relations with those in other geographic regions. Its facilities and the capabilities of its dedicated ASEAN regional staff are impressive. The breadth and scope of its activities are attaining a momentum of their own. This, and its proximity to and support derived from the College of Agriculture of the University of Malaysia and the Malaysian Agricultural Research Center (MARDI), assure the continuing viability of PLANTI along with the contributions planned from ASEAN member countries.

ASEAN. As a coordinative project counterpart for AID or other donors, ASEAN remains a complex regional entity. Its prevailing *modus operandi* of consensus by committee does not make for a framework which can provide such institutions bearing the ASEAN label with guidance or coordination. At best, it exercises a retroactive oversight of center activities, leaving these activities almost entirely to the capabilities and discretion of Center Directors and National ASEAN Committees of the nations hosting them. As a result, regional centers are still viewed by the member states more in the national domain of the host country rather than in an ASEAN perspective.

Despite the organizational shortcomings of ASEAN in providing direction, guidance and coordination of such regional centers, a regional (as opposed to bilateral) mode of providing assistance and promoting relationships within and from without the ASEAN region, with both public and private sector entities, has some inherent advantages. Regional entities provide economies of scale, with excellent training being made available at a fraction of the cost of less relevant courses outside the region, and with little or no "brain drain" in the process. These ASEAN institutions address priorities defined by the ASEAN nations themselves. Moreover, they are progressively assuming a much more broadly conceived service role in the private sectors of member nations than any national entity would.

5. Recommendations for this Activity: The ASEAN HRD Project has been maintained on track and is in the final stages of having run its course. It leaves in its wake a new cadre of highly trained personnel in place in the ASEAN region who are already playing meaningful roles in regional development. The regional centers this project assisted

have all expanded their facilities and mandates in the course of this undertaking, some beyond what was foreseen at its outset in 1987. All have made provisions to accommodate private sector participation in the planning of and benefits derived from their activities. In return, greater private sector participation in the financing of both recurrent costs and expanding programs of these centers is a valid assumption. AID/ASEAN relationships should move from a role in strengthening ASEAN's institutional framework to addressing private investment and trade issues and environmental concerns of the ASEAN region during the next decade. The four institutions assisted under Phase II of this HRD Project now have the capabilities to undertake diverse facets of these latter undertakings.

6. Lessons Learned: ASEAN represents a conglomerate of Southeast Asian nations in various stages of development. There is no question regarding their collective capabilities in formulating viable project undertakings or in utilizing the array of regional centers fostered under Phase II of this HRD Project. The "Dialogue Partner" mode, under which ASEAN assigns a single donor exclusively to a particular center, mitigates against access by Center Directors to the mix of capabilities and resources within the external donor community.

A *de facto* placing of these ASEAN projects under the scrutiny and jurisdiction of each ASEAN National Committee places the burden and responsibility for their financial viability more on the host nation than ASEAN itself. This has contributed to the present pattern of reluctance to share recurrent and operational costs collectively.

ASEAN has yet to work out the mechanics of a collective annual assessment and establishment of a common fund to support either its regional projects or its other activities. Until a formula for such assessment is endorsed and put into place, any regional center must of necessity be hosted in close proximity to a national institution with capabilities in the same discipline to assure continuing financial viability. Unfortunately, this in turn only reinforces the prevailing perception of these centers more as national, rather than as ASEAN regional, entities.

I. INTRODUCTION

A. The Project

1. Background

The Association of Southeast Asian Nations (ASEAN) is considered to be one of the most successful regional groupings in the developing world and the most important in Asia. ASEAN's accomplishments to date and status within the international community are all the more noteworthy in a regional setting characterized by such cultural, linguistic, religious, historical, and political diversity. Though political motivations underlay ASEAN's genesis, the ASEAN identity is now viewed as a hallmark for cooperative economic and social endeavors in one of the fastest growing regions of the world.

Since its inception in 1967, the five original members of ASEAN--Indonesia, Malaysia, the Philippines, Singapore, and Thailand--have admitted only one new entrant: Brunei Darussalam in 1984. However, consideration of ASEAN's future role and potential should not exclude the possibility of its serving as a vehicle for such neighboring nations as Laos, Cambodia, Viet Nam, and Myanmar to make their entry from individual command economies into the global economic network. Personnel from these four countries, as well as others (Bhutan, Outer Mongolia, the People's Republic of China) already are being exposed for the first time to Western technology and methodology in some ASEAN institutions. Papua New Guinea now attends ASEAN Ministerial Meetings in an Observer Status.

A.I.D.'s affiliation with ASEAN began with undertakings to support and strengthen its regional training institutions. Some of this support predated the first ASEAN - U.S. Dialogue in 1977. The Asian Institute of Technology (A.I.T.) and the Tropical Medicine and Public Health Project (TROPMED) came under the ASEAN aegis subsequently. Others, such as the Agricultural Development Planning Center (ADPC) and the Plant Quarantine Center and Training Institute (PLANTI), came into being and obtained their initial A.I.D. support through such dialogues. The roles and programs of each center have been reassessed periodically to assure their continuing relevance to the changing needs of the ASEAN region.

On April 12, 1987, the A.I.D. Bureau for Near East and Asia authorized Phase II of the ASEAN Human Resources Development Project (398-0287) with planned obligations of $14 million over a five-year period for expenditure over a seven-year period. As stated in the Project Authorization: "The Project will promote cooperation among ASEAN countries and provide assistance required to improve plant protection and quarantine services, strengthen agricultural policy and planning capabilities, improve primary health and nutrition services and expand the number of post-graduate technical experts in the region."

2. Project Purposes and Objectives

As cited in its Project Paper (PP), the ASEAN HRD Project (Phase II) was to ". . . accelerate the transfer, adaptation and development of technology in selected areas that contribute to regional economic productivity."

The AID/ANE Bureau viewed this project as a mechanism to further strengthen the ASEAN network for regional cooperation and collaboration in advancing the socioeconomic development of its member nations. Collectively, its four distinct institutional components were to train some 1,988 participants: 360 at the master's degree level at regional institutions; 6 at the master's degree level in the U. S.; 266 at the diploma level at regional institutions; and 1,356 in short-term training at ASEAN sites. In addition, some 744 individuals were to benefit from seminars, workshops and conferences focusing on agriculture, health and other development technologies. These trained personnel will be using newly acquired technical skills in their respective countries with many in turn serving as instructors of their compatriots. Their multiplier effect is further enhanced by their continuing affiliation with the training institution. These institutions will serve as a focal point for a continuous and expanding interchange of information and source of reference.

Though always difficult to transpose training into quantifiable results, these four subprojects were designed to meet the following purposes:

- Provide PLANTI the support needed to improve the quality of basic plant quarantine services in the region.
- Strengthen the capacity of ADPC to assist ASEAN member countries to improve agricultural planning and formulation of agricultural policies.
- Assist TROPMED in filling the remaining manpower gaps in a regional network addressing agreed common health priorities.
- Expand the capacities of all four institutions to facilitate adaptation of new technologies from within and outside of the ASEAN region.
- Expand the training and research available to the private sector in these ASEAN institutions.
- Strengthen the wherewithal for regional policy coordination and reform, particularly in environmental and international trade issues.
- Improve the match between the technical skills needed and available within the ASEAN region.
- Increase applied research, international linkages and curriculum development.

The PP includes the criteria for economic and social soundness analysis; no environmental assessment was required. An Evaluation Plan for this project is set forth in its Annex I; the specific issues outlined in the Evaluation Plan, plus others which have subsequently come into focus, are contained in the Scope of Work of this Evaluation Team (report Annex B).

3. Management Systems of the ASEAN Centers

As an Asian regional organization, ASEAN operates on a culturally derived consensus basis as compared to decisions arrived at by a majority, as in most western groupings. It has regularly scheduled meetings ranging from: (a) The Annual Conferences of its Chiefs of State; (b) The Annual Meetings of the Foreign Ministers; (c) The Post-Ministerial Conferences with Dialogue Partners (Australia, Canada, the European Community, Japan, New Zealand, the United States, and South Korea); (d) The ASEAN Senior Officials Meetings, which can be called anytime; (e) The Biannual Meetings of the ASEAN Economic Ministers; and, (f) The ASEAN Standing Committee (ASC) which meets every two months. There are ten ASEAN sectoral committees, five of which deal with economic affairs. These sectoral committees are responsible for formulating and submitting regional activity proposals to the ASC. Once approved, the ASC then submits those requiring external technical or financial support to ASEAN dialogue partners. Each member nation has an ASEAN National Secretariat which implements ASEAN-sponsored activities within its national boundaries. There is an ASEAN Secretariat under the direction of an ASEAN Secretary General located in Jakarta, but by design both play a limited role in relations with external donors and project monitoring (report Annex A, Charts 1 and 2).

Two of the four subprojects within the ASEAN Human Resources Development Project, the ADPC and PLANTI, are sponsored by the ASEAN Committee on Food, Agriculture and Forestry (COFAF). The TROPMED Project is under the ASEAN Committee on Social Development (COSD), while A.I.T. is supported by the ASEAN Committee on Science and Technology (COST) (report Annex A, Chart No. 4). Every ASEAN Center has its own Board of Directors made up of nationals from each country participating, all of whom have impressive credentials in the activities they ordain for these centers to implement. An Annual Report for the preceding year's activities and a Plan of Action for the subsequent year is submitted by the individual directors of ADPC, PLANTI and TROPMED to their respective Boards of Directors for approval. Once approved, these annual programs are submitted to the relevant ASEAN committees for review, where the Board of Directors' actions are almost always endorsed. Following approval by these boards and committees, programs, management and administrative operations of these ASEAN Centers are left to be carried out by each center director and his staff. This *modus operandi* is in keeping with the basic ASEAN organizational precept that these activities are designed, implemented and scrutinized by the ASEAN nations benefiting from them.

The Asian Institute of Technology (A.I.T.) is an exception among these institutions. While A.I.D. funding under this HRD Project is limited to training of participants from the six ASEAN member countries, the 800+ members of A.I.T.'s student body come from every nation, from Iran to the Republic of Korea, and the South Pacific as well. Its Board of Trustees consists of over 40 corporation presidents, government ministers, university presidents, distinguished professors and ambassadors from Asia, Europe and North America. Over 75 percent of its financial support comes from an extensive array of government and private sector donors and foundations. A.I.T. realizes it must maintain its reputation as a

well-managed center of educational excellence to assure such a wide range of support. Its management style is more akin to a prestigious U. S. graduate school of engineering.

B. The Assessment

1. Purpose

This interim evaluation was conducted to assess progress to date for each of the four subprojects funded under Phase II of the ASEAN Human Resources Development Project and identify actions to be taken by USAID, ASEAN and the implementing institutions.

2. Scope of Work

The Scope of Work as developed by USAID is included in Annex B of this evaluation report.

3. Composition of the Team

TVT Associates was contracted by OP/OS/ANE through PDC-0085-I-9087-00 to provide a five-person evaluation team to include a project development specialist, an engineering educator, an agriculture research and education specialist, a plant quarantine specialist, and a health educator. The team comprising these skills was composed of the following members:

Dr. Tung Au, Engineering Educator
Dr. John M. Conje, Agriculture Research and Education Specialist
Ms. Mona Y. Grieser, Health Educator
Mr. Harry J. Petrequin, Jr., Team Leader
Mr. John Thaw, Plant Quarantine Specialist

4. Methodology and Schedule of this Evaluation

Time constraints were a fundamental factor in determining the methodology employed in this evaluation. There was no documentation other than the Scope of Work available prior to departure and the team assembled for the first time in Bangkok, Thailand, on July 7th, having departed on July 5th. The team was allowed 18 field work days with permission for six-day work weeks. The first written draft report was due at the end of the first two weeks; USAID, A.I.T., ADPC, PLANTI and TROPMED were allowed four days for comments; the last three days allowed the team to incorporate feedback from these reviews, as appropriate. Within 30 days of the completion of the field work, 10 copies of the final report were to be submitted to USAID.

Mr. John Thaw, Director of Training, USDA Animal and Plant Health Inspection Service, was available for only the first two weeks of field work. Given his demonstrated

professional competencies and his familiarity with the work of PLANTI, it was thought Mr. Thaw could do a thorough evaluation nonetheless.

Each of the four subprojects under this umbrella HRD activity is a distinct undertaking. Each was addressed separately as a project existing by its own right and evaluated on the merits of the contributions made in its own particular discipline according to the schedule of activities outlined in the PP. Each team member's experience was brought to bear in a subjective fashion on the data gathered through the following methods:

- Review of files, design documents, reports of ASEAN Boards of Directors and ASEAN Committees concerned with the Centers and financial and programmatic reports provided by the AID/ASEAN Liaison Office, Bangkok.

- Review of documents prepared by each of the ASEAN Centers concerned to facilitate this evaluation.

- Visits to the three ASEAN Project Centers in Thailand (A.I.T., ADPC and TROPMED), and PLANTI in Malaysia, where interviews were conducted with Center directors and their staffs as well as with personnel being trained, and inspections made of Center facilities and laboratories.

- Review of responses to the initial draft report from these ASEAN Centers.

Documents reviewed and personnel interviewed are included as Annexes in each of the four sectors of this report dealing with A.I.T., TROPMED, PLANTI and ADPC, respectively. The schedule for this evaluation was carried out as follows:

July 5	Team departure from U. S.
July 7	Team arrival in Bangkok
July 8	Briefing by AID/ASEAN Liaison Office personnel
July 8-9	Individual team members review documents available in the AID/ASEAN Liaison Office, Bangkok
July 15-19	Draft report writing
July 20	Draft report submitted to ASEAN Centers
July 24	ASEAN comments on Draft Report received
July 27	Final Draft Evaluation Report submitted
July 28	Team departs

The Scope of Work was completed. The issues were identified in the findings and conclusions of the text. There is a "Lessons Learned" in each section, pertaining to each of

the regional centers evaluated, as well as "General Lessons Learned," dealing with the modalities of working with regional organizations in Southeast Asia.

II. THE ASIAN INSTITUTE OF TECHNOLOGY (A.I.T.)

A. FINDINGS-A.I.T.

1. Program

a) Purpose

The purpose of the A.I.T. Phase II Project is to expand ASEAN's post-graduate pool of engineers, managers, planners and scientists trained in priority development areas. At the same time, A.I.T.'s capacity to respond to ASEAN country needs and requests for assistance will be further developed.

HRD Phase II was originally conceived as a 4-year grant of $3.4 million to provide scholarships at A.I.T. for participants from the six ASEAN countries for the period from September 1, 1987, to August 31, 1991. The projection of expenditures was based on 36 master's degrees, or their equivalent in certificates or short-term training courses, per year for each project year. The master's degree and certificate would be offered through A.I.T.'s Academic Divisions. Short-term training would be given at the appropriate A.I.T. Centers. The precise mix would be on the order of 70 master's degrees and 344 short-term training participants. In addition, special courses for short-term training with regional participation would be organized and conducted at the Continuing Education Center of A.I.T. for the following specific activities: (1) a seminar on Computerization of Tax Administration Operations for senior level officials from each ASEAN member country; (2) a Marine Pollution Training activity on the strategies to combat oil spills; and, (3) courses for ASEAN participants on management, control, transportation and disposition of hazardous materials.

At subsequent meetings of ASEAN Coordinators at A.I.T., which were attended by the AID/ASEAN Representative or Deputy Representative, the A.I.T. Phase II Project was further fine-tuned to address both USAID concerns and the ASEAN countries' development needs. In response to the new direction of AID programs towards the support of private sector efforts and operations in the ASEAN region, the ASEAN Coordinators at their meeting in May 1990 agreed that the A.I.T. Project would, within the remaining period of the grant, align its short-term training and master's degree activities towards programs with such emphasis. In view of varying levels in fund utilization by different ASEAN countries, issues inhibiting flexibility in funding allocations were addressed in order to select qualified participants in a timely manner and to recruit participants from the private sector actively. At another meeting in April 1991, the ASEAN Coordinators further agreed to increase participation of the private sector in training courses, thus accelerating the drawdown of funds, and to provide increased cost-sharing of airfare for participants by member countries. In view of these recent measures, the expiration date of the A.I.T. Phase II project was extended by mutual agreement to May 31, 1993, with no increase in total funding.

b) Measures of Progress

Benchmarks for measuring progress of the project are established to reflect the following objectives: (1) to facilitate information dissemination and sharing; (2) to accelerate the transfer, adaptation and development in selected areas that contribute to regional economic development; (3) to increase the cohesion of ASEAN's technical networks; and, (4) to strengthen A.I.T. as a regional institution. Periodic measures of progress can be made against the established benchmarks.

A proper mix of scholarships for master's degree, certificate and short-course training participants is the vehicle for facilitating information dissemination and sharing. Hence, the participant selection is an important benchmark for measuring progress. Emphasis is placed on factors such as the quality of candidates, number of candidates, number of women and private sector participation.

The benchmarks for measuring progress in accelerating the transfer, adaptation and development in selected areas include the research topics selected by master's degree candidates, the contents of short-term training courses offered by A.I.T.'s Academic Divisions and/or Centers, and the topics of special courses for short-term training in selected areas organized and conducted by A.I.T.'s Centers. Emphasis is placed on factors such as relevancy and cost effectiveness of the products.

The A.I.T. Tracer Study of alumni, supported by the US-ASEAN Scholarships Project (Phase II), can be used as a benchmark for measuring the increase of cohesion of ASEAN's technical network. Since the A.I.T. Tracer Study includes both employment information and training feedback, it provides materials for evaluating the effectiveness of training programs as well as measures of career advancements of the participants in their respective countries.

While A.I.T. is a viable and prestigious institution of higher learning in the region, the US-ASEAN Scholarships Project (Phase II) does enhance its stature as a regional institution. The achievement of initially planned project activities and the continuing validity of project administrative arrangements are the benchmarks of progress in strengthening the role of A.I.T.

c) Progress from 1987 to 1991

Project implementation began immediately after signing the grant agreement in September 1987. However, only a few qualified candidates who submitted their applications and received approvals in anticipation of the transition from Phase I to Phase II of the A.I.T. Scholarships Project were awarded scholarships. At a meeting of ASEAN Coordinators held at A.I.T. in August 1988, it was agreed that the number of participants in short-term training courses should be expanded, while the numbers for the master's degree and certificate programs should be reduced accordingly. Since the qualifications for admission to short-term training courses are less demanding, this decision has the net effect of speeding up the

selection process and providing the flexibility for each member country to make timely drawdown of the allocated funds.

Working with ASEAN member governments to establish standardized procedures for administering the grant, A.I.T. was able to obtain quality candidates for various components of the Scholarships Project and at the same time maintain its high standard of admission for the master's degree and the certificate. By April 30, 1991, 21 recipients had completed the master's degree, 57 the certificate, and 374 the short-term training courses, for a total of 452 recipients. For the May 1991 terms, there are 4 continuing students for the master's degree and 13 for the certificate, making a total of 17 recipients. Among new students, 1 is in the master's degree, 19 are in certificate, and 43 are in short-term training, leading to a total of 63 new recipients. A summary of scholarship recipients as of April 30, 1991, is given in Table 1, and another summary of new students for the May 1991 term by country and program is shown in Table 2 of Annex C. A breakdown of scholarships by country, year and program 1987-1990, is also given in Table 3 of Annex C.

Conscientious efforts have been made to increase the number of women participants in the US-ASEAN Scholarships project. For the May 1991 term, there were 23 male students and 3 female students in the master's degree program, but there were 46 male versus 23 females participants in the certificate program. The distribution of the scholarship holders by division and by sex for the May 1991 term is given in Table 4 of Annex C, while the breakdown of male-female students enrolled at A.I.T. in the same period is shown in Table 5 of Annex C. Similarly, efforts of increasing private sector participation resulted in 13 percent of participants from the private sector in 1990. A summary of participants' sectorial representation and a breakdown of such representation by country are given in Tables 6 and 7, respectively, of Annex C.

The breadth of research conducted by scholarship recipients is reflected by the thesis topics for the master's degree as indicated in Table 8 of Annex C. All topics selected are practical problems relevant to the development of the region and important to the participants upon return to their own countries. The short-term training courses are comprehensive and pertinent. A list of such courses as well as the number of participants by country and by program is shown in Table 9 of Annex C. Furthermore, special courses for selected areas of interest to member countries have been organized and conducted for the Scholarships Project. Specifically, the selected areas include micro-computer applications; toxic and hazardous waste management; marine oil pollution prevention and abatement, and other technical and management problems. A list of special courses is given in Table 10 of Annex C.

The enthusiastic responses to the short-term training courses are reflected by the generally favorable evaluations of such courses from the participants. A summary of course evaluation profile is shown in Table 11, with the course codes and titles given in Table 12 of Annex C.

From all indications, the short-term training courses are cost effective. A comparison has been made by A.I.T. of the unit cost of its courses with that of similar courses offered by other centers and institutions. A comparison of the cost for one-week training for such courses is shown in Table 13, and a summary of the same is given in Table 14 of Annex C.

Two tracer studies of scholarship recipients have been conducted by A.I.T. since the start of the project in 1987. A total of 382 participants to both degree programs and short-term training courses has been included in both studies. The results of the second survey covering 194 participants of courses offered during the period between October 1989 and December 1990 are typical of both studies. Table 15 in Annex C shows a summary of responses by program while Table 16 gives a summary of responses by country.

The scholarship recipients of the period were employed, at the time of the survey, in various technical/professional (36.1 percent) and middle management (33.7 percent) levels. In all countries except Brunei, respondents from the technical/professional level comprised the largest group. Only 9.6 percent of the respondents were employed in the senior management level. The government, including state enterprises, was the largest sector (75.9 percent) represented by the respondents. This was true in all countries except Indonesia where 80 percent of the respondents were in educational institutions.

After completing the programs at A.I.T., the changes in scholarship recipients' jobs primarily involved absorbing added responsibilities at the same positions, accounting for 41 percent of the respondents, while 12 percent have been promoted and 2.4 percent transferred to other organizations. Short-term training accounted for 96.4 percent of the respondents since there was a strong preference among potential master's degree candidates to study in western countries. Most respondents (90.3 percent) found the A.I.T. training courses to be generally useful, and a majority (55.4 percent) rated them as very useful.

A.I.T. received 4.49 percent of its total contributions from the government of the United States in FY 1989-90, as compared to 12.47 percent from Canada, 10.61 percent from Japan, 7.69 percent from Germany, 4.78 percent from France, and 4.74 percent from Australia. While the U.S. contribution is well utilized and deeply appreciated, as the figures indicate A.I.T. is capable of attracting financial support from many governmental and private sources. Table 17 in Annex C shows a Summary of Contributions received from all sources in FY 1989-90, and Table 18 shows Total Donations by category in FY 1989-90. Table 19 gives a Summary of all Donations received from FY 1959-60 to FY 1989-90, indicating a cumulative 11.53 percent from the United States over these years.

The faculty of A.I.T. is drawn from a pool of experts in the international community as indicated by the sources of faculty members by nationalities in Table 20. The alumni of A.I.T. are primarily located in Asia, with 48.4 percent in Southeast Asia, 33.5 percent in South and West Asia, 17.7 percent in East Asia, and only 0.5 percent in America, Europe and Africa. The distribution of A.I.T. alumni by country is shown in Table 21 in Annex C.

Thus, A.I.T. is able to utilize resources from all over the world to advance the social and economic development in the region.

Based on the benchmarks established for measuring progress, the US-ASEAN Scholarships Project (Phase II) at A.I.T. is achieving the objectives originally envisioned, despite a slow start. The project is gaining momentum and is destined to be a great success in improving ASEAN's human resources in priority development areas and in strengthening A.I.T.'s capacity to respond to ASEAN country needs.

d) Problems

Since the procedures for administering the project are reached by consensus at the meetings of US-ASEAN coordinators representing member countries, the decision process on policy matters is slow and time-consuming. Hence, there is a time lag between the authorization of the project and its implementation.

While A.I.T.'s training courses are extremely well run, they are generally designed to upgrade professional or technical skills. Top management executives are not interested in too much technical detail and do not find time to be away from their jobs for three months or even two weeks. Consequently, too few executives in top management from member countries who are most influential in policy decisions have benefited from the scholarships project. It is hoped that when the scholarship recipients eventually move up to top management, they can generate a greater impact on the social and economic development in the region.

The public/private sector representation of scholarship recipients is reflective of the implementing mechanism of the project. Cooperating agencies from the Philippines and Thailand involved in the selection process are their respective national organizations with broad perspectives specifically mandated to coordinate scholarship programs, and thus they have greater access to both public and private sectors. On the other hand, the cooperating agencies from other ASEAN member countries are government ministries which often have only ministry-specific or at best broad governmental scopes. This is an area which requires attention in order to increase private sector participation for the remaining grant period.

e) Effectiveness of Project Management

As stated in the previous section, the protocol of the meeting of US-ASEAN Scholarship Program coordinators sometimes prevents rapid response to new initiatives, thereby reducing the effectiveness of project management. However, on the whole, the project is reasonably well managed. The A.I.T. administration is responsive to the needs of member countries and within its own bounds operates very efficiently. When problems arise, A.I.T. is quick to seek solutions through the US-ASEAN Scholarship Program coordinators.

A.I.T.'s role as ASEAN's implementing agent for the project consists of a host of administrative functions in addition to providing the facilities and instruction for training. On a continuing basis, A.I.T. monitors country allocations; conducts student selection and makes scholarship awards; arranges and provides for students' travel, accommodations and allowances; produces reports on academic progress; supervises student research activities; and, conducts tracer studies. A.I.T. is responsible for the bookkeeping and accountability of A.I.T. funds provided and makes all financial, administrative, and academic reports required by ASEAN and member countries as well as by USAID. In all these respects, A.I.T.'s performance as the implementing agent is exemplary.

f) Institutional Development

Although the HRD Phase II Project represents only a small percentage of the total contributions received by A.I.T., its uplifting effect is significant because it stands as that important link in the chain of US and ASEAN mutual interests which A.I.T. has served since 1959.

The US-ASEAN Scholarships Project has stimulated increased contacts between A.I.T. faculty and staff and ASEAN government agencies, universities and research institutions. This close contact has facilitated A.I.T.'s access to information on the needs, problems and potential requirements of A.I.T.'s service in the region. Since the faculty and staff of A.I.T. have a distinct international character, representing 29 nationalities as indicated in Table 20 of Annex C, this type of contact also improves international understanding and good will.

g) Extension of Services to Other Asian Countries

A.I.T. has extended its services to other Asian countries outside of ASEAN membership, as indicated by the distribution of its alumni in Table 21 of Annex C. Among those countries are Laos, Vietnam and Cambodia, which have recently expressed interest in sending students to its master's degree and certificate programs as well as to its short-term training courses. Because the potential candidates for the degree programs from these countries are generally not up to A.I.T.'s academic standards, A.I.T. has recently initiated a remedial program of two-term duration specifically designed to upgrade the standards of candidates from these countries before they enter regular degree programs.

The initiative of A.I.T. for admitting students from Laos, Vietnam, Cambodia and other countries which lack opportunities for advanced technical training, points to the potential of its contributions to the development of these countries when they are ready to join cooperative activities in this region.

2. Financial Analysis

a) Financial Plan and Resources Allocation

The financial plan for the project provides $2,960,000 for scholarships, including an amount of up to $360,000 for master's degree research, plus $440,000 for organizing and conducting special courses, totaling $3.4 million supported by A.I.D. The ASEAN member countries are expected to contribute collectively $720,000 for participant salaries and $430,000 for in-kind items, totaling $1.15 million. The scholarship funds, including those earmarked for special courses, are to be divided equally among six member countries. In addition, the Royal Thai Government offers A.I.T. a waiver of taxes.

b) Expenditures to Date

The expenditures on scholarships as of December 31, 1990, reached an amount of $1,323,287 plus projected commitments of $42,000, with a balance of $1,594,713. The expenditures for special courses as of December 31, 1990, reached a total amount of $231,863, with a balance of $208,137. The breakdown of expenditures in both categories by country is shown in Tables 22 and 23 of Annex C. Among member countries, Singapore and Brunei had relatively low drawdowns on scholarships, while Thailand and Indonesia were infrequent users of special courses. Since December 1990 efforts have been made to increase the number of scholarships and special course offerings that are attractive to potential participants to member countries, thus equalizing the drawdowns by all ASEAN countries.

The counterpart funds provided by ASEAN countries in 1987-1990 resulted in $238,910 for salary contributions, $2,126 for in-country travel expenses, and $756,392 for A.I.T. operating costs. In addition, $2,380,253 is credited to the Royal Thai Government waiver of A.I.T. taxes. The total funding from these sources is summarized in Table 24 of Annex C. The salary contributions were based on estimates of approximate monthly salaries of participants at various levels of responsibilities, and computed according to the number of participants, as shown in Table 25 of Annex C. In-country travel expenses were provided for trainees from Indonesia and the Philippines, as shown in Table 26. A new policy of travel cost sharing was instituted whereby, beginning from November 1990 to September 1991, 100 percent of airfare for long-term academic programs and 25 percent of airfare for short-term training programs are provided by counterpart funding. Furthermore, after October 1991 until project completion, the counterpart funding of airfare for short-term training programs will be increased to 50 percent. Thus, the travel expenses from counterpart funding are expected to increase in the future. The contributions to A.I.T. operating costs by year are listed in Table 27 of Annex C and the RTG waiver of A.I.T. taxes by year is shown in Table 28. While individual items of counterpart funding differ from the original financial plan, the total of all items exceeds the total expected in the plan.

c) Potential Private Interest and Support

Up to this date, private interest and support for the scholarships project appears to be relatively modest. In most ASEAN member countries, there are few viable mechanisms in the government to communicate to the private sector the potential values of training programs at A.I.T. or research programs pertinent to the region conducted at A.I.T.. Since all candidates participating in the project are selected by cooperating agencies in member countries, the selection process is bound to favor participants in the public sector. Furthermore, many large enterprises which are expected to understand the importance of human resources in regional development are state-owned, while the small enterprises are too fragmented to be able to provide substantial support. The immediate solution to this problem is to encourage the increase of participants from large private business enterprises.

A.I.T. should be encouraged in its current planning to set up a Center for Entrepreneurship to serve as an incubator for new high-tech businesses and for the management of technology. Thus, individuals may learn the entrepreneurial skills and receive the necessary support for setting up small businesses and nurturing them to fruition under the tutorage of experienced specialists at the center. This concept is currently gaining acceptance at some universities in the United States as a mode of operation in increasing private sector employment. Whether it can be transplanted to the ASEAN region without waiting for the results of extensive experimentation in the United States is an open question.

d) Assessment of Sustainability

Because of the popularity of the US-ASEAN Scholarships Project among past and current participants, there will be pressure on ASEAN governments to continue the scholarships by seeking funds from other sources after the termination of USAID support. There is no question that some other sources can be found to replace the existing project, but it is equally clear that the amount available will probably be much smaller in scale.

As an on-going viable regional institute, A.I.T. will continue to serve as a moving force in shaping the development of the Asia region. The degree to which A.I.T. can obtain support from various sources, particularly from the private sector, will be the crucial element in the nature and scope of its future endeavors.

B. CONCLUSIONS - A.I.T.

1. The project is achieving the objectives originally envisioned despite a slow start stemming from the lengthy process of consensus building among US-ASEAN Scholarship Program coordinators.

2. The quality of participants in various programs of the project is good. Conscientious efforts to increase the number of women participants and private sector participation are viewed as making inroads in both domains and are continuing.

3. The research projects conducted by master's degree participants are practical problems relevant to the development of the region. The short-term training courses are comprehensive and pertinent. Special courses in selected areas of priority development in the region have been well organized and conducted by appropriate A.I.T. Centers.

4. Practically all scholarship recipients returned to their respective countries and were employed in the same positions with added responsibilities or were promoted to higher positions. Over 90 percent of former scholarship recipients found the A.I.T. training courses to be generally useful and 55 percent of them rated them as very useful.

5. A.I.T.'s role as ASEAN's implementing agent for the project consists of a host of administrative functions in addition to providing the facilities and instruction for training. A.I.T.'s performance in all respects is exemplary.

6. A.I.T. has extended its services to other Asian countries outside of ASEAN members, including Laos, Vietnam and Cambodia. A.I.T. can make significant contributions to enlarge its mission when these countries are ready to join the cooperative activities in the region.

7. The A.I.T. subproject has fulfilled portions of the stated objective of HRD Phase II assistance to increase the human and institutional resource capacities of the ASEAN region in priority development areas.

C. RECOMMENDATIONS - A.I.T.

1. The program should continue to expand the number of scholarships for short-term training courses while reducing the number of master's degree recipients.

2. In order to increase private sector participation, it is important that the government appointed US-ASEAN Program coordinators from member countries should have knowledge of and access to the private sector in their respective countries.

3. It should be recognized that many large enterprises in ASEAN countries are state-owned. It is therefore important to train a new generation of public officials who understand a market economy and thus become fully aware of the comparative advantages of privatization of state enterprises. This transition can be facilitated by steering more scholarship participants to take short-term training courses related to management of technology, especially those offered by the Division of Industrial Engineering and Management, or special courses designed for private entrepreneurs.

4. A.I.T. should be encouraged to pursue its plans to establish a Center for Entrepreneurship as an incubator for high-technology businesses and as a source of support for management of technology. This concept is currently gaining acceptance at some universities in the United States as a mode of operation to increase private sector employment. Although this concept is by no means proven, its experimentation will at least

guide the future development of the ASEAN region in the direction of private sector participation.

D. LESSONS LEARNED - A.I.T.

1. The program coordinators from member countries in the region are policymakers for implementing the project. The educational background and experience of these coordinators influence significantly the selection of participants in the program. Hence, the qualifications and professional backgrounds of these coordinators should reflect the stated purpose of the program.

2. The implementing agent must be effective in project management. The agent must be responsive to the needs of member countries but at the same time maintain high standards and integrity in administering the program.

3. In order to promote social and economic development in a region, it is important to develop or strengthen a regional institution which can serve as an effective implementing agent. Mutual trust and cooperation with such a regional institution require constant and long-term nurturing.

4. In the current climate of international competition for markets, assistance to developing countries is no longer a one-way street. With increasing participation in regional development, a donor country may benefit significantly in trade and investment for its private sector and thus improve its own economic strength. Identification with the strengthening of regional centers of excellence also creates goodwill and other important intangible benefits.

III. TROPICAL MEDICINE AND PUBLIC HEALTH PROJECT (TROPMED)

A. FINDINGS - TROPMED

1. Program

a) Purpose of TROPMED/ASEAN Project

The SEAMEO Regional Tropical Medicine and Public Health Project (TROPMED) is an unusual example of multi-country collaboration in health research and training in Southeast Asia. It is intended to address the human resource needs of the health sector in the region. SEAMEO TROPMED is now in its Fifth Five-Year Plan (1990-1995). The South East Asian Ministers of Education Organization (SEAMEO) is an intergovernmental group whose present membership consists of Brunei, Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand, Cambodia, and Laos. Associate members include Australia, Canada, France, Germany, and New Zealand. For the purposes of USAID, beneficiaries of project funding are the four ASEAN-member states of Malaysia, Indonesia, Philippines and Thailand.

The project was established through the initiative and continuing significant financial and technical contribution of USAID since its inception in 1967. Its overall objective is to help improve the living standard of the people of the region by pooling their manpower resources to upgrade the research and training capability in tropical medicine and public health in institutions of the member countries.

The TROPMED Secretariat is located in Bangkok at a building of the Faculty of Tropical Medicine at Mahidol University. The project works through four pre-existing national centers: (1) The Faculty of Tropical Medicine, Mahidol University in Bangkok, Thailand; (2) The College of Public Health, University of the Philippines in Manila, Philippines; (3) The Faculty of Medicine, University of Indonesia in Jakarta, Indonesia; and, (4) The Institute for Medical Research in Kuala Lumpur, Malaysia.

Each center is fully equipped with laboratories, classrooms, and a library, and, in Thailand, hospital beds in the Hospital for Tropical Diseases. Each institution has specialized in a particular aspect of tropical medicine, as well as providing courses in epidemiology, behavioral research, pediatrics, parasitology, entomology, microbiology, occupational health, etc. (see Chart No. 1).

The project offers post-graduate training in tropical medicine and public health and supports research in endemic diseases and health problems of the region. The total of 19 training courses at the 4 centers grants 4 post-graduate diplomas: 11 master's of science degrees and 4 doctorate degrees in Tropical Medicine and Public Health. In addition, since

1989, two M.Sc. courses are taught at the University of Singapore in Public Health and Occupational Health. The chart below shows the training institutions and the courses they offer.

Chart No. 1

TROPMED Programs and Activities

SEAMEO-TROPMED

GOVERNING BOARD
(CENTRAL COORDINATING BOARD)
TROPMED Central Office

- Teaching & Training - postgraduate
- Research and Development
- Seminars, Conferences
- Personnel Exchanges
- Consultant Technical Services
- Publications & Information Services (Southeast Asian Journal of Tropical Medicine and Public Health) and TROPMED Newsletter

TROPMED NATIONAL CENTERS

Indonesia	Malaysia	Philippines	Thailand
Faculty of Medicine University of Indonesia Indonesia, Jakarta	Institute for Medical Research Kuala Lumpur	College of Public Health, University of the Philippines, Manila	Faculty of Tropical Medicine Mahidol University, Bangkok

SPECIALIZATION FOR REGIONAL WORK

Nutrition and Food Science	Applied Parasitology and Entomology, Medical Microbiology	Public Health Rural Medicine, Occupational Health	General and Clinical Tropical Medicine and Tropical Pediatrics

REGIONAL TEACHING COURSES

D.A. Nutr. M.Sc. A. Nutr. Ph.D. A. Nutr.	D.A.P. & E. D. Med. Microb. M.Sc. Parasit. or Entomology, or Med. Microb.	M.P.H. Rural Health M.Occ Hlth. M.S. Pub. Hlth. Dr. P.H. + H. Hosp. Adm.	D.T.M. & H. M.Sc. Trop. Med. M.P.H. Urban Health M.Sc. Clin. Trop. Med. Ph.D. Trop. Med. + M. Sc. Med. Epid. + M. Sc. Trop. Ped. + Ph.D. Clin. Trop. Med.

The Project trains between 150 to 160 medical personnel and scientists each year, most of them Asians. Almost three thousand professionals have attended TROPMED-sponsored seminars and workshops since its founding. The project publishes a quarterly journal, a newsletter and occasional papers. The operations of the TROPMED center are paid for by member states, while funding for special activities are provided by a variety of donors, the largest being USAID.

In 1987, USAID entered into the latest of a series of grant agreements with TROPMED providing three million dollars over the five-year period, 1987-1992. The grant provides scholarship assistance to TROPMED training courses, excluding the doctoral programs. Currently, USAID provides assistance to TROPMED equivalent to 60 percent of its total budget.

b) Measures of Progress

Measures of progress for TROPMED are relatively simple to determine since USAID/ASEAN support in Phase II is for a limited number of activities (scholarships and seminars). Determinants of success are:

1) The numbers and kinds of students utilizing these scholarships and whether they conform to the illustrative breakdowns in the project agreement. The project agreement is based on the provision of 121 scholarships per year over a 4-year period, totaling 484 scholarships, and assumes an even distribution of men and women receiving the scholarships. Approximately half of these scholarships (236) are for short-term training in diploma courses.

2) The quality and kinds of courses offered.

3) The number and quality of short-term courses and regional seminars offered to the region through SEAMEO and TROPMED. Under the project agreement, three regional seminars were to be held during Phase II.

It was not possible due to the briefness of the evaluation period to determine the use to which these trainees have been able to put their education on returning to their posts.

An additional fourth measure of success is the degree to which TROPMED has been able to achieve financial self-sufficiency either through obtaining alternate sources of funding, or through the provision of services to parapublic and private sector agencies. While this was not a specific feature of USAID funding, the temporary nature of the funding made it imperative that TROPMED plan for additional resources prior to the end of the funding period.

c) HRD Phase II: Benchmarks

The chart below details the number of graduates from the TROPMED program in each year since PHASE II was signed. It follows quite closely the illustrative training plan of scholarships for each institution outlined in the project agreement.

Chart No. 2

	1987-88	'88-89	'89-90	'90-91	'91-92	TOTAL
MSc Applied Nutrition (I)	2	3	-	3	-	8
Dip.Appld.Parasit.& Ent(M)	10	9	10	12	-	41
Dip.Med.Microbiology(M)	13	12	12	10	13	60
MSc.Med.Microbiology(M)	3	1	-	-	-	4
MPH Rural Hlth(P)	17	17	17	21[1]	19	91
MS. Public Health(P)	1	-	-	-	-	1
Mastr. Occptl. Hlth(P)	3	5	5	4	5	22
MSc.Public Health(S)	3	5	6	4	4	22
MSc.Occptl. Hlth(S)	5	4	3	6	4	22
Dip.Trop.Med and Hygiene(T)	32	18	22	14	-	86
MSc.Trop. Med. and (T)	-	2	2	1	8	13
MPH Urban Hlth(T)	4	12	8	7	-	31
MSc.Clinical Trop.Med.(T)	2	7	5	4	7	25
MSc.Medical Epidemiology(T)	-	-	-	6	5	11
Sub-Total	95	95	90	92	65	437
Short Course Trop.Epidem.	-	-	-	15	12	27
Regional Seminar--Zoonoses				26		26
TOTALS	95	95	90	133	77	**490**

I = University of Indonesia
M = University of Malaysia
T = Mahidol University, Thailand
P = University of the Philippines
S = University of Singapore

[1] The Master of Public Health course in 1990-91 was changed into a Masters in Hospital Administration.

The project agreement provides an illustrative number of graduates to be trained from each country, anticipating that there would be an even distribution of scholarship funds in accordance with SEAMEO TROPMED's policies. The USAID/ASEAN agreement calls for training a total of 484 persons in short- and long-term training. By PACD, 437 people from 4 countries will have received diploma and master's degree-level training. An additional 26 persons have received scholarships to a regional seminar organized in Bangkok, November 1990, on Tropical Food-Borne Zoonoses, and a further 27 in the short course on Tropical Epidemiology, bringing the **total number of trainees to 490.** An as yet unspecified number of scholarships will be distributed in two short courses to be held in August 1991 and May 1992. Two more regional seminars will be funded by the project in May 1992, one in Bangkok and one in Manila, increasing further the number of trained persons.

Under the terms of the agreement, USAID funding to ASEAN would be concentrated on those subject areas promoting child survival techniques in an effort to reduce high infant mortality rates in the region as well as communicable and chronic diseases, particularly affecting the young.

In order to ensure dissemination of research findings, TROPMED was to have scheduled three regional conferences during the five-year period. The first of these three was a seminar on Emerging Problems on Food-Borne Parasitic Zoonoses: Its Impact on Agriculture and Public Health, held in November 1990 in Chiang Mai, Thailand. A second on Bleeding Disorders and Transfusion Medicine is scheduled for May 1992 in Bangkok, and a third on Filariasis is scheduled also for May 1992 in the Philippines. These regional seminars are expected to draw between 100 and 200 interested professionals.

In March 1989, a SEAMEO TROPMED Task Force undertook an in-house evaluation of its program to ensure that the courses it offered were relevant, timely, and accessible, and that the quality of the training reflected the highest international standards. Several conclusions reached by the task force were adopted by the Governing Council, resulting in an improved training program that is more practical and prevention-based in its approach.

New elements to be introduced into the program were:

A) A focus on socio-behavioral linkages to diseases and the role of health education in connection to disease control;

B) Management skills related to disease control; and,

C) Health economic aspects of specific diseases and their relationship to Public Health.

Additional teaching courses were recommended, based on changing health patterns in the ASEAN region, including:

1. M.Sc. in Medical Epidemiology, a 12-month course taught in Thailand and focusing on Community Epidemiology and Clinical Epidemiology.

2. A 12-month M.Sc. course in Tropical Pediatrics to be taught at TROPMED, Thailand.

3. A 12-month master's degree in Hospital Administration to be taught at the University of the Philippines.

A number of short courses has also been arranged. Several of these courses respond to USAID's concern that TROPMED begin to diversify its programming to respond to the region's private sector needs. A seminar on "Poisoning from Industrial Wastes and Other Environmental Hazards in Agriculture" (of potential interest to industry and agri-business) is scheduled. Also a seminar in "Biotechnology: Production of Biological Reagents and Vaccines for Disease Control" (of interest to pharmaceutical firms) and a seminar on "Occupational Diseases Caused by Toxic Hazards at the Work Place." These three seminars, besides being of interest to the private sector, respond to USAID's growing concern for environmental issues in the region.

Quality of the Courses Offered

Currently, TROPMED offers 19 courses leading to degrees or diplomas, of which AID/ASEAN scholarships have partially funded 17. Listed below are the various courses and their duration.

IN JAKARTA:

1. Diploma in Applied Nutrition--6 months
2. M.Sc. Applied Nutrition--12 months

IN KUALA LUMPUR:

3. Diploma in Applied Parasitology and Entomology--6 months
4. Diploma in Medical Microbiology--6 months
5. M.Sc. Parasitology and Entomology or Medical Microbiology--2 years

IN MANILA:

6. M.P.H. Rural Health--12 months
7. Master's in Occupational Health--10 months
8. M.Sc. Public Health--2 years
9. Master's in Hospital Administration--2 years

IN BANGKOK

10. Diploma in Tropical Medicine and Hygiene--6 months
11. M.Sc. Clinical Tropical Medicine--12 months
12. M.P.H Urban Health--10 months
13. M.Sc. Tropical Medicine--2 years
14. M.Sc. Medical Epidemiology--12 months
15. M.Sc. Tropical Pediatrics--12 months

IN SINGAPORE

16. M.Sc. Public Health--12 months
17. M.Sc. Occupational Health--12 months

As noted above, of these 17 courses, 4 were added in 1990 because of their relevance and timeliness to the region. TROPMED additionally provides short courses of six- to eight-week duration on a variety of subjects considered topical and interesting to the region. Below is a list of the planned short courses for the duration of TROPMED's Five-Year Plan which has been approved by its Governing Council.

1. Occupational and Environmental Health and Diseases in Economically Developing Southeast Asian Countries.

2. Nutrition and Diseases of the Elderly

3. Toxicology of Industrial Wastes

4. Women and Child Survival in Rural and Urban Areas

5. Tropical Clinical Pharmacology

6. Tropical Epidemiology
   Communicable and non-communicable diseases
   Environmental hazards

These courses are taught on a rotation basis among the TROPMED member countries and show that TROPMED has made an effort to stay current with the changing health patterns of the region, which are shifting away from infectious diseases towards chronic diseases and behavior-related diseases.

USAID ASEAN had been encouraging this change for some time, as is evident in the correspondence to TROPMED over the past two years. The slowness of the TROPMED response is as much due to its own cumbersome management procedures as to the reluctance of its principals to deviate from traditional tropical medicine and infectious

disease subjects. It is anticipated that this shift towards topical subjects will increase the variety and scope of ASEAN clients to include those in the private sector.

Briefly, the task force noted that many of the courses had benefited from external consultant assistance from Canada and the GTZ in improving the quality of course content (as recently as 1988-89). The M.Sc. course in Tropical Medicine needed to be updated with new techniques in molecular biology, computer science and the socio-economic aspects of disease control.

Three new aspects in the teaching of all courses were recommended and approved by the TROPMED Governing Board:

1. The Socio-Behavioral Aspects of Man and the Role of Health Education in Connection with Successful Disease Control,

2. Management Skills in the Implementation of Disease Control, and

3. Health Economic Aspects of Individual Tropical Diseases and Public Health.

Quality of the Students and Faculty

The Task Force noted that there was an on-going problem with the English-language capability of some students and faculty and with the entering qualifications of some students. To redress this problem, TROPMED now has made available English language training for faculty and students at certain of its centers.

One additional comment about the composition of the scholarship trainees stems from data disaggregated by sex for each country and for each course. The number of women from Indonesia and Malaysia to receive scholarships is substantially smaller than men from these countries. It is the Philippines which trains significantly more women than men that permits the total numbers of women and men trainees at TROPMED to remain at their present 80 percent level. Chart No. 3 illustrates the breakdown of students trained by sex and region:

Chart No. 3

Country	1987-88		1988-89		1989-90		1990-91		TOTAL		GRAND TOTAL
	M	F	M	F	M	F	M	F	M	F	
Indonesia	24	7	24	6	13	9	15	10	76	32	108
Malaysia	14	5	10	5	15	3	14	4	53	17	70
Philippines	3	18	6	13	10	13	8	19	27	63	90
Thailand	15	9	15	16	14	13	10	11	54	49	103
Singapore	-	-	-	-	-	-	1	-	1	-	1
TOTALS	56	39	55	40	52	38	48	44	211	161	372[2]

TROPMED is also struggling with problems stemming from its regional nature. One example is Malaysia, which does not recognize the Public Health degrees earned through TROPMED and therefore does not take advantage of them. Both USAID and ASEAN are aware of this issue and hope that Malaysia will see the advantages of this training in the future.

Singapore, which is an ASEAN member and entitled to benefit from ASEAN assistance, has not become a TROPMED institutional member and contributor. It therefore hosts courses and benefits from the scholarships of trainees sent from other countries, but only one Singaporean has received USAID scholarship funds.

In sum, TROPMED has fulfilled its potential as a regional information and training center and looks to the future for an increased role in regional medical activities. Problems it needs to address are to achieve this leadership role are examined in the next section.

d) Problems Related to Success

It is in the transition from dependence on HRD funding that TROPMED is encountering difficulties and these, in turn, highlight deficiencies in the HRD Project that could have made the transition more a planned activity than an activity born of desperation. TROPMED is uniquely placed to provide a leadership role in the newly emerging health issues of the region. Three kinds of problems prevent it from assuming that role: financial, management, and program problems.

[2] Breakdowns by sex and country for 1991-92 were unavailable when this document was written.

(1) Financial Problems

TROPMED will without a doubt suffer severe financial withdrawal symptoms once USAID assistance ceases. USAID currently provides 60 percent of TROPMED's annual budget. TROPMED has been unable to confirm increased support from member countries or additional donor support. The 1990-91 scholarships reflect a 50 percent reduced USAID travel contribution to trainees and member countries, and, for some courses, the trainees themselves have picked up the difference. For 1991-92, SEAMES has picked up the entire travel budget for every course except the diploma courses. The students going to Singapore are self-financing 50 percent of their travel costs and USAID continues to pay 75 percent of the diploma students' travel costs. However, the total number of students is down to seventy-six funded by USAID.

TROPMED's efforts to obtain additional funding are relatively recent coming from a reluctance, possibly based on two decades of assistance, to believe that USAID would indeed completely sever its ties with the institution.

Correspondence from USAID over the last two years, encouraging TROPMED to diversify its client base from public to private sector in an effort to partially fill this gap, reveal USAID's own disquiet at the delay.

If SEAMEO member countries have to supply the funds for future training courses, it is more than likely that economically distressed countries, such as the Philippines, will not be able to participate.

(2) Management Problems

TROPMED does not have a clear understanding of how to switch from dependence on public funds to seeking out alternative sources of funding, whether from purely private sector sources or through the many parapublic agencies that exist in the region.

Unlike other institutions in the HRD Project Family, TROPMED has not had a post within its secretariat responsible for new development. Neither has SEAMEO, its parent organization. It has not produced promotional materials (videos, slide shows, etc.) which it can show to potential clients, and is uncertain as to how its client base can be expanded from traditionally health-oriented agencies (pharmaceutical firms) to non-traditional ones (agro-industry and industrial firms, insurance companies, the tourist industry, environmental NGOs, etc.). It is only in the last Five-Year Plan that TROPMED begins to address current health issues of interest to donors and of importance to the region. Its curriculum is intended to serve a wide audience and the concept of product targeting seems not to be addressed.

(3) Program Problems

Discussion has already been made of some of the difficulties in reorienting the program to reflect emerging health trends in the region as well as economic realities. Additional to these issues are the quality of the coursework. The task force recommendation of 1989 which evaluated the curriculum, recommended that all courses include information on sociocultural factors of disease control and the role of health education; the economics of health programs; and, management issues related to health. Discussions with students in the 1990-91 program indicated that these issues are still inadequately treated in the curriculum and students must select these subjects as electives. The task force felt that even those trainees with primarily clinical leanings would profit from inclusion of these core modules.

The TROPMED Governing Board in its Fifth Five-Year Plan (Part IV, p. 62) reviewed TROPMED's role and activities, focusing on poverty-related issues, new social diseases and their impact, and general health education towards eradication of endemic diseases. However, its proposed Fifth Five-Year Plan goals and objectives (p. 5, TROPMED Five-Year Plan) do not address the same issues and ignore completely the mechanisms for achieving it. There are no established goals for responding to private sector challenges, to increasing TROPMED's financial viability for reorienting the program towards a more visionary role of TROPMED in the region over the next decade.

Finally, in its earlier evaluation, USAID drew the attention of TROPMED SEAMEO to the fact that little recognition was given to USAID's contribution. Project documents did not specify USAID, referring instead to ASEAN or SEAMEO contributions. Students interviewed were unaware of their funding source. TROPMED declined a USAID request to put the AID symbol on the diplomas of graduating trainees, instead preferring to alert each student as to his/her funding source. Interviews with some 20 students from the 1990-91 class from all the ASEAN countries showed that the situation remains the same. Few documents even mention USAID by name. The TROPMED SEAMEO annual reports refer only to ASEAN scholarships. Other donor country contributions are mentioned by name. After 20 years of support, there is very little documentation to demonstrate USAID's contribution to the Health Manpower Development of the region.

e) Effectiveness of Management

TROPMED is an independent institute that is financially and programmatically responsible to SEAMEO. SEAMEO in turn receives its USAID grant funding from ASEAN. Annual work plans and annual reports are submitted to SEAMEO, and financial disbursement comes from the SEAMEO Secretariat (SEAMES). A governing board consisting of representatives from each of the TROPMED member countries acts as an intermediary management committee responsible for approving program changes, scholarship disbursement, assuring program quality, etc. In actuality, the TROPMED

Secretariat enjoys great confidence from its governing board and SEAMES so that TROPMED's recommendations are generally accepted.

Laterally, TROPMED engages with ASEAN through the provision of annual work plans and annual reports. These documents are submitted to the Subcommittee for Health and Nutrition, of the Committee on Socioeconomic Development of ASEAN.

TROPMED's financial reports fulfill USAID requirements. It produces an annual report in which details of its activities are described. Quintennial work plans provide long-term planning goals. TROPMED is currently in its Fifth Five-Year Work Plan.

TROPMED curriculum quality is monitored through technical assistance from its donors, and through periodic evaluations requested by the governing board. External examiners assure the quality of students graduating from each course.

In 1989, TROPMED received a grant from the Japanese Government that allowed it to purchase computer equipment, both for management and program use. A desk-top publishing system functions to publish a newsletter, and a database of students is finally being compiled.

f) Effectiveness in Achieving its Mandate

It is evident that TROPMED has been extremely successful in achieving its stated objectives to date. By PACD, it will have trained the requisite number of postgraduate students. Descriptions of its achievements have been highlighted elsewhere in this report.

A cursory review of the posts from which scholarship students are drawn indicate that over one third are in policy-making positions while the rest provide direct health services. Some few combine health services with responsible managerial and administrative positions. The task force evaluation indicated that students were generally well-pleased with their training and able to use their new learning in their positions.

The training program has also helped to establish the credibility of the member institutions in each country as specialists in their various fields. Thus, Indonesia has emerged as nutrition specialists, the Philippines as public health specialists, Thailand as tropical medicine specialists, and Malaysia as specialists in microbiology, parasitology and entomology.

g) Extension of Services to Other Asian Countries

TROPMED has already made efforts to put its services at the disposal of Vietnam, Laos and Cambodia by sending a team to review their manpower needs and preparing a plan to provide training to students from these countries. It has every intention of pursuing

these goals. To date, three students from Vietnam and Laos have received their training at TROPMED with WHO grant funds and TROPMED expects to increase that number.

In addition, TROPMED has offered its technical assistance services to assist the fledgling institutions in these countries to manage their public health tasks more effectively.

2. FINANCIAL

a) Resource Sources

There is no question that USAID contribution to TROPMED has been significant both financially and programmatically. By extension, its contribution to the member countries has also been significant. USAID acknowledgment of the expertise already available in the region has permitted TROPMED and its member institutions to manage their funding and their activities with limited external input and controls.

TROPMED has become an attractive grantee for other donors as well and has continuing relationships with Canada, Australia, France, and the GTZ among others. In 1990, Indonesia contributed $126,210 for 26 Indonesian students; the Malaysian Government contributed 64,700 for 13 Malaysian students; the Philippines Government contributed 102,975 for 21 Filipino students; and, the Thai Government contributed 161,750 for 34 Thai students. [3]

b) Expenditures to Date

The total grant to TROPMED was $3 million dollars drawn down according to the following chart.

Disbursements:

FY1987/88	$467,437.01
FY1988-89	$522,893.75
FY1989-90	$480,037.01
FY1990-91	$562,794.40

Total Disbursements 1987-91	$2,033,162.17
Anticipated expenditures FY1991-92 for short and long-term courses	$368,267.00

[3] See special report from TROPMED on financial status.

Anticipated Expenditures FY1991-92 short courses and regional seminars	$145,530.00
Grand Total PACD Disbursement	$2,546,959.17
Unexpended balance	**$453,040.83**

TROPMED receives support from the Netherlands which fully funds the diploma course in nutrition at the University of Indonesia; from Australia, which provides an exchange program with TROPMED scholars and several of its universities; with Canada, which provides similar support besides funding scholarships from the DAAD in Germany; and, from its own SEAMEO and TROPMED member countries. These latter funds provide $44,894 support per member country to TROPMED operational costs. This is a thirty percent increase over previous year contributions and is expected to increase still more once USAID funds are discontinued.

TROPMED has little difficulty attracting private donor funding for specific seminars and the occasional short course. Several of its students are privately funded either through their own NGOs or through parapublic and private agencies. USAID has supported a total of 35 "private" sector students. Most of these represent independent universities and NGOs.

Problems in attracting sustained private sector support were discussed in the Problem section of this document and pose a very real threat to the continuance of TROPMED beyond 1992 when USAID funding is withdrawn. TROPMED is now making preliminary efforts to seek alternative sources of financing, including approaching other donors and seeking increases from the member countries.

c) Potential for Private Sector Support

The potential for private sector support seems to exist if TROPMED is able to change its orientation and diversify the services it provides. Opportunities for research support to the private sector (clinical trials for vaccines, contraceptives, new drugs etc.), for education and information to non-traditional agencies (industry, agriculture) and for technical assistance to Indochina make it a potentially attractive institution to support. However, TROPMED's academic and clinical support services will continue to be required by the region for some time and should not be discontinued.

B. CONCLUSIONS

TROPMED is a viable agency that has served and continues to serve a useful role in the health manpower resource development of the region. The quality of its courses is acceptable and is beginning to attract students from outside the region, including Europe. Linkages with European, Canadian and Australian universities have also led to improvements in quality of teaching and improved learning opportunities for students.

Much of TROPMED's success has been that, at inception, it was the only agency in the region able to offer the range of tropical health courses needed in each member country. Twenty years later, competition for students and faculty, and improvements in the member institutions have made TROPMED's services less competitive. Its unique role of pooling the best of the region to address regional health problems is still its greatest strength.

C. RECOMMENDATIONS

TROPMED should explore possibilities for increasing their share of private sector students and research through feasibility studies and interviews with industrial and commercial agencies, as well as NGOs. A marketing plan for TROPMED services should be developed that reflects realistic private-sector needs. TROPMED should also explore developing informal relations with U.S.-based institutions and universities that can assist it in this effort.

D. LESSONS LEARNED

The most obvious lesson learned from support to TROPMED has been that institution-building is a viable component of USAID strategy and that human resource development in particular has provided the region with qualified, competent health professionals. It has been a quiet manpower revolution, but one which has significantly affected the ability of the region to respond to its health needs.

Although not in the project as initially conceived, a second lesson learned would suggest that TROPMED would have greatly benefited from linking up with U.S.-based institutions both to improve the quality of its educational program as well as to assist with the process of conversion to sustainability.

IV. ASEAN AGRICULTURAL DEVELOPMENT PLANNING CENTER (ADPC)

A. FINDINGS - ADPC

1. Program

a) Project Purpose

The purpose of the ADPC Phase II Project is to strengthen the capacity of ASEAN member countries to formulate more effective policy and undertake better agricultural planning. Selected technical personnel will be trained to assist in upgrading current policy and planning capability. At the same time, ADPC's capacity to serve the ASEAN countries' needs on a continuing basis during changing agricultural conditions will be further developed.

b) Measures of Progress from 1987-1991 Toward Achieving Stated Purpose

Objective 1: To strengthen the capacity of ASEAN member countries to formulate more effective policy and undertake improved agricultural planning.

Current status: The evaluation team was unable to find adequate data in the project files to properly evaluate Objective 1. Except for a few participants from Thailand, the team was unable to visit and interview returned participants from other ASEAN member countries due to limited time and unavailability of travel funds.

However, there are indications that the project has strengthened the capacity of ASEAN member countries to formulate more effective planning policy and improved agricultural planning. For example, informal communications between the returned participants and ADPC staff indicate that "almost all" trainees were promoted upon their return from training, especially the long-term participants. At least two participants were promoted to a position equivalent to Deputy Director General, thereby exerting greater influence in policymaking decisions.

The exchange of participant experience in comparative case studies has resulted in identifying ways and means to formulate more effective policy and better agricultural planning in ASEAN member countries. Some long-term trainees reported that they are training others in their work units. An added benefit was the long lasting camaraderie which developed among the participants, further strengthening ASEAN-wide networks of policy-makers and agricultural planners. This transfer and diffusion of skills should multiply effective policy and improve agricultural planning capacity in the region as a whole.

ADPC's ASEAN Data Base and Information System has proven to be a useful tool in formulating policy and planning by government ministries as well as private companies, private research institutions, and consultants. For example, the ASEAN Food Handling

System in Singapore has linked with the Center's data base. The study on strengthening food security in the ASEAN region resulted in a member countries' agreement to set up a stockpile of 50,000 tons of rice for emergency situations.

Similarly, workshops and consultative meetings on agricultural marketing systems, standardization of agricultural statistical data, and comparative advantages of ASEAN nations in selected feedcrops and livestock production systems have provided an opportunity for dialogue/communication among ASEAN on policy issues and problems on these important topics. An information and data base for regional cooperation in the agriculture sector would be built should this be deemed advantageous by the ASEAN committee on Food, Agriculture and Forestry (COFAF). The paper on "New Initiatives to Further Forestry," prepared by ADPC which COFAF used in preparing for new initiatives in ASEAN economic cooperation during the Third Asian Summit Meeting, focused emphasis on greater private-sector involvement in forestry management and conservation.

New activities implemented by ADPC during the current fiscal year include: (1) compiling and maintaining a current listing of ASEAN experts in agricultural and rural development; (2) improving an agricultural data banking system with statistics that are policy relevant and which can be used in agribusiness policy formulation and planning; and, (3) improving a computerized data base system.

Attainment of this objective has varied according to the levels of country participation. It is perceived as fully attained in Thailand which has provided 29 percent of the trainees, followed by Indonesia (24 percent), Malaysia (23 percent) and somewhat fewer in the Philippines (19 percent). Brunei has had only 4 percent participation and Singapore, less than 1 percent.

Objective 2: ADPC will be further developed in its capacity to serve ASEAN member country needs on a continuing basis in the face of changing agricultural conditions.

Current status: The Center's restructured research and planning activities for FY 1990/91 indicate that these are constantly scrutinized and redirected to focus on changing needs.

From 1987 to 1989, the research and training activities of ADPC Phase II focused on strengthening agricultural development and policy analysis capabilities in ASEAN member governments. Targeting mainly public sector agricultural planners, the center provided master's degree level training in agricultural economics, a three-month program in agricultural planning and policy analysis, and topic specific short-term seminars.

With assistance from A.I.D., the ADPC restructured these activities. Its training component was redesigned from an exclusive focus on public sector agriculture planning to a more balanced private/public sector mix. The research and planning components are being reoriented toward encouraging private sector involvement in agricultural development.

c) Define Project Benchmarks of the 1987-1991 Period and Determine Effectiveness of ADPC in Meeting Benchmarks

The Project Paper (PP) and Project Agreement (ProAg) indicate the following activities will be undertaken over the four-year period (1988-92) of Phase II.

Training

1) Master's degree (Technical Group or TG) training in agricultural economics will be provided for an estimated 36 participants.

Current status: 34 participants have completed master's degree training; 5 more participants will complete their MS coursework during the remaining life of the project.

2) Two short-term training activities will be supported. One is the three-month Micro Group (MG) training for senior planners and mid-level staff. The MG activity is an intensive training effort in project planning, formulation, implementation and evaluation. Two MG sessions per year were planned for academic years 1987-88; 1988-89; 1989-90, and 1990-91. Two participants per member country are invited to each session. A total of 96 participants was thus expected in the project period.

Current status: 139 participants completed MG training as follows: A.I.D. grant funded - 123 participants; FAO/UNDP funded - 12 participants; and, USAID/Sri Lanka funded - 4 participants. An additional A.I.D.-funded training program is currently planned for 24 participants for the period from January 1992 to July 1992.

The second short-term activity is the 10-day Special Group (SG) training course for senior officials and research leaders. This is a seminar-cum-workshop designed to keep participants abreast of recent developments in planning approaches and methodology by focusing on selected topics and specific analytic techniques. It was planned that 12 senior officials will have received SG training in the 1988/89, 1989/90 and 1990/91 academic years.

Current status: 59 participants have completed SG training. An SG course on roundtable discussion for financing agribusiness planned for July 23-24, 1991, will train 12 participants. All training was funded by A.I.D. funds except for one SG course where the resource person was funded by FAO. (See Annex 4 for number of participants by training course.)

The cost per participant for the long-term training was estimated at $14,000 (excluding salary and administrative costs) which was much lower than the cost for MS degree training at other graduate institutions in the region. In the short-term training, the cost was $1,500 per participant, much lower than the $8,000 tuition fee that The Bradford University in England charges for a similar course in project planning. More than half of the evaluation questionnaires of participants completing courses were not returned.

However, almost all of those who returned the questionnaires indicated that they returned to their place of employment and that the training they received was relevant to their work.

Selected Research, Data Collection and Planning Support

1) Two to three in-depth comparative studies/analyses for food and feed crops, to include topics such as costs of production, trade barriers, incentives/subsidies, pricing policies, and marketing issues.

Current status: Two studies were completed as follows: (1) the comparative advantage Study on Selected Feedcrop and Livestock Production Systems, completed in 1988, and (2) Agricultural Marketing Information Systems, completed in 1989.

2) Specific studies of agricultural policy issues as identified and requested by COFAF during the implementation period.

Current status: Two studies requested by COFAF were completed: (1) Review of Agricultural Policies and Programs in the ASEAN Region (4 country papers, 1 synthesis), completed in 1988, and (2) Inventory of ASEAN-COFAF Projects and Actions, 1987/88, 1988/89 (3 reports for each year).

3) Statistical data collection for the publication of two additional ASEAN statistical yearbooks.

Current Status: Two additional ASEAN statistical yearbooks were completed; one in 1989 and one in 1991.

In addition, 5 workshops and consultative meetings were held:

August 1988	-	Harmonization of National Plans in Food, Agriculture and Forestry
September 1988	-	Consultation on Comparative Advantage
May 1989	-	Workshop on Perspectives and Implications of the Comparative Advantage Study on Feedcrop and Livestock Production
September 1990	-	Workshop on Agricultural Marketing Systems
September 1990	-	Regional Consultations on Selected Planning and Policy studies in Agricultural Development

Other services include newsletters, synthesis and reports of country studies on selected topics, and computer services.

Institutional Support Costs

1) Commodity support including office supplies and equipment.

Current status: No problem in delivery.

2) Salary support of up to 13 professional and semi-professional staff.

Current status: On track.

3) Selected operating and maintenance costs, including transportation and communications, insurance, and maintenance and repair.

Current status: Carry-over equipment and vehicles from Phase I required high maintenance costs.

d) Identify Problems (Barriers to Success) for Project

1) There has been less than an ideal nomination/selection process for participants in both long-term and short-term training courses. Many participants have come from the same departments within respective Ministries of Agriculture. ADPC believes that a more broadly based participation from these ministries would be beneficial in bringing the results of such training to reflect in national agricultural policies rather than having it so compartmentalized. As to be expected, each country has its own nomination/selection process. The Philippines utilizes a committee system; selection of candidates in Thailand and Indonesia is handled by a contact person (the country's Board of Planners [BOP] member). The BOP is a committee consisting of representatives from member countries of COFAF (Annex 2).

2) There were few women trained in the long-term program; only about 15 percent of the participants in the master's degree training were women. In short-term training, the male/female ratio was more equitable (48 percent).

3) There were few participants from the private-sector, especially in Indonesia and Singapore; private sector participation from Thailand and Philippines is better.

4) Communication with contact persons in ASEAN has been difficult, resulting in delays. Some member countries do not have faxing facilities and some BOP members do not delegate authority when they are out of the country.

5) There have been delayed responses of ASEAN member countries in nominating participants; nominations are usually received when the training is about to start.

6) ADPC has had difficulty in simultaneously satisfying the various regulations of USAID, The Royal Thai Government and ASEAN which at times has resulted in delayed implementation of project activities.

7) Poor follow-up on the results/impact of training programs; more than half of the evaluation questionnaires of participants completing courses were not returned.

8) USAID interest in tracking the Center's activities is seen by some ADPC staff as overzealous or meddling.

9) Morale among ADPC personnel is diminishing given growing uncertainty regarding the status of the Center after Phase II project activities are completed in June 1992.

e) Assess ADPC Effectiveness of Management of Respective Project Components

Organizationally, the ASEAN ADPC is an institution under the auspices of a Board of Planners (BOP). The BOP appointed Mr. Nguen Srisuraksa (Thailand) as Director on May 7, 1988, to administer the Phase II activities of ADPC. The Center has been operating with a total staff complement of 29 in 1987/88; 30 in 1988/89; 31 in 1989/1990; and, 30 in 1991 (for a description of the current staffing pattern see Annex 5). The Director is directly assisted by three senior officers: the Chief of the Research/Planning Branch; the Chief of the Training Branch; and, an Economist. Under Mr. Srisuraksa the capacity of the ADPC to carry out the mandate of ASEAN has been strengthened. He has enthusiastically embraced the new direction towards increased private sector participation and has restructured ADPC's training, research and planning activities toward this end.

Mr. Eutiquio J. Lumayag (Philippines) was the Chief of the Research and Planning Branch at the start of Phase II until his resignation in January 1990. During his tenure, he developed and implemented the research and planning policy decisions of the BOP. His efforts provided an improved data-gathering capacity of the Center and several studies with findings being utilized by ASEAN countries. After consultations with ASEAN member countries, the BOP appointed Mr. Roberto M. Dalag (Philippines) as the new Research and Planning Branch Chief. Mr. Dalag was one of first graduates of ADPC's master's degree training program.

Mr. Preeda Chantagul (Thailand) is responsible for the development and implementation of the long- and short-term training programs of the Center. A retired professor of agricultural economics at Kasetsart University, Mr. Preeda was one of the first professors to teach courses under the ADPC's masters' degree program. He has capably administered the training of 233 participants under Phase II.

The Economist position was filled only in 1989. Ms. Fe L. Porciuncula (Philippines) was recruited for this position. She resigned in 1990 and was replaced by Ms. Nonglug Pongsrihadulchai (Thailand), a former research aide with the center.

f) Extension of Services to other Asian Countries

ADPC has already trained participants from Vietnam through the sponsorship of FAO. No participant from Cambodia or Laos has yet been trained at the Center. Approval on a case-by-case basis from the ASEAN body is required for the training of non-ASEANS. Streamlining of these approval procedures for the training of non-ASEANS should increase participation from these countries and contribute towards the self-sufficiency of ADPC.

2. FINANCIAL

a) Assess extent to which A.I.D. has Contributed to the Development of ADPC

A.I.D. Contribution

A.I.D.'s contribution to the development of ADPC has been in the financing of training, selected research, data collection, planning and institutional support, including commodities and equipment, salaries, operations and maintenance. A.I.D. was also instrumental in the Center's shifting from an exclusive focus on public sector agricultural planning to a more balanced public/private sector mix. A.I.D. administration of the project was capably handled by the AID/ASEAN Regional Office in Bangkok.

ASEAN Member Countries' Contributions

ASEAN member countries contributions have been used to defray the expenses for utilities, maintenance of facilities, and the salaries of eighteen administrative and general support staff. It also includes BOP members' travel costs and each government's share of its participant travel cost.

Other Donors' Contributions

UNDP has financed training programs for project formulation, monitoring and evaluation. FAO has funded training programs in: (a) use of computers as tools for agricultural project analysis and planning; (b) trainers' course in the preparation, monitoring and evaluation of agricultural and rural development projects for Indonesian government officials; (c) ASEAN inter-country workshop in training applications of CAPPA software; and, (d) ASEAN agribusiness development policy formulation and planning. The World Bank provided funds for an ASEAN workshop in identification and preparation of forestry projects.

b) Assess Financial Progress to Date

A.I.D Funding

ADPC's summary of project expenditures for the period through May 1991 (Annex 6) indicates that of the $1,750,000 obligated, $1,269,700 (73 percent) has been expended.

The accounting firm of Ernst & Young performed a financial audit of ADPC in December 1990. The auditors found that expenditures made under the Grant were accurate, allowable and reasonable, and that ADPC generally complied with the grant agreement and with applicable laws and regulations. The auditors indicated that ADPC's system of internal controls was adequate to segregate and account for A.I.D. funds. They did recommend improvements in certain internal control procedures which have since then been implemented by ADPC.

Trends In ASEAN Support

The ASEAN countries' contributions in carrying out ADPC's activities is in cash and in kind. The cash contributions from ASEAN have consistently increased every year as follows: $189,908 in 1987; $248,125 in 1988; $278,789 in 1989, $305,508 in 1990, and $334,542 in 1991, totaling $1,356,872 (about 76 percent of total grant funds) to date. USAID has obtained agreement for travel cost contributions starting from FY 1991. ASEAN will pay for 25 percent of international travel costs for participants to short-term courses at ADPC, starting in FY 1991, and 50 percent starting in FY 1992. One hundred percent of travel costs for participants in long-term training (TG) will be borne by ASEAN.

In-kind contributions consisted of microcomputers, a conference room, a garage, and classroom furniture.

Patterns and Trends of Other Donor Funding

ADPC was also assisted by FAO, UNDP and World Bank as follows:

- UNDP - Assistance in Project Formulation, Monitoring and Evaluation, 1988-89 - US$ 116,600
- FAO
  a. Use of Computer Tools for Agricultural Project Analysis and Planning (DASI Project), 1991 - US$ 223,000
  b. Trainers Course in the Preparation, Monitoring and Evaluation of Agricultural and Rural Development Projects for Indonesian government officials, 1991 - US$ 26,400

c. ASEAN Inter-Country workshop on Training Applications of CAPPA Software, 1991 - US$ 17,094

d. ASEAN Agribusiness Development, Policy Formulation and Planning, 1990-1991 - US$ 36,062

- World Bank - Assistance for ASEAN Workshop on Identification and Preparation of Forestry Projects 1991 - US$ 35,300

US$ 464,456

c) Potential for Private Interest and Support

USAID provided the services of an agribusiness consultant in early 1990 to look into the operations of the ADPC and explore various options for restructuring its program from a public planning to a private agribusiness focus. This change in focus was deemed necessary to enhance ADPC's responsiveness to privatization trends in the ASEAN region. Over the past decade the pattern of new growth in the agricultural sector has shifted from field production to private sector processing and marketing. This development has, in turn, necessitated the governments to change their role away from direct control and participation in agricultural markets to the promotion of such private sector activities.

The ADPC is considered to be in a unique position to facilitate this transition, given its strategic location and extensive network of contacts. By virtue of its location in Thailand, the most successful promoter of agribusiness development within ASEAN, APDC can draw upon the Thai experience as a training model for other ASEAN countries. At this time, ASEAN nations have varying degrees of participation by private capital in their respective agriculture sectors. There is more private-sector participation in Thailand and the Philippines than Indonesia.

The potential for private interest in and support of ADPC is promising. Although limited, the private sector is now participating in the Center's agribusiness training programs. Agribusinesses, export companies, private research institutes and consultants have expressed interest in the Center's agricultural data information system. For example, ASEAN Food Handling Services in Singapore is already linked with ADPC's data base. In order to generate greater private interest and support, ADPC itself should develop a dynamic marketing plan to promote its services and products.

d) Assess the Sustainability of ADPC after Termination of A.I.D. Support

ADPC has prepared a Phase III project proposal which was presented to its BOP and COFAF. Both approved the continuation of the Center's activities and recommended that

the proposal be presented to prospective donors for funding assistance. ADPC staff indicated that the Center would need two more years of external assistance (about $800,000) before the Center becomes self-sufficient. A.I.D. has already gone on record that its support terminates with the completion of Phase II in 1992.

A combination of several options to finance the Center are being considered: (1) funding from traditional ASEAN dialogue partners other than the U.S.; (2) financing by private foundations and institutions; (3) increased contributions from ASEAN member countries; (4) non-ASEAN participant fees; and, (5) private sector participant fees. ADPC still needs the approval of ASEAN to conduct training programs for non-ASEANs and to solicit funds directly from the private sector.

C. CONCLUSIONS - ADPC

1. The main conclusion of this evaluation is that ADPC is a viable, well functioning institution that has met its objectives under HRD Phase II.
2. ADPC possesses the administrative and organizational capability to manage the Training Programs and services it was designed to offer.
3. Though in so short a timeframe no supportive statistical data could be gathered, there are indications that ADPC has strengthened the capacity of ASEAN to formulate more effective planning and improved agricultural policies.
4. In most cases, outputs for training programs have been exceeded.
5. Quality training programs are provided.
6. At least two significant research and planning activities have been conducted.
7. ASEAN member countries have shown their willingness to participate in training, research and data collection activities.
8. Much of the work of ADPC during 1990/1991 was done in preparation for wider private sector involvement and the Center is developing a very positive relationship with ASEAN's private sector.
9. Within an overall high level of performance, factors requiring attention are:
   - less than ideal nomination/selection process for participants in both long- and short-term training;
   - few women participants in the master's degree program; and,
   - poor follow-up on the results/impact of training project activities.
10. ADPC's financial capability and current budget shows that its ability to become self-sufficient will probably depend on a combination of some or all of the following:
    - increased participation from a paying private-sector clientele;
    - increased contributions from ASEAN member countries;
    - increased contributions from other ASEAN dialogue partners;
    - new sources of funding from private foundations and institutes; and,
    - opening of activities to paying non-ASEAN clientele.

11. The uncertain future of ADPC has resulted in a low morale among staff members who have already started to look for alternative employment.

12. ADPC and A.I.D. must be aware of the need to maintain the support of the public sector while cultivating positive relationships with the private sector.
13. A camaraderie has developed among the participants doing much to further strengthen an ASEAN-wide network of policymakers and agricultural planners.

D. RECOMMENDATIONS - ADPC

1. ADPC's management should accelerate developing a strategy to assure this Center's sustainability aimed at all potential sources listed in Conclusion 10.
2. As part of this strategy, ADPC should develop and implement a plan to elicit more private-sector support of ADPC and its activities.
3. The ASEAN private sector should be represented in the Board of Planners (BOP).
4. Studies proposed should be more carefully considered to benefit most ASEAN member countries.
5. ADPC's impact evaluation assessments should be improved; funding should be made available to finance this activity.
6. ASEAN regulations should be relaxed to permit greater flexibility in project implementation.
7. ADPC should strive to maintain positive relationships with the public sector while addressing private-sector priorities.
8. There should be a higher level of involvement by the private sector in designing training programs; an advisory committee for private sector input on research and training needs would assist greatly in this regard.

E. LESSONS LEARNED - ADPC

1. Host country support is crucial to the success of this regional Center. Royal Thai Government budgetary support, excellent training facilities, availability of capable resource persons, and the whole country itself as a learning laboratory have contributed to the success of ADPC.
2. Improving the relevance, quality, and cost effectiveness of training requires a high degree of empathy and tact when this implies curricular reform as well as changes in instructional materials and evaluation strategies.
3. In proposing regional agricultural development programs, the varying capacities of each ASEAN member country to analyze its own problems must be recognized.

V. ASEAN PLANT QUARANTINE CENTER & TRAINING INSTITUTE (PLANTI)

A. FINDINGS - PLANTI

1. Program

The ASEAN Plant Quarantine Center and Training Institute (PLANTI) was established by the Government of Malaysia and USAID to strengthen the plant quarantine capabilities of the ASEAN Region. PLANTI works to improve plant quarantine regionally to develop the plant quarantine technology and professionalism of the plant quarantine services of the Region by:

a) Conducting relevant, practical training and education on plant quarantine topics;

b) Conducting and sponsoring research on plant quarantine topics;

c) Providing post-entry quarantine services for the Region;

d) Collecting and disseminating information on plant quarantine to the Region;

e) Providing consultant services in specialized areas of plant quarantine;

f) Assisting the private sector to export agricultural products; and,

g) Assisting the ASEAN plant quarantine organizations to develop regionally standardized quarantine procedures and legislation.

During Phase I, PLANTI invested considerable resources in developing the facilities and staff with which to carry on its responsibilities. During that time, the facilities were built, the equipment purchased, the professional and supporting staff hired, and the functions of PLANTI begun. An impressive number of short-term courses, certificate and diploma courses, master's degree programs, and study tours were accomplished.

In addition to training courses, PLANTI actively organized technical meetings and developed a regional information network. Both staff and students accomplished and published numerous research projects. PLANTI also made valuable use of consultants to investigate a wide range of regional plant quarantine problems.

Under Phase II, PLANTI was to:

a) Strengthen its capacity to offer relevant training and education;

b) Strengthen its capacity to provide relevant research;

c) Further develop as a clearinghouse for information on PQ issues affecting the ASEAN region;

d) Continue to assist member nations meet the phytosanitary requirements of their commercial partners and facilitate international trade;

e) Assist in the formulation of diagnostic procedures for detecting and identifying exotic pests and diseases; and,

f) Assist in the formulation of contingency plans for containment and eradication should a pest establishment occur.

Each of these six areas of concern or components differ sufficiently from each other. Therefore, each area is evaluated separately with respect to the following:

a) the stated goals and benchmarks as stated in the USAID Project Paper;
b) the accomplishments;
c) barriers encountered or envisioned;
d) the overall effectiveness and management of the component; and,
e) whether or not the component could be utilized by Vietnam, Cambodia or Laos.

1A. Component 1: Strengthen PLANTI's Capacity to Provide Relevant Training and Education.

a) Specific Goals and Benchmarks

- Provide master's degree training for 12 participant--6 in the U.S., and 6 in ASEAN institutions
- Provide diploma training for 30 PQ officers
- Provide certificate training for 80 officials
- Provide short-term training for 800 participants
- Provide one-month study tours in the U.S. and ASEAN countries for 54 senior PQ officials
- Provide a U.S. observation/study tour for 4 PLANTI staff
- Provide senior fellowships for 6 months for 6 scientists
- Support up to 200 PQ officers to attend 1-week meetings on technical subjects
- Support 3 major PQ conferences, each for 50 PLANTI and ASEAN PQ experts
- Support (up to $40,000) PLANTI staff or senior ASEAN PQ officials to attend overseas conferences on major PQ issues
- Provide for 102 person-weeks of short-term technical assistance
- Provide for 2 person-years of long-term technical assistance

b) Accomplishments

Table I below summarizes the progress PLANTI has made toward reaching the Phase II goals that were set in 1987 to provide relevant training and education.

Table 1

Accomplishment of PLANTI's Primary Training and Education Goals

Output	Goal	Accomplishment
Master's degree training	12	4
Diploma training	30	20
Certificate training	80	54
Short-term training	800	592
1-month study tours	54	8
PLANTI study tour for 4 staff	1	-
Senior fellowships	6	1
Participants at 1-week meetings	200	150
Provide major PQ conferences	3	3
Provide ASEAN participants at conf.	150	26
Funding for overseas conferences	$40,000	
Short-term technical assistance	102 person weeks	82
Long-term technical assistance	2 person years	2

It should be noted that Table 1 is a summary of the accomplishments through June 1991. It does not reflect a full year's efforts, which plan to include:

- 14 short-term training courses, with approximately 275 participants;
- A 7-week course conducted at the APHIS Plant Quarantine training center in Frederick, Maryland, for 6 ASEAN PQ officers;
- Attendance at a workshop on South American Leaf Blight in Brazil;
- Coordinate a technical meeting on Standardization of PQ Procedures for Export of Various Crops;
- 5 participants in another diploma course; and,
- 18 participants in another certificate course.

c) Barriers Encountered or Envisioned

Some of the problems PLANTI encountered during Phase II revolved around the fluctuations of the funding from USAID. Also, based on recommendations from the 1985 Report of the Evaluation Committee, recommendations by the consultant, Dr. Robert Kahn,

(Annex 4-a) in 1988, and an internal participant survey (1984-1987 Tracer Study), conducted in 1988, PLANTI held a 1989 technical meeting on training needs. Recommendations from the technical meeting (Annex 4-a) changed the way PLANTI selected topics for training and the manner in which the topics were to be presented. In addition, it changed the duration of some courses and the number of courses that would be given each year. It also changed the priority of training, reducing some of the most costly activities, such as master's degree programs and overseas tours, in favor of more pressing needs for regional short-term courses.

Consistently, consultants and evaluation teams that have come to PLANTI, even though they were not familiar with training technology, were impressed with the facilities, the academic credentials of the staff, the volume of training and education produced, and the favorable reaction of the students. And consistently they recommended less academic, more job-oriented courses that had less lecture and more hands-on experience. They also recommended that more hands-on experience with plant quarantine be gained by the staff.

The PLANTI staff members have responded as best they can, and have made marked improvement in the curriculum, but they are hampered by a lack of knowledge of modern training technology (performance technology). They have kept up to date in their field of academic expertise, but have not developed teaching skills beyond what they observed or practiced in the university. Teaching adults is quite different than teaching college students. And training (performance) technology has advanced tremendously since 1980, when PLANTI was first conceived. Training technology is a tool PLANTI needs to obtain to augment its ability to educate. Until the PLANTI staff gains skills in training technology and teaching adults, they will only be able to operate at the present level. The effectiveness of their courses can increase very little.

Training and education is the main thrust of the Human Development Project. PLANTI should continue to concentrate on it as its top priority. There is danger that PLANTI's effectiveness in this area will be diluted as pressures increase to conduct additional research, provide increased post-entry quarantine services, disseminate additional information, and provide more regional meetings. The professional staff is capable of doing many things, but it is in danger of spreading itself too thin.

d) Overall Effectiveness and Management of Providing Relevant Training and Education

With the implementation of the recommendations of the technical meeting on training needs (Annex 4-a), the management and the effectiveness of the educational component has improved immensely. Further improvement could be made by allowing the staff to gain and practice skills in teaching adults and by making the lecture rooms more accommodating to learners (remove the fixed chairs). Discourage the use of straight lecture (especially by guest lecturers) in favor of participative lectures, discussions, simulations, practice exercises, and case studies. These methods are effective in promoting learning.

The professional staff should be allowed to receive a one month on-the-job assignment as a Plant Quarantine Officer in a port in another country to gain on-the-job experience. This will greatly increase their credibility. Additional Plant Quarantine experience can be added to the staff by hiring a PQ officer (active or retired) as a trainer.

The actual training (using performance technology) part of this component is missing. Members of the staff need to be given the opportunity to learn and practice the various parts of performance technology (Front-end Analysis, Instructional Design, Job Aids Design, Instructional Delivery, Evaluation). By using this technology they could more effectively:

- Analyze and define the performance problems of member countries or private interest groups;
- Recommend solutions to the problem;
- Design training and job aids to help solve the problem, if that is appropriate;
- Deliver the training; and,
- Evaluate the results of the training.

This technology would enable PLANTI to better provide on-site training workshops, provide workshops specific to private sector needs, and develop a train-the-trainer ability within the region. The technology is adaptable to all parts of the world, and hopefully, is available locally.

e) Usefulness of the Component to Vietnam, Cambodia, and Laos

Twenty percent of the courses given at PLANTI are now available to participants outside of ASEAN Plant Quarantine. This can include people from other regions or the private sector. There is no reason a person from Vietnam, Cambodia, or Laos could not participate. To be useful to them, however, they should be able to speak English and be involved in plant quarantine activities.

1B. Component 2: Strengthen PLANTI's Capacity to Provide Relevant Research

a) Specific Goals and Benchmarks

No specific goals or benchmarks were defined.

b) Accomplishments

PLANTI continues to aggressively pursue a wide range of research topics, but early on in Phase II, based on the 1985 evaluation report and recommendations in 1988 by Dr. Robert Kahn (Annex 4-a), the focus of the research shifted away from pure research to concentrate on applied research in support of plant quarantine activities or courses taught at PLANTI. Participants in diploma courses are expected to arrive at PLANTI with a

research topic picked by their country's PQ services. Annex 2 (h) summarizes the research that has been accomplished during Phase II. It also indicates the papers published based on the research.

c) Barriers Encountered or Envisioned

In his 1988 report, Dr. Robert Kahn made a number of recommendations to improve the research functions within PLANTI. Almost all of the recommendations were accepted and implementation proceedings started. Some of the results are as follows:

- Surveys were conducted to determine the species composition of the whiteflies, viruses, nematodes, and other organisms of quarantine interest that occur at PLANTI. These surveys are on-going.

- Pressure was applied to the local universities to increase the amount of applied research performed by students. The pressure was successful. PLANTI and these universities have developed an excellent working relationship.

- Numerous changes to the glasshouses to increase their usability as research or post-entry quarantine facilities. These changes were accomplished.

- Establish a technical advisory committee. The proposal was written but delayed because of the death of Dr. Singh, the Director of PLANTI at that time. The proposal has recently been revived.

- Provide advanced virology training for Dr. Chan. Training is currently being accomplished in Denmark.

- Obtain an electron microscope. An arrangement was made with the Technical Aid Agency of Japan to obtain an electron microscope but by the time the request had channelled through the appropriate people, it was too late. PLANTI has arranged to use an excellent electron microscope at the neighboring Universiti Pertanian Malaysia.

- Arrange for the staff of PLANTI to visit the USDA Post-entry and Plant Germplasm Inspection Facilities in Beltsville, MD. This recommendation has never been realized, but this evaluation has caused it to be considered.

The only problems PLANTI may encounter in the near future will occur if one of the professional staff leaves. There are no back-ups.

d) Overall Effectiveness and Management of the Component

PLANTI has assembled an excellent research staff, appropriately equipped and trained. The program is well-managed, and guided by the users. The effectiveness and the usefulness of the program to plant quarantine operations increased immensely when the focus of the program became applied research. To be successful, plant quarantine programs must have somewhere to turn to provide them with the research to solve problems and improve programs. However, industry, academia, and other government agencies have their own research priorities. That's why the research service PLANTI is providing the region is so valuable.

Another positive sign is PLANTI's willingness to explore ways to work with the private sector to do research on a quarantine problem that will have significance to industry. Studies on the transmission of pest organisms (pest risk analysis), alternative treatments (irradiation) for export and import commodities, and workshops on integrated pest management are but a few of the innovative ideas PLANTI is promoting.

e) Usefulness of the Component to Vietnam, Cambodia, and Laos

The main focus of the research should remain on ASEAN needs. If those needs are similar to those in Vietnam, Cambodia, or Laos, then the research would obviously be of use. A close working relationship with scientists performing similar projects in both regions would surely be of benefit to all.

1C. Component 3: Further Develop PLANTI as a Clearinghouse for Information and PQ Issues Affecting the ASEAN Region

a) Specific Goals and Benchmarks

No specific goals and benchmarks were defined.

b) Accomplishments

PLANTI has assembled a remarkably professional documentation and publishing ability. All of the posters, brochures, training programs, symposia and conference proceedings, data sheets, and newsletters are published with style and excellent quality. PLANTI's dissemination of information has had tremendous impact on raising the level of awareness about PLANTI (and plant quarantine) with the public and private sectors and within the plant quarantine community.

PLANTI has put ASEAN Plant Quarantine on the map. Table 2 below summarizes some of PLANTI's accomplishments in information dissemination during Phase II.

Table 2
Information Dissemination During Phase II

- Published 3 issues of PLANTI News each year.
- Published the proceedings from 1 conference and 1 symposium.
- Published 32 Pest Data sheets.
- Published 1 PLANTI Training Programme each year.
- Published the PLANTI Information Brochure.
- Published the Primer on Plant Quarantine.
- Published the reports from 8 ASEAN PLANTI Technical Meetings.
- Published the reports from 6 meetings of the Board of Directors of ASEAN PLANTI.
- Developed a plan for a Local Area Network (LAN) of computers for the ASEAN Region. Began acquisition of required hardware and software.
- Developed and implemented the PLANTI EXPO-90 (exposition for the public).
- Promoted PLANTI and the region's plant quarantine programme through publication and institutional exhibitions locally and elsewhere in the member countries.
- Published numerous press releases in ASEAN newspapers on PLANTI events and important plant quarantine news.
- Published articles in trade magazines and journals.
- Developed policy guidelines for the publication of the PLANTI News.
- Developed guidelines for the appointment of member country coordinators for PLANTI's publications.

c) Barriers Encountered or Envisioned

PLANTI has taken care to prepare guidelines and standards to follow in the preparation of its publications. It has conducted the audience analysis to determine the

needs of the users. As long as it continues to publish what the users want, and not what PLANTI thinks best, it should encounter no problems.

The Local Area Network should be focused on information services that the users really need and will use. The system should be tested before it is put into use and the users should be trained in how to use the system.

d) Overall Effectiveness and Management of the Component

PLANTI has developed an impressive information service. It is well managed, highly visible, and very productive. There is a wealth of information in each publication, filling a large void within the region. PLANTI's publications serve as references and should not be seen as operational manuals or guidelines.

The proceedings from technical meetings are written in narrative form, often in the passive voice. They are written and organized as notes from a meeting, not as operational manuals. If operational manuals are needed, they should be developed as such.

PLANTI has an exciting vision for the future of regional information services. Their plan for a LAN has unlimited possibilities. They are well positioned to be a major coordinator in unifying the information flow within the region. And they envision the private sector as a major component of that information network.

e) Usefulness of the Component to Vietnam, Cambodia and Laos

Vietnam, Cambodia and Laos could benefit by being added to the mailing list for the various PLANTI publications. This would allow them to know what advances are being made in the ASEAN Region. It is doubtful that PLANTI would envision them as part of the LAN.

1D. Component 4: Continue to Assist Member Nations Meet the Phytosanitary Requirements of Their Commercial Partners and Facilitate Trade

a) Specific Goals and Benchmarks

No specific goals or benchmarks were defined.

b) Accomplishments

Recently PLANTI has become very active in promoting activities between plant quarantine and the private sector involved in the export of agricultural commodities. Specifically, PLANTI has:

- Set up a meeting with the Farmers Marketing Association to answer questions and solve exporting problems.

- Set up a meeting with representatives of the cut flowers industry to discuss exporting problems and new advances in the treatment of flowers to facilitate trade.

- Worked with the Malaysian Agriculture Research and Development Institute (MARDI) and the flower growers in the Cameroon Highlands to help them survey for the white rust of chrysanthemums, a disease that prevents trade with Australia.

- Set up a national committee on cut flowers to deal with problems on an on-going basis.

- Set up a national committee on control of stored product pests to deal with problems on an on-going basis.

- Responded to requests from ASEAN countries for information on the import requirements of several foreign countries. This information was needed to enable the export of commodities from the member countries.

- Held a technical meeting on new fumigation techniques for cut flowers for export. The techniques used in Thailand became the model for the other ASEAN countries.

- Held a meeting on the use of Vapor Heat Temperature (VHT) treatments of tropical fruits for export, specifically for Japan. The techniques used in the Philippines became the model for the other ASEAN countries.

- Held a meeting on irradiation of spices (and experimental data on cut flowers) for export. Cooperated with FAO and IAEA on the meeting.

- Held a technical meeting on Plant Quarantine as an Element of International Trade Facilitation. The purpose of the meeting was to set plant quarantine in a new context as partner and facilitator of trade, rather than the image as a barrier to trade.

- Develop plans to hold a technical meeting on Standardization of PQ Procedures for Export of Various Crops. This meeting will further signal PQ's interest in helping solve problems in the export trade.

c) Barriers Encountered or Envisioned

PLANTI is taking the lead in promoting a close working relationship between plant quarantine and the exporting industry. And as that happens, industry should come to understand that the health and well-being of their industry depends to a large extent on the strength and well-being of the plant quarantine organizations. Its a symbiotic relationship where both benefit. No barriers are envisioned.

d) Overall Effectiveness and Management of the Component

PLANTI, as can be seen by the accomplishments, has been very effective in opening the dialogue with the private sector. Management of setting the tone and direction of these talks has been skillful. The development of the LAN computer system can only enhance PLANTI's ability to provide critical information on exporting requirements to the ASEAN countries.

e) Usefulness of the Component to Vietnam, Cambodia and Laos

The dialogues that have begun between exporters and plant quarantine will benefit Vietnam, Cambodia, and Laos to the extent that trade develops between that region and the ASEAN region. Industries that export agricultural commodities to Vietnam, Cambodia or Laos should open talks with plant quarantine to solve problems they may be experiencing.

1E. Component 5: Assist in the Formulation of Diagnostic Procedures for Detecting and Identifying Exotic Pests and Diseases

a) Specific Goals and Benchmarks

No specific goals or benchmarks were defined.

b) Accomplishments

PLANTI has developed an orderly process for the development of diagnostic procedures for both detecting (inspection techniques) and identifying exotic pests and diseases. The A1 and A2 Pest List, developed during Phase I, contains a list of the pests of most concern to ASEAN plant quarantine. PLANTI uses certain criteria to select an organism from the list to develop procedures for detecting and identifying the pest. They analyze how it moves in commerce, the life stages likely to be found, how to sample or inspect a commodity to find the pest, and how to preserve the intercepted specimen for identification. PLANTI will then disseminate this information through technical meetings, training at PLANTI, consultant reports, and to a certain extent, through the Pest Data Sheets and PLANTI News. Specific detection and identification procedures are generally transmitted only during PLANTI training and/or to the member countries directly.

PLANTI also develops identification aids for the pests by doing literature searches. It generally does not have actual specimens to work with and thus cannot often develop original diagnostic keys and identification aids for A1 and A2 pests.

PLANTI held a technical meeting to discuss procedures and techniques for the inspection of seed shipments and the interception of seed-borne pests and diseases. PLANTI also held a technical meeting to discuss inspection procedures for fruits and vegetables.

c) Barriers Encountered and Envisioned

There are several barriers confronting PLANTI as it tries to develop inspection procedures and identification aids:

1. It does not often have actual specimens with which to work.

2. It does not have the training and practice on how to make job aids (these could be both inspection procedures or identification aids).

3. The ASEAN Plant Quarantine organizations generally do not have the ability within their organizations to quickly identify pests of commerce. They do not have appropriate reference collections or identification literature at their disposal.

   PLANTI can work to change Items 1 and 2. Item 3 is critical to plant quarantine in the region and should be discussed and a solution promoted at the ASEAN level.

d) Overall Effectiveness and Management of the Component

PLANTI is on the right track in developing the detection procedures and identification aids. The ASEAN countries already have keys that identify to species level the insignificant organisms that are commonly seen in commerce and already exist throughout this region. It is appropriate that PLANTI concentrates on the A1 and A2 lists.

The process of developing the detection procedures and identification aids is effective and managed well. PLANTI could increase its effectiveness in disseminating the detection procedures if it made the references in the PLANTI News and Pest Data Sheets as specific and as detailed as possible.

e) Usefulness of the Component in Vietnam, Cambodia and Laos

Wherever a commodity goes from a host country, the pest also has a chance of going. So, detection procedures and identification aids that are useful in the ASEAN Region would

likewise be useful in Vietnam, Cambodia and Laos.

1F. Component 6: Assist in the Formulation of Contingency Plans for Containment and Eradication Should a Pest Establishment Occur

a) Specific Goals and Benchmarks

No specific goals or benchmarks were defined.

b) Accomplishments

PLANTI has developed a process for looking at control and eradication programs, initiating a discussion among the ASEAN member countries about the programs, having the programs technically reviewed and modified, and from the process, implementing a standard procedure for the entire region to follow.

Following that process, PLANTI helped develop standardized control or eradication procedures for:

- *Salvinia molesta*
- *Eichhornia cressipes* (waterhyacinth)
- *Mikania micrantha*
- *Mimosa pigra*
- *Sternochetus sp.*
- Bunchy-top and Moko disease of banana
- Papaya Ring-spot Virus
- Cocoa Swollen Shoot Virus
- Peanut Mottle Virus
- *Sexava nubila*
- Potato Virus
- Cocoa Pod Borer
- Khapra Beetle
- South American Leaf Blight on rubber
- Cadang-Cadang disease on coconut palm

c) Barriers Encountered or Envisioned

Standardizing procedures for an entire region must take into account many differences, such as resources, cultural practices, history with the organism, relative pest risk and cost/benefit ratios, and seriousness of the pest to the local economy. For that reason, many of the procedures, while standardized, are often somewhat general. Each country is expected to operate within that general framework and develop its own specific operational procedures.

d) Overall Effectiveness and Management of the Component

PLANTI has done a good job of getting the member countries to review and standardize many of their control and eradication procedures. To try to develop more specific procedures would go beyond the scope of PLANTI's role.

e) Usefulness of the Component to Vietnam, Cambodia and Laos

Vietnam, Cambodia and Laos might be able to use the published control and eradication procedures as reference material to see how another region should handle a situation they also may be encountering. This could give them valuable insight and indicate where some expertise might exist should they need it.

2. Financial

a) A.I.D. and Other Donors

- USAID contributed, or will have contributed by the end of Phase II, $4,000,000.
- The Government of Malaysia contributed, or will have contributed, the U.S. equivalent of $1,790,000.
- The other ASEAN member countries contributed, or will have contributed, all in-kind payments (Annex 4).
- Other donors have contributed no money, but have made other contributions including GTZ, IAEA, FAO, Catholic University at Belgium, CABI, ASEAN Grain Post-harvest Programme, and DANIDA. All have contributed in-kind.
- All USAID funds are kept in a separate account and are not commingled with other funds.

b) Financial Progress to Date

During Phase II, while the rates of obligation of A.I.D. funds varied, expenditures generally kept pace, with a 99 percent expenditure level by the beginning of 1991. Generally, throughout Phase II, PLANTI has spent USAID funds at approximately 45 percent for training, 40 percent for staff support, 5 percent for commodities, and 10 percent for information dissemination. In-kind funding from other donors tended to be used for payment of lecturers' travel, donations of equipment, donations of training for PLANTI staff, and collaboration on projects where the donor paid their expenses.

c) Potential for Private Sector Support

Presently, there is relatively little motivation for the private sector to support PLANTI activities. But as the floriculture and exotic tropical fruit producing industries grow, the potential for interaction with and support for PLANTI projects will grow. Mr. Sivanaser estimates that within 5 years as much as 5 percent of the PLANTI budget could come from that sector.

d) Assessment of Sustainability

ASEAN and PLANTI have every intention of maintaining the same level of activity after termination of USAID support. Three options are being considered that will provide funding. All three choices will fully fund PLANTI.

B. CONCLUSIONS - PLANTI

PLANTI provides exceptional service to the ASEAN Plant Quarantine organizations in six separate, but interrelated, functional areas. PLANTI performs admirably in all six areas. In each area, there were examples of foresight, good planning and good organization including effective innovations (the diploma course, in its present format, giving an experienced PQ Officer five months away from the job to research a problem confronting ASEAN plant quarantine; and, the concept of using a LAN computer system to facilitate the flow of essential information within the region).

There are some areas of concern and these are noted as follows:

- The professional staff at PLANTI needs to improve their training skills.
- ASEAN needs a systematic way of translating the products produced by PLANTI into operational reality.
- ASEAN needs to develop standardized operational guidelines, manuals and aids.

C. RECOMMENDATIONS - PLANTI

1. PLANTI has used consultants very effectively in the past to guide improvements. They should continue using appropriate consultants.

2. PLANTI should give the teaching staff the opportunity to gain expertise in:

- teaching adults,
- performance technology, and
- on-the-job plant quarantine experience.

3. After receiving training in performance technology and manual writing, members of the staff should guide the development of operations manuals and aids for the PQ organizations. The manuals and aids must be clear and easy to use.

4. PLANTI should work with the PQ organizations, its Board of Directors, and COFAF to develop a systematic way of translating all of PLANTI's efforts into operational reality. There needs to be a much better dialogue and a closer working relationship between the PQ organizations and PLANTI.

5. PLANTI should modify the lecture rooms to provide the learners with comfortable seating.

6. PLANTI should add detail to the interception techniques section of PLANTI NEWS and the Pest Data Sheets.

7. PLANTI should prepare properly for the installation of the LAN computer system, focusing always on the needs of the user, rather than on the capabilities of the system.

8. If funds are available, PLANTI should arrange for PLANTI staff to visit the USDA-APHIS Germplasm and Post-entry Quarantine facilities in Beltsville, Maryland, and the Professional Development Center in Frederick, Maryland.

D. LESSONS LEARNED - PLANTI

1. PLANTI quarantine is a regional and even global concern. A pest that becomes established in the Philippines or India or the United States may some day be a pest throughout the ASEAN Region. PLANTI, as a regionally unifying force for plant quarantine within ASEAN, makes sense. The region's agriculture and agribusiness interests are much safer through PLANTI's efforts. PLANTI fills a critical need.

2. PLANTI's research projects became much more effective when they switched to applied research related directly to PQ problems occurring in the field.

3. PLANTI's training programs improved greatly when they switched away from the predominantly academic approach to teaching to an emphasis on the hands-on approach, in subjects related to on-the-job needs.

4. Unless there is a close working relationship between the operations staff and PLANTI, much of what is produced by PLANTI will not be effectively used.

VI. GENERAL LESSONS LEARNED - ASEAN

1. As bilateral assistance programs are reduced or terminated for whatever reason, providing regional assistance through ASEAN is a viable means of retaining an identity with and assisting the development aspirations of its member nations.

2. ASEAN represents a conglomorate of Southeast Asian nations in various stages of development; there is no question regarding its collective capabilities in formulating viable project undertakings embodying A.I.D.'s current policies and in utilizing the four regional centers.

3. The "Dialogue Partner" mode by which ASEAN assigns a single donor exclusively to a particular center limits access by center directors to the mix of capabilities and resources within the external donor community.

4. The *de facto* placing of ASEAN regional centers under the jurisdiction of each ASEAN National Committee in effect places the burden and responsibility more on the host nation than on ASEAN itself; this has contributed to the present pattern of reluctance to share operational costs collectively.

5. The consensus mode, which characterizes the decision-making process of the rest of ASEAN, has not permeated to the operations of some of its regional centers. Policy and program matters are largely decided by center directors who, at their discretion, may or may not consider inputs from senior staffs or assessments by trainees. A more systematic method of incorporating staff recommendations and feedback from trainees into the planning and structuring of future programs would provide a much greater degree of assurance that ASEAN's regional centers' activities are synchronized to the changing needs of its members as such needs come into focus.

6. ASEAN has yet to work out the mechanics of a collective annual assessment and establishment of a common fund to support either its regional centers or other activities. Until a formula for such assessment is endorsed and put into place, any regional center must of necessity be hosted in close proximity to a national institution with capabilities in the same discipline to assure continuing financial viability. Unfortunately, this in turn only reinforces the prevailing perception of these centers more as national, rather than ASEAN regional, entities.

I. REPORT ANNEXES

REPORT ANNEXES

ANNEX (A) - Charts

(1) Organizational Structure of ASEAN
(2) Subsidiary Bodies of ASEAN Committees
(3) ASEAN Public-Private Sector Linkages
(4) Distribution of U.S. ASEAN Projects
(5) SEAMEO Centers

Organisational Structure of ASEAN

CHART No. 1.

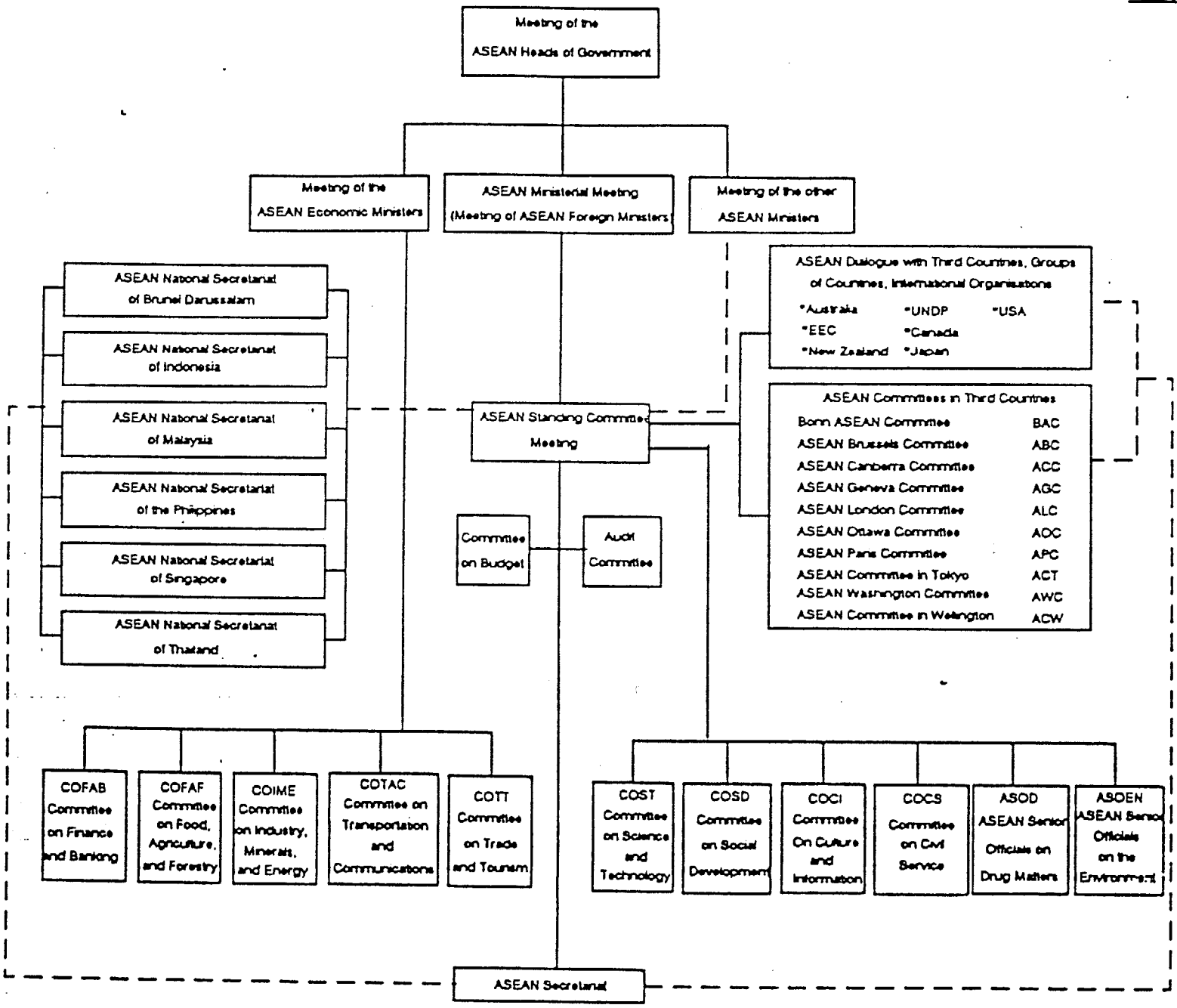

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CHART No. 2.

Subsidiary Bodies of the ASEAN Committees

- Working Group on Fisheries
- Working Group on Grain
- Working Group on Horticulture
- Working Group on Livestock
- ASEAN Food Handing Bureau
- ASEAN Forest Tree Seed Centre
- ASEAN-US Watershed Project

COFAF Committee on Food Agriculture and Forestry

- Sub-Committee on Food Handing
- Food Security Reserve Board
- Co-ordinating Group on Livestock
- Co-ordinating Group on Forestry
- Co-ordinating Group on Fisheries
- Co-ordinating Group on Crops
- ASEAN Agricultural Research Co-ordinating Board
- Council of ASEAN Directors for Extension
- PLANTI Plant Quarantine Centre & Training Institute
- ADPC Agricultural Development Plan Centre

COFAB Committee on Finance and Banking

- Working Group on Customs Matters
- Meeting of Insurance Commissioners
- Working Group on Tax Matters

COIME Committee on Industry, Minerals and Energy

- ACEG on Guidelines for Industrial Complementation
- ACEG on ASEAN Ammonium Urea Project (Indonesia)
- ACEG on ASEAN Ammonium Urea Project (Malaysia)
- ACEG on ASEAN Copper Fabrication Project (Philippines)
- ACEG on ASEAN Diesel Engine Project (Singapore)
- ACEG on Rock Salt Soda Ash Project (Thailand)
- ACEG on ASEAN Vaccine Project (Singapore)
- ACEG on Concept of Prevailing Market Prices Applicable to ASEAN
- ACEG on ASEAN Industrial Standardisation
- ACEG on the Automotive Industry
- ACEG on the Motorcycle Industry
- ACEG on ASEAN Offset Programme in the Aerospace Industry
- AECG on Small and Medium Industries
- ACEG on the ASEAN Investment Guarantee Agreement
- ACEG on Minerals
- ACEG on Non-petroleum Energy

COTAC Committee on Transportation and Communications

- Sub-Committee on Shipping and Ports
- Sub-Committee on Civil Aviation and Related Services
- Sub-Committee on Post and Telecommunications
- Sub-Committee on Land Transportation
- Joint Ad-Hoc Working Group on Shipping

COTT Committee on Trade and Tourism

- Sub-Committee on Tourism
- Working Group on HRD
- Working Group on Marketing
- Experts Group on Trade Preference Negotiating Group
- Working Group on Commodities

COST Committee on Science and Technology

- Sub-Committee on Climatology
- Sub-Committee on Protein
- Working Group on Food Waste Materials
- Working Group on Food Technology Research and Development
- Working Group on Non-Conventional Energy Research
- Experts Group on Environment
- Working Group on Marine Sciences

COSD Committee on Social Development

- ASEAN Population Programme
- ASEAN Regional Co-ordination Committee (RCC)
- ASEAN Youth Forum
- ASEAN Women's Programme
- Sub-Committee on Health and Nutrition
- Experts Group on Natural Disasters

COCI Committee on Culture and Communication

- Working Group on Visual and Performing Arts
- Working Group on Literary Works & ASEAN Studies
- Working Group on Radio, TV, Film and Video (Electronic Media)
- Working Group on Print and Interpersonal Media

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ASEAN Government/ASEAN-CCI Interaction Chart

CHART No. 3.

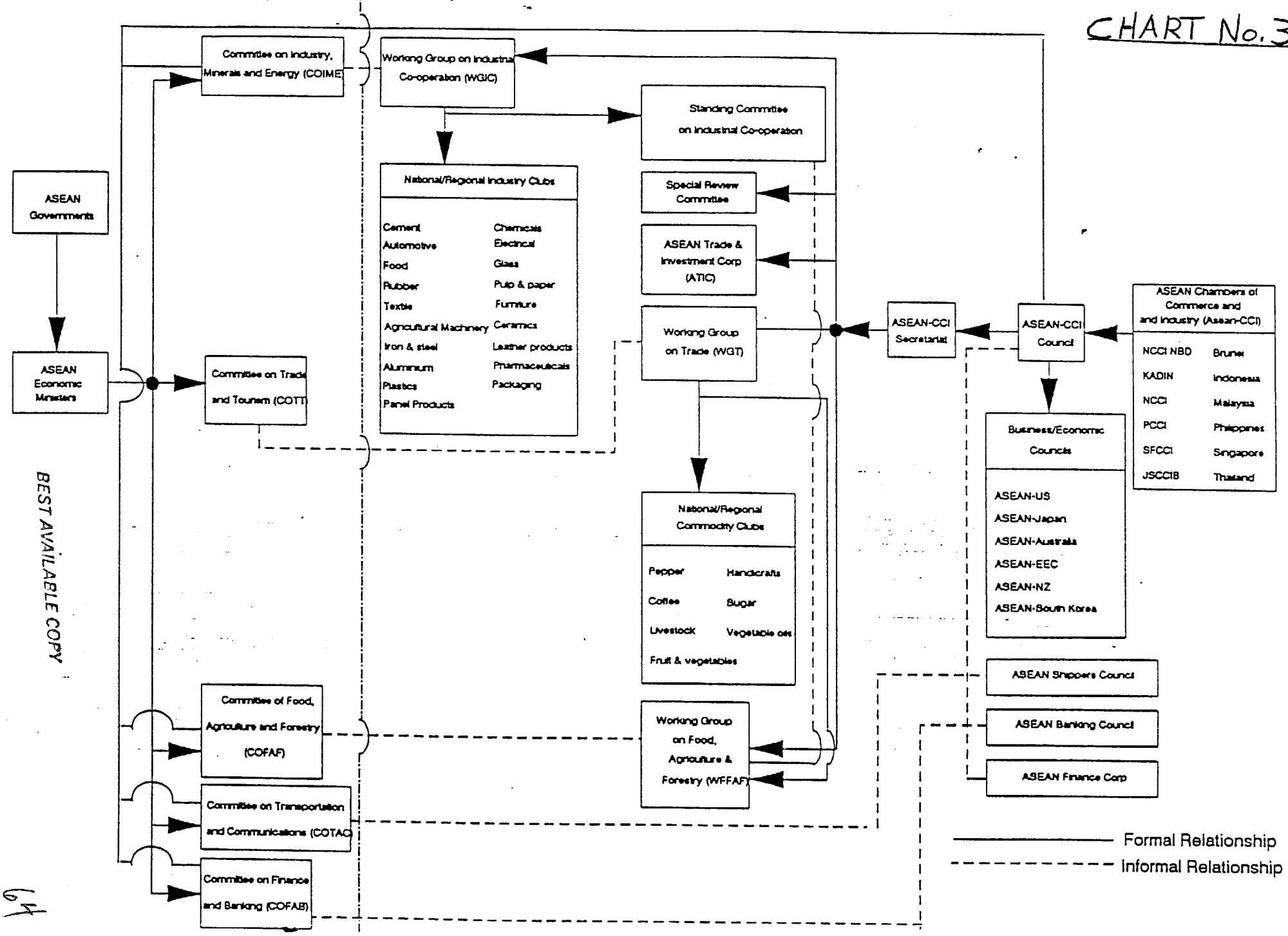

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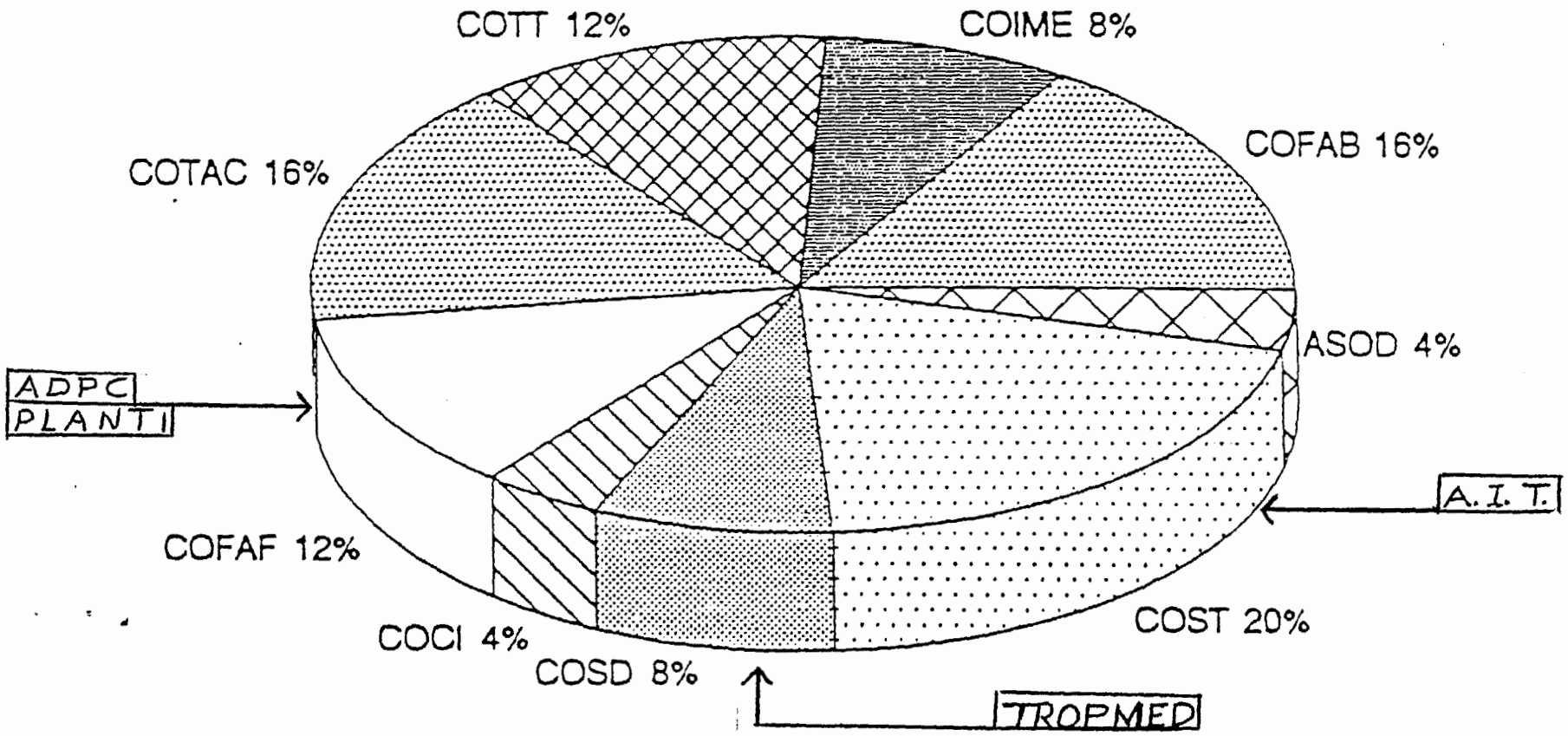
CHART No. 4.

Distribution of US-ASEAN Projects
(Number of projects as percentage of total)



Notes: 1) *Includes listed new, on going, and completed projects given in Annual Report of the ASEAN Standing Committee, 1988-1989.*

2) *Distribution is calculated using number of projects, rather than size as latter figures are unavailable*

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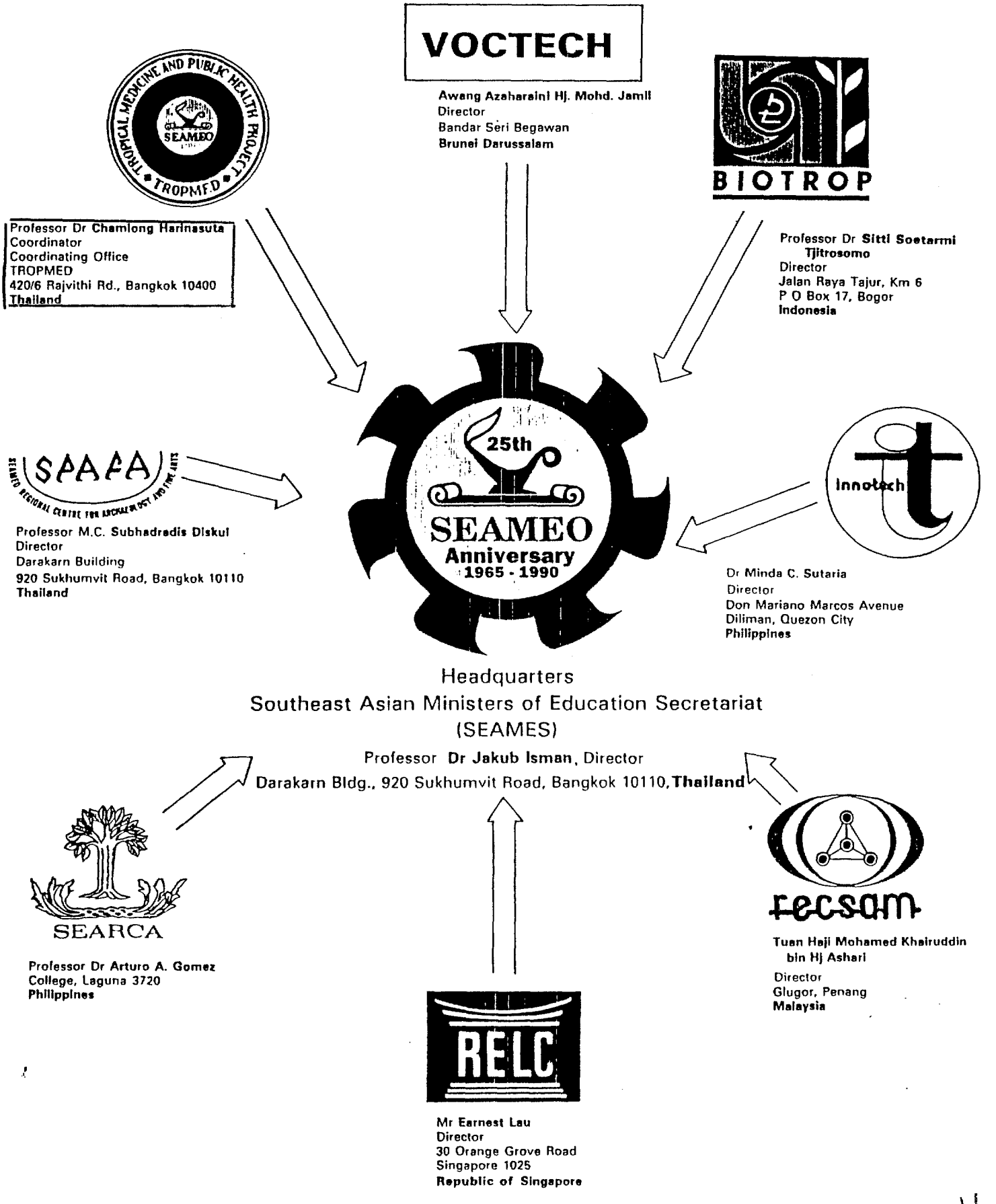
CHART No. 5


VOCTECH
Awang Azaharaini Hj. Mohd. Jamil
Director
Bandar Seri Begawan
Brunei Darussalam
TROPICAL MEDICINE AND PUBLIC HEALTH PROJECT
SEAMEO
TROPMED
Professor Dr Chamlong Harinasuta
Coordinator
Coordinating Office
TROPMED
420/6 Rajvithi Rd., Bangkok 10400
Thailand
BIOTROP
Professor Dr Sitti Soetarmi Tjitrosomo
Director
Jalan Raya Tajur, Km 6
P O Box 17, Bogor
Indonesia
SPAFA
Professor M.C. Subhadradis Diskul
Director
Darakarn Building
920 Sukhumvit Road, Bangkok 10110
Thailand
25th
SEAMEO
Anniversary
1965 - 1990
Innotech
Dr Minda C. Sutaria
Director
Don Mariano Marcos Avenue
Diliman, Quezon City
Philippines
Headquarters
Southeast Asian Ministers of Education Secretariat
(SEAMES)
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SEARCA
Professor Dr Arturo A. Gomez
College, Laguna 3720
Philippines
recsam
Tuan Haji Mohamed Khairuddin bin Hj Ashari
Director
Glugor, Penang
Malaysia
RELC
Mr Earnest Lau
Director
30 Orange Grove Road
Singapore 1025
Republic of Singapore

ANNEX (B)

MAY 21 1991

STATEMENT OF WORK

FOR EVALUATING

THE ASEAN HUMAN RESOURCES DEVELOPMENT PROJECT (398-0287)

INTRODUCTION

This is an interim evaluation of the ASEAN Human Resources Development Project. Its purpose is to assess progress to date and identify actions to be taken by USAID, the ASEAN governments and implementing institutions for the remaining life of the project.

The material provided below is the overall scope of work for the team carrying out the review and assessment of the ASEAN Human Resources Development Project.

I. OBJECTIVES

The objectives of this interim evaluation are to: (a) measure progress towards achieving the project's purpose; (b) review the effectiveness of the implementing agencies in meeting project benchmarks; (c) identify and analyze problems inhibiting progress; (d) recommend actions to correct problems; (e) assess the implementing agencies' management of their respective components; (f) assess the extent to which A.I.D. assistance contributed to institutional development and discuss the extent to which project is developmentaly effective; (g) discuss - potential - private interest in the project; (h) assess project sustainability in relation to ASEAN country contributions; (i) assess the importance of the project in relation to the potential of providing training and research assistance to Laos, Vietnam, and Cambodia; and (j) identify lessons learned.

II. PROJECT SUMMARY

Rapid change in the economies of the Association of Southeast Asian Nations (ASEAN)* generates a constant need to upgrade and prepare human resources for technological adaptation and development. In turn, variance in the character of technological change creates demand for deliberate policies and means to expand training and research opportunities. Recognition of skills training as a sound path for technical adjustment is the basis of ASEAN's request for US assistance with human resources development (HRD).

This project builds on activities of four previous ASEAN projects (in effect, Phase II of these activities). The Plant Quarantine Centre and Training Institute (PLANTI); the Agriculture Development Planning Centre (ADPC); the Scholarship Program for Applied Tropical Medicine and Public Health (TROPMED); and the Asian Institute for Technology (AIT) Scholarship and Research Program.

Fourteen million dollars in grant funds were authorized to assist ASEAN to conduct priority HRD and related institutional improvement activities. The grant will provide: $4.0 million to better the quality of plant protection and quarantine services in the region; $1.75 million to improve the region's primary health and nutrition services; $3.4 million to expand the post-graduate pool of engineers, managers, planners and scientists trained in agriculture and rural development, applied engineering, natural resources development, irrigation, computer applications and other technical topics; and $1.85 million in contingency funding.

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* ASEAN is comprised of six countries: Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

The primary project goal is to accelerate the transfer, adaptation and development of technology in selected areas that contribute to regional economic productivity. The project seeks to increase the human and institutional resource capacities of the ASEAN region in the key sectors named above, i.e., plant protection and quarantine, agricultural economics and planning, primary health, agricultural engineering, rural development and other priority development areas. By increasing human and institutional capacities, this project will strengthen ASEAN-wide networks devoted to regional cooperation for socio-economic development.

The project will train approximately 1,988 ASEAN participants: 360 at the Master's Degree level at regional institutions; 6 at the Master's Degree level in the US; 266 at the Diploma level at regional institu- tions; and 1,356 in short-term training at ASEAN sites. Moreover, some 744 nationals will benefit from seminars, workshops and conferences focusing on agriculture, health and other development technologies. By project end, participants will be using acquired technical skills in their respective countries. Since many of them will be instructors from national institutions, or serve similar roles in member countries upon return, their transfer and diffusion of skills will multiply the economic and technical effects in the region as a whole.

At the institutional level the project will strengthen the ASEAN Plant Quarantine Center and Training Institute (PLANTI) in Malaysia and the ASEAN Agriculture Development Planning Center (ADPC) in Thailand to serve as regional plant protection and agriculture planning and research centers, respectively. The project will also advance the regional responsiveness of the ASEAN university network for Applied Tropical Medicine and Public Health (TROPMED) and the Asian Institute of Technology (AIT). It will sharpen the capacities of these institutions to respond to changing human and technical resource needs in the region over time. Scholarship support for participants at these centers will facilitate information dissemination and sharing, thus increasing the cohesion of ASEAN's technical networks.

III. PROJECT COMPONENTS

1. ASEAN PLANT QUARANTINE CENTER AND TRAINING INSTITUTE - PHASE II

The descriptions below are brief summaries of project activities. Complete descriptions are contained in the Project Paper and other documentation available at USAID/ASEAN and in documentation at the implementing institutions.

A. Background. Agriculture and agribusiness are mainstays in the economy and welfare of the ASEAN region. One of the foremost barriers to increased production is ineffective crop protection practice. Crop and forest pest losses are estimated to range from 25 to 35 percent in ASEAN countries. Through improved pest management practices, such losses can be reduced.

To strengthen ASEAN region plant quarantine (PQ) services, AID entered into an agreement in 1980 to establish the ASEAN Plant Quarantine Center and Training Institute (PLANTI) at Kebangsaan University, near Kuala Lumpur, Malaysia. Construction of the PLANTI complex began in March 1982, and PLANTI has quickly become a highly effective institution for PQ training, research and extension-type activities in the ASEAN region.

B. Description. The purpose of Phase II assistance to PLANTI is to improve the quality of basic PQ services in the region. Intermediate objectives are to (1) strengthen PLANTI's capacity to offer relevant training and perform applied research; (2) further develop PLANTI as a clearing- house for information on PQ issues affecting the ASEAN region; (3) assist member nations meet the phytosanitary requirements of their commercial partners and thus facilitate international trade; and (4) assist in formulating diagnostic procedures for detecting and identifying exotic pests and diseases and in developing contingency plans for containment and eradication should pest establishment occur.

C. Project Input/Activities.

1) Training - MS degree, diploma, certificate, short courses, one-month U.S. study tours for senior officials, U.S. observation/study tours for staff, senior fellowships, and selected technical meetings and conferences.

2) Technical assistance - short-and long-term TA to assist in curriculum and course development and to help ASEAN members resolve country-specific problems.

3) Commodities - to enhance and expand PLANTI's training, research and information dissemination capabilities.

4) Staff support - salary and allowance support.

5) Information dissemination - publications, bulletins and newsletter.

2. ASEAN AGRICULTURAL DEVELOPMENT PLANNING CENTER - PHASE II

A. Background. The ASEAN Agricultural Development Planning Center (ADPC) was established at Kasetsart University, Bangkok, Thailand in 1980. It was created in response to (1) a regional shortage of trained personnel in agricultural economics and development planning and (2) a recognized need for stronger planning to enhance agricultural performance in the ASEAN region, particularly in overcoming common agricultural development problems among the nations.

B. Description. In the longer term, this project component aims to help increase agricultural productivity and production within the region. Its purpose is to strengthen the capacity of ASEAN member countries to formulate

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more effective policy and undertake better agricultural planning. Selected agricultural planners will be trained to assist with current planning weaknesses. At the same time, ADPC will be further developed in its capacity to serve ASEAN country needs on a continuing basis in the face of changing agricultural conditions.

C. Project Inputs/Activities.

1) Training - Master's degree in agricultural economics and short-term for senior planners, senior officials and research leaders.

2) Research and data - comparative studies and analysis for both food and feed crops, agricultural policy issues and statistical data collection.

3) Institutional support - commodities, salaries and selected O&M costs.

3. HEALTH AND NUTRITION (TROPMED) - PHASE II

A. Background. The SEAMEO Tropical Medicine and Public Health Project (TROPMED) is a cooperative network of training institutions in the region. Since its inception in 1967, TROPMED has worked to promote regional cooperation in the prevention, control and eradication of endemic tropical and communicable diseases through teaching and research. TROPMED members have drawn on their particular institutional strengths and interests to develop special Master's and diploma-level courses in public and preventive health. With a small central office at Mahidol University in Bangkok, TROPMED supports member institutions with special field activities, research training grants, faculty exchange, seminars, and educational scholarships as well as in producting and distributing scientific journals.

The US supported the early organization of SEAMEO-TROPMED and provided substantial assistance in capitalizing all four regional centers in Indonesia, Malaysia, the Philippines and Thailand. With steady progress in institutional development, there was less need for direct capital assistance or operating cost support. Accordingly, scholarship assistance was initiated under the ASEAN-US program in 1981.

B. Project Input/Activities.

1) Training - short-term technical training in diploma courses and longer-term academic training at the Master's level.

2) Regional Seminars - information dissemination through the TROPMED network for curriculum development and technical areas, with an emphasis on childhood diseases.

4. ASIAN INSTITUTE OF TECHNOLOGY (AIT) - PHASE II

A. Background. The Asian Institute of Technology (AIT) was chartered in 1967 by the Royal Thai Government (RTG) as an independent educational institution with international status. The Institute provides graduate training for engineers, scientists and planners and thus serves as an important contributor to the achievement of ASEAN's development goals.

B. Project Input/Activities.

1) Training - Master's degree (with research topic) and short-term training in technical areas.

2) Specially designed activities - short-term specialized technical training.

IV. TECHNICAL DIRECTIONS

The evaluation team shall address the evaluation objectives to each component and the specific evaluation questions indicated below, draw conclusions from the findings, and make recommendations responding to those conclusions. The review/assessment will also contain a discussion of lessons learned during project implementation.

The evaluation shall include a detailed examination of overall project progress in terms of the delivery of project inputs, the realization of project outputs and the achievement of initially planned project objectives. In addition, this assessment will examine the continuing validity of project administrative arrangements, and the technical and institutional soundness of the project based on implementation experience. At each of these levels, the project review/assessment will examine the current validity of the original design assumptions.

Specific Issues for Mid-Project Evaluation Review.

- Extent to which ADPC and PLANTI have increased donor and ASEAN financed support.

- Extent to which ADPC and PLANTI have established and improved training programs.

- Review of participant selections: quality, number of candidates, numbers of women and private sector participants.

- Review training undertaken - costs, effectiveness, product.

- Review TROPMED courses for quality, overlap, and improvement.

- Information from follow-up questionnaires or interviews with returned participants for relevance of training and appropriateness of position.

- Extent of role as regional institution -- e.g., documentation/ information center, coordination of regulation formulation, and cooperative research efforts.

V. METHODOLOGY

A. Timing. The evaluation will begin in Thailand on June 1, 1991. The five person team will be permitted a six day week in the field. The four technical members of the team, the plant quarantine specialist, the engineering educator, the agriculture research and education specialist and the health educator, will complete their tasks within 18 field work days. At this time the team will provide USAID/ASEAN with a draft report of the team's findings. The team leader, project development officer/HRD specialist, will review the report with USAID and implementing agencies during the following week and initiate action to prepare the final report. The team leader's field work will then have been completed, and the team leader will submit the final report to USAID/ASEAN within 30 days of departure.

B. Basic Information Collection Techniques

1. Review of Documents: The team will review relevant project and background documents. These documents will be provided by USAID and the implementing agencies and will consist of the project paper, the project agreement, periodic project reports, and project files. In addition, each institution has been instructed to do their own evaluation which should be reviewed by the team.

2. Interviews: The team will interview relevant USAID, ADPC, TROPMED, PLANTI and AIT personnel in Bangkok and Kuala Lumpur.

VI. TEAM COMPOSITION

The evaluation team shall be composed of:

A. Project Development/HRD Specialist (Team Leader) -- Person must be familiar with team management and AID Handbook 3 requirements for project implementation, monitoring and evaluation. Knowledge of regional economic situation in ASEAN and good understanding of human resources development constraints in these rapidly developing countries is important. Knowledge of the institutions supported by this project would be helpful. The person must have experience evaluating AID HRD projects that include both policy and implementation aspects of agriculture, engineering, research, and health training programs included in this project. Person should be articulate and a good writer who can pull a team product into a coherent final report. (6 weeks)

B. Plant Quarantine Specialist -- Person must be familiar with plant quarantine in general and especially with plant quarantine training and research efforts in the the ASEAN region. Experience in AID or other donor institution project implementation, monitoring and evalution would be good. (3 weeks)

C. Engineering Educator: Person should have engineering education experience in the ASEAN region in areas of technology training. Experience in computer science, energy tecnology, environmental engineering, geotechnical engineering, and industrial engineering and management would be useful. Person should also have project evaluation experience. (3 weeks)

D. Agriculture Research and Education Specialist: Person should have an agriculture training and reseach background. Knowledge of regional ASEAN agriculture training and research constaints is important. Person should be experienced in development of agricultural planning strategies and methodologies: skills and techniques in project formulation, monitoring and evaluation. (3 weeks)

E. Health Educator: Person should have experience with graduate level health education and research programs in variety of health sectors, especially with deseases that are highly prevalent among the vulnerable younger age groups in the ASEAN countries. Person should also have project evaluation experience. (3 weeks)

Project Development/HRD Specialist (Team Leader)	6 weeks
Plant Quarantine Specialist	3 weeks
Engineering Educator	3 weeks
Agriculture Research and Education Specialist	3 weeks
Health Educator	3 weeks

USAID/ASEAN would appreciate contractor's efforts to recruit a team with good South East Asian experience. Experience with or knowledge of AID's ASEAN program will be considered a plus.

VII. REPORTING REQUIREMENTS

A. Draft Report. One week (7 days) prior to departing Thailand, the evaluation team will present a written draft report of findings for review by USAID, ADPC, TROPMED, PLANTI and AIT. Shortly thereafter the team will discuss the report with these agencies/organizations. These groups will provide comments on the report within four calendar days. During the last 3 days, the team will incorporate into the report, as appropriate, feedback derived from the review.

B. Final Report. Within 30 days of completion of field work, the team leader will complete a final report and submit 10 copies to USAID. The final report will follow the format outlined in Annex A attached.

DOC:0979S:02/14/91

II. ANNEXES - A.I.T.

ANNEXES - A.I.T.

ANNEX (a) List of Documents Reviewed - A.I.T.

1. Letter from USAID to Asian Institute of Technology dated September 15, 1987 authorizing Grant no. AID 492-0287-G-SS-7094-00.

2. USAID Project Implementation Order dated May 14, 1991 amending

   the grant to AIT Scholarship II component of the ASEAN HRD Project by extending the Grant Completion Date to May 31, 1993.

3. Proceedings of US-ASEAN Scholarship Program Coordinators' Meeting, May 9-11, 1990.

4. Proceedings of US-ASEAN Scholarship Program Coordinators' Meeting, April 1-3, 1991.

5. Record of Participants and Course Listing at AIT as of May 1991.

6. AIT US-ASEAN HRD Program Implementation Guidelines and Program Offerings, as of May 1991.

7. Financial Status of US-ASEAN Phase II, as of December 31, 1990.

8. AIT Tracer Study I and II of US-ASEAN Phase II Participants, as of December 1990.

9. Course Evaluation of PCAD Training Programs at AIT.

10. Counter Funding of US-ASEAN Scholarships Project (Phase II), 1987-1990.

11. Cost Effectiveness Comparisons of AIT Short-Term Training Courses to Similar Courses offered by other training centers.

12. Data Base of AIT Alumni Supported by the US-ASEAN Scholarships Project (Phase II).

13. 1990 AIT Annual Report

14. An Assortment of Brochures about AIT's Academic Divisions and Centers.

ANNEX (b) Listing of Persons Interviewed - A.I.T.

1. Introductory Meeting with AIT Administrators:

Date: Morning, July 10, 1991
Present: Prof. Ricardo P. Pama, Vice President for Development
Mrs. Aurorita M. Mendoza, Coordinator for Development
Dr. Barbara Igel, Scholarship Development Office

2. Meeting with US-ASEAN Scholarship Participants

Date: Afternoon, July 11, 1991
Present: 3 Master's Degree candidates
15 participants in the 3-month Programs in Computer Applications Development (PACD) - names on attached list.
7 participants in the 1-month Training in Computer Applications in Education - names on attached list.
Dr. Barbara Igel, Scholarship Development Office
Mrs. Aurorita M. Mendoza, Coordinator for Development
Mr. R.L. Gonzales, Jr., Manager, Programs in Computer Applications Development (PCAD), Regional Computer Center (RCC)
Mr. Kiew Kuan Boon, External Services Officer, RCC

3. Interview with Directors of AIT's Centers

Date: Morning, July 12, 1991
Present: Mrs. Aurorita M. Mendoza, Coordinator for Development
Prof. K. Harigopal, Director, Continuing Education Center (CEC)
Mrs. Lilla Robles-Austriaco, Senior Information Scientist, International Ferrocement Information Center (IFIC), a component of Library and Regional Documentation Center (LRDC).
Mr. Terry Jeggle, Program Coordinator, Asian Disaster Preparedness Center (ADPC).
Dr. Charoon Chirapaisarnkul, Director of Regional Computer Center (RCC)
Mr. R.L. Gonzales, Jr., Manager, Programs in Computer Application Development (PCAD), RCC
Mr. Kiew Kuan Boon, External Services Officer, RCC

4. Exit Interview with Vice President for Development

Date: Afternoon, July 12, 1991
Present: Dr. Ricardo P. Pama, Vice President for Development

List of PCAD US/ASEAN Scholarship Holders for May 1991

No	Participant's Name	Nat	Prog	Donor	Week
1	Ms. Sulianah Bte Menuddin	BN	AD	US/ASEAN	12
2	Ms. Raudzah Binti Mansor	BN	AD	US/ASEAN	12
3	Mr. Mansor Juluddin	BN	BS	US/ASEAN	12
4	Ms. Pg Hj Salmah Bte Pg Hj Tuah	BN	BS	US/ASEAN	12
5	Ms. Hamedah Ahmad	BN	BS	US/ASEAN	12
6	Ms. Caroline Yapp	BN	AD	US/ASEAN	12
7	Ms. Lim Guat Goo	BN	BS	US/ASEAN	12
8	Ms. Hajjah Aishah Pim Pg.	BN	BS	US/ASEAN	12
9	Ms. Dk Hj Rosni Binti Pg Hj Sabtu	BN	BS	US/ASEAN	12
10	Mr. Kalya Prasetia	IO	AD	US/ASEAN	12
11	Mr. Widjajana Andi Heman	IO	AD	US/ASEAN	12
12	Mr. Reneechito M. Sto. Domingo	PH	AD	US/ASEAN	12
13	Ms. Judy Melendez Ticsay	PH	BS	US/ASEAN	12
14	Ms. Elsa B. Alaba	PH	BS	US/ASEAN	12
15	Mr. Titasak Boonthai	TH	AD	US/ASEAN	12

List of Workshop US/ASEAN Scholarship Holders for May 1991

No	Participant's Name	Nat	Donor	Duration
(Training in Computer Applications in Education)				
1	Mr. Arniel D. Estrella	PH	US/ASEAN	4/7/91-31/7/91
2	Mr. Burhanudin Mohd. Aris	MY		
3	Mr. Shaari Abdul Karim	MY		
4	Mr. Mohd. Salleh Saad	MY		
5	Mr. Jasmi Ismail	MY		
6	Mr. Khalid Ahmad	MY		
7	Mr. Mohamad Yazid Esmail	MY		

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Table 1
SUMMARY OF US-ASEAN SCHOLARSHIP (PHASE II)
Recipients as of 30 April 1991

	Brunei	Indonesia	Malaysia	Philippines	Singapore	Thailand	TOTAL
I. CURRENT STUDENTS							
A. Master's (month of intake)							
September 1990		2					2
January 1990				1			1
May 1989						1	1
B. Certificate							
1. Academic Division's Certificate Program							0
2. PCAD	3			5	1	4	13
C. Short Term Training							
1. Regular							0
2. Specially Designed							0
Sub-Total	3	2	0	6	1	5	17
II. RECIPIENTS WHO COMPLETED TRAINING							
A. Master's		10	7	2		2	21
B. Certificate							
1. Academic Division's Certificate Program		1				4	5
2. PCAD	5	5	20	12	1	9	52
C. Short Term Training							
1. Regular	59	19	46	41	47	64	276
2. Academic Division's	2	3	0	12	3	8	28
3. Specially Designed	9	6	18	20	11	6	70
Sub-Total	75	44	91	87	62	93	452
III. RECIPIENTS WHO WERE DISMISSED/WITHDRAWN							
A. Master's		1					1
B. Certificate	3						3
C. Short Term Training	9		0				9
Sub-Total	12	1	0	0	0	0	13
Grand Total	90	47	91	93	63	98	482

Table 2

SUMMARY OF US-ASEAN SCHOLARSHIP PHASE II

New Students May – July 1991

	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
A. MASTER							
May 1991 Intake	0	1	0	0	0	0	1
B. CERTIFICATE							
PCAD	12	2	0	3	0	1	18
ERDC	1	0	0	0	0	0	1
C. SHORT-TERM TRANING							
Regular	6	2	6	5	20	4	43
TOTAL	19	5	6	8	20	5	63

Table 3

US-ASEAN SCHOLARSHIPS BY COUNTRY, YEAR, AND PROGRAM 1987 - 1990

COUNTRY	1987	1988	1989	1990	TOTAL
1. Brunei Darussalam					
Master's	-	-	-	-	-
Certificate (include PCAD)	-	-	-	5	5
Short-term	-	16	4	17	37
2. Indonesia					
Master's	-	10	-	2	12
Certificate	5	1	-	-	6
Short-term	-	6	7	11	24
3. Malaysia					
Master's	3	3	1	-	7
Certificate	6	4	3	7	20
Short-term	-	22	5	27	54
4. Philippines					
Master's	-	1	1	1	3
Certificate	-	2	8	2	12
Short-term	-	14	3	39	56
5. Singapore					
Master's	-	-	-	-	-
Certificate	-	-	1	-	1
Short-term	-	3	6	31	40
6. Thailand					
Master's	-	2	1	-	3
Certificate	-	-	9	4	13
Short-term	-	24	27	7	58
TOTAL					
Master's	3	16	3	3	25
Certificate	11	7	21	18	57
Short-term	-	85	52	132	269

Table 4

US-ASEAN PHASE II

Distribution of US-ASEAN Scholarship Holders

(By Division and Sex)

as of May 1991 Term

DIVISION	Master's		Certificate	
	Male	Female	Male	Female
Master				
Agricultural & Food Eng.	8 *	–	1	–
Computer Science	–	1	–	–
Energy Technology	–	1	–	–
Environmental Eng.	5	1	–	–
Geotec. & Trans. Eng.	4	–	–	–
Industrial Eng. & Mgt.	2	–	–	–
Structural Eng. & Const.	1	–	–	–
Water Resources Eng.	3	–	–	–
Certificate				
PCAD	–	–	43	22
Remote Sensing	–	–	2	1
TOTAL	23	3	46	23

* 1 student from Indonesia resigned

Table 5

BREAKDOWN OF MALE-FEMALE STUDENTS
CURRENTLY ENROLLED AT AIT
MAY 1991 TERM

ACADEMIC UNIT	DOCTORAL			MASTER			DIPLOMA			CERTIFICATE			OTHERS			TOTAL
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
AE	16	3	19	90	31	121							1		1	141
CS	6	1	7	66	22	88	1		1	1	1	2		2	2	100
ET	7	1	8	50	11	61				2	1	3	3		3	75
EV	7	3	10	26	8	34										44
GT	10		10	42	3	45										55
HS	12	3	15	71	30	101										116
IE	6		6	61	11	72							1		1	79
NR				26	15	41				1		1	1	3	4	46
SC	5		5	25	4	29										34
SM				27	10	37				1		1	6	1	7	45
TC				12	6	18				7		7	4		4	29
WR	11	1	12	56	7	63										75
TOTAL	80	12	92	552	158	710	1	0	1	12	2	14	16	6	22	839

Table 6

US-ASEAN SCHOLARSHIPS PROJECT

Participants' Sectoral Representation

1990

COURSE	PUBLIC	PRIVATE	TOTAL
1. 7th Asian School in Energy	3	-	3
2. Marine Oil Pollution: Prevention, Control, and Abatement	13	-	13
3. Project Management	3	2	5
4. Fruits and Vegetable Farming	1	-	1
5. Monitorign and Evaluation of Agricultural and Rural Development Projects	1	-	1
6. Project Monitoring and Evaluation	12	1	13
7. Human Resource Management	4	-	4
8. Irrigation System Management	-	1	1
9. Management of Training Centers	5	-	5
10. Advanced Management Program for Asia-Pacific Managers	7	4	11
11. Managing Rural Development	3	1	4
12. Small Business Management	3	-	3
13. Ferrocement Technology for the Construction Industry	11	8	19
14. Environmental Impact Assessment and Review	2	2	4
15. Information Technology and Computerised Library Services	1	-	1
16. Disaster Management Course -10	4	-	4
17. Disaster Management Training	4	-	4
18. PCAD Jan'90	5	-	5
19. PCAD May'90	2	-	2
20. Microcomputer Manintenance (May-July)	4	-	4
21. Microcomputer Maintenace (AS 01)	5	1	6
22. Administrative Application Analysis and Development (AS 03)	9	-	9
23. Computer Application Development in Education	15	-	15
24. Computer Application in Forestry Management and Planning	3	-	3
25. PCAD Sept'90	10	-	10
TOTAL	130 = 87% of Total	20 = 13% of Total	150

Table 7

US-ASEAN SCHOLARSHIPS PROJECT

1990

REPRESENTATION BY SECTOR, COURSE, COUNTRY

	PUBLIC							PRIVATE							GRAND
Course	Brunei	Indo.	Malay.	Phil.	Sing.	Thai	Sub-Total	Brunei	Indo.	Malay.	Phil.	Sing.	Thai	Sub-Total	TOTAL
01		2		1			3							0	3
02		3	3	3	1	3	13							0	13
03	3						3				2			2	5
04					1		1							0	1
05				1			1							0	1
06	3			9			12				1			1	13
07	1				3		4							0	4
08							0						1	1	1
09	1	1		3			5							0	5
10	4			1	2		7				1	3		4	11
11	2			1			3				1			1	4
12	1					2	3							0	3
13		5	2	4			11				8			8	19
14			2				2			1	1			2	4
15	1						1							0	1
16				1	3		4							0	4
17			2	1		1	4							0	4
18				2		3	5							0	5
19			2				2							0	2
20			2		2		4							0	4
21	2		3				5			1				1	6
22			5		4		9							0	9
23			4		11		15							0	15
24			2		1		3							0	3
25	5		5				10							0	10
TOTAL	25	11	32	27	28	9	130	0	0	2	14	3	1	20	150
PERCENTAGE							87%							13%	

Table 8

US-ASEAN Phase II
Thesis Topic of Graduated Master Students

September 1987 Intake

1. Mr. Lee Miang Koi — Malaysia
   Thesis Title: Development of a Microcomputer Program for Model-based Design of Water Distribution Systems

2. Mr. Saidin Bin Abu Bakar — Malaysia
   Thesis Title: Determination of Yield Loci of Muary Clay in Analyzing the Behavior of a Test Embankment

3. Mr. Anuar Bin Yahya — Malaysia
   Thesis Title: Modelling of Shear Resistance Mechanism of Concrete Members with Shear Reinforcements

January 1988 Intake

1. Mr. Totok Herwanto — Indonesia
   Thesis Title: Development of a direct paddy seeder

2. Mr. Suharno — Indonesia
   Thesis Title: Performance evaluation of enamel-coated moldboard plough

3. Mr. Hadi Suryanto — Indonesia
   Thesis Title: A computer program for insecticide application to rice crops

4. Mr. Pontianus Tamtomo — Indonesia
   Thesis Title: Accelerated wear testing of enamel coatings

5. Mr. Istiarto — Indonesia
   Thesis Title: Modelling of leachate migration under unsaturated-saturated condition

6. Mr. Momok Soeprapto Rahardjo — Indonesia
   Thesis Title: A knowledge-based system for design of spillways

7. Mr. Joko Sujono — Indonesia
   Thesis Title: Distributed parameter rainfall-modeling for ungaged rivers

8. Mr. Mila Japitana Jude — Philippines
   Thesis Title: Research Study: An assessment of economic cogeneration potential of selected textile industries in the Philippines

Table 8 (Continued)

May 1988 Intake

1. Mr. Nakorn Manomayanggoon Thailand
   Thesis Title: Production planning and scheduling in the kraft paper industry

2. Mr. Boonrat Sasiwong Thailand
   Thesis Title: Production planning and scheduling for an iron and steel factory

September 1988 Intake

1. Mr. Hary Christady Hardiyatmo Indonesia
   Thesis Title: Behavior of a mechanically stabilized embankment on soft Bangkok clay

2. Mr. Budi Kamulyan Indonesia
   Thesis Title: Application of deep bed filtration of tertiary wastewater treatment

3. Mr. Lee Heng Keng Malaysia
   Thesis Title: Enhancement of dye processing factory activated sludge by the addition of powdered activated carbon

4. Mr. Abdul Aziz bin Abdul Rasol Malaysia
   Thesis Title: Research study: Statistical analysis of the water quality data of a river basin in Malaysia (monitoring network design)

5. Mr. Wong Wai Ching Malaysia
   Thesis Title: Economic cost-benefit analysis of transportation networks in an agricultural land scheme in Malaysia

September 1989 Intake

1. Mr. Mohd. Redzuan Bin Husin Malaysia
   Thesis Title: Engineering behavior of expansive clay-shale in Mae Moh diversion channel

Table 9

US-ASEAN SCHOLARSHIP (PHASE II)

Short Term Training Program Participants by Country and By Program

30 April 1991 *

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
A. CONTINUING EDUCATION CENTER TRAINING PROGRAMS (CEC)								
1. Project Management (18 April - 27 May 1988)	2,400	3						3
2. Micro Computer Applications in Water Management (16 May - 8 July 1988)	3,000			2				2
3. Management of Training Centers (18 July - 26 August 1988)	2,250	5						5
4. AIT-UC Berkeley Management (25 July - 5 August 1988)	2,500	3						3
5. Information Systems Analysis (22 August - 9 September 1988)	1,200	3						3
6. Toxic & Hazardous Waste Management for Developing Countries (12 September - 7 October 1988)	(a) 1,500		3	3	3	2	3	14
7. Integrated Farming Systems Mgt. (19 September - 28 October 1988)	2,250	1		1				2
8. Rural Physical Infrastructure Devt. (17 October - 9 December 1988)	4,000						5	5
9. Mgt. of Rainfed Agriculture (7 November - 16 December 1988)	2,000			2			4	6
10. Sixth Asian School on Energy: Rational Use of Energy in Industry (14 November - 25 November 1988)	200		3				9	12
11. Third Asian School in Computers (6 December - 17 December 1988)	800						3	3
12. Quality Control in the Food Industry (6 February - 24 February 1989)	1,500						8	8
Sub total		15	6	8	3	2	32	66

* Course fee covers tuition, training materials, and field trips

Table 9 (Continued)

Short Term Training Program Participants by Country and By Program
30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
A. CONTINUING EDUCATION CENTER TRAINING PROGRAMS (CEC) - Cont.								
13. Integrated Farming System Management (18 September - 27 October 1989)	2,250						2	2
14. Rural Physical Infrastructure Devt. (9 October - 1 December 1989)	4,000	1					1	2
15. Environmental Impact Assessment & Review (30 October - 24 November 1989)	1,600				1	1	1	3
16. Quality Control on the Food Industry (13 November - 1 December 1989)	1,500						7	7
17. 4th Asian School on Computer Sc. (20 November - 1 December 1989)	800	1	7	1	2	1	4	16
18. Seven Asian School on Energy: Rational Use of Energy in Industry (17 January - 27 January 1990)	300		2		1			3
19. Marine Oil Pollution: Prevention, Control, and Abatement * (14 May - 8 June 1990)	2,000		3	3	3	1	3	13
20. Project Management * (4 June - 13 July 1990)	2,500	3			2			5
21. Fruits and Vegetables Farming (6-19 June 1990)	1,000				1			1
22. Monitoring and Evaluation of Agricultural and Rural Development Projects (11-22 June 1990)	900				2			2
23. Project Monitoring & Evaluation (25 June - 20 July 1990)	2,000	3			9			12
Sub-total		8	12	4	21	3	18	66

Table 9 (Continued)
Short Term Training Program Participants by Country and By Program
30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
A. CONTINUING EDUCATION CENTER TRAINING PROGRAMS (CEC) - Cont.								
24. Human Resource Management * (27 June - 11 July 1990)	2,000	1				3		4
25. Irrigation System Management (AWRO2) (2 July - 24 August 1990)	3,200						1	1
26. Management of Training Centers (16 July - 24 August 1990)	2,500	1	1		3			5
27. AIT-UC Berkeley Advanced Management Program for Asia-Pacific Managers * (13-24 August 1990)	2,500	4			2	5		11
28. Managing Rural Development (20 August - 14 September 1990)	2,000	2			2			4
29. The Small Business Management Training Course (3-28 September 1990)	2,000	1					2	3
30. Training Course on: Environmental Impact Assessment and Review (5-30 November 1990)	2,000			3	1			4
31. Rural Physical Infrastructure Development (14 January - 8 March 1991)	3,200				1			1
32. Industrial Waste Management: Application of Clean Technology (14 January - 8 March 1991)	2,000	1		3	1	1	5	11
33. Management of Conflict and Change (25 March - 5 April 1991)	2,000	1	1	1	1	3	1	8
Sub total		11	2	7	11	12	9	52

Table 9 (Continued)

Short Term Training Program Participants by Country and By Program

30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
B. REGIONAL COMPUTER CENTER (RCC)								
1. Micro Computer Fundamentals (a) (11 January - 19 February 1988)	1,000				4			4
2. Micro Computer Applications (a)								
(25 April - 3 June 1988)	1,500	1			2			3
(25 April - 17 June 1988)	2,000				2			2
3. Computer-Graphic Aided Three- (a) Dimensional Interactive Application (1 May - 21 May 1989)	3,000			2				2
4. Micro Computer Maintenance Training (14 May - 6 July 1990)	2,630			2		2		4
5. Micro Computer Maintenance ASO1 (3 September - 26 October 1990)	2,630	2		3				5
6. Administrative Application Analysis and Development (5 November - 30 November 1990)	1,900			5		4		9
7. Computer Application Development in Education (26 November - 21 December 1990)	1,900			4		11		15
8. Computer Application in Forestery Management & Planning (26 November - 21 December 1990)	1,900			2		1		3
9. ASO1 Maintenance of Microcomputer (7 January - 1 March 1991)	3,200	1		3	2	3	1	10
10. Computer Center Management (11-21 March 1991)	2,400	1		3	1	6		11
11. Administrative Applications Analysis & Development (8 April - 3 May 1991)	1,900	5			1	5	1	12
12. Computer Applications in Education (8 April - 3 May 1991)	1,900	22					7	29
13. Preparatory Course (May 1991 term)	3,300	2						2
Sub-total		34	0	24	12	32	9	111

Table 9 (Continued)

Short Term Training Program Participants by Country and By Program
30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
C. ASIAN DISASTER PREPAREDNESS CENTER (ADPC)								
1. Disaster Management Training (18 April - 27 May 1988)	2,000			1				1
2. Disaster Management Training (17 October - 25 November 1988)	2,000			2		1		3
3. Disaster Management Training (17 April - 26 May 1989)	2,000					1		1
4. Disaster Management Training (16 October - 24 November 1989)	2,000			2			1	3
5. Disaster Management Training (16 April - 25 May 1990)	2,000			2	1		1	4
6. Disaster Management Course - 10 (15 October - 23 November 1990)	2,500				1	3		4
Sub total		0	0	7	2	5	2	16

Table 9 (Continued)

Short Term Training Program Participants by Country and By Program
30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
D. LIBRARY AND REGIONAL DOCUMENTATION CENTER (LRDC)								
1. Library Information (9 May - 29 July 1988)	3,100			1				1
2. Ferrocement (a)								
(17 October - 18 November 1988)				7	2			9
(17 October - 25 November 1988)	3,100			3				3
3. Information Technology and Computerized Library (8 May - 28 July 1989)	3,100					3		3
4. Information Technology & Computerized Library Services (7 May - 27 July 1990)	3,100			1				1
5. Ferrocement for the Construction (15 October - 16 November 1990)	2,400		5	2	11			18
Sub total		0	5	14	13	3	0	35

Table 9 (Continued)
Short Term Training Program Participants by Country and By Program
30 April 1991 (cont.)

	FEE US$	BRUNEI	INDONESIA	MALAYSIA	PHILIPPINES	SINGAPORE	THAILAND	TOTAL
E. ACADEMIC DIVISIONS								
HUMAN SETTLEMENTS DEVELOPMENT (HSD):								
1. Rural-Regional Development Planning (19 September - 11 November 1988)	2,900				1			1
SCHOOL OF MANAGEMENT (SOM):								
1. Management of Technology (6 March - 18 March 1989)	2,200	2					3	5
2. Workshop on "Technological Scanning, Assessment and Choice" (14 March - 16 March 1990)	300				1			1
3. Management of Technology in Asia (18-29 March 1991)	2,000				7	2	3	12
ENERGY TECHNOLOGY (ET)								
1. The Building Energy Management Workshop (18-29 March 1991)	180		3		3	1	2	9
Sub total		2	3	0	12	3	8	28
TOTAL		70	28	64	74	60	78	374

Table 10

ASIAN INSTITUTE OF TECHNOLOGY

US-ASEAN Scholarship (Phase II)
List of Special Courses
1 September 1987 - 30 April 1991

1. Micro Computer Fundamentals
   (11 January - 19 February 1988)

2. Micro Computer Applications
   (25 April - 3 June 1988)

3. Training on Toxic and Hazardous Waste Management for Development Countries
   (12 September - 7 October 1988)

4. Ferrocement (Level III)
   (17 October - 18 November 1988)

5. Computer-Graphic Aided Three-Dimensional Interactive Application
   (1 May - 21 May 1989)

6. Marine Oil Pollution: Prevention, Control, and Abatement
   (14 May - 8 June 1990)

7. Project Management
   (4 June - 13 July 1990)

8. Human Resources Management
   (27 June - 11 July 1990)

9. AIT-UC Berkeley Advanced Management Program for Asia-Pacific Managers
   (13-24 August 1990)

Table 11

SUMMARY OF
COURSE EVALUATION PROFILE

ITEM	I. 1						I. 2						II. 1					
CCode	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
01		3	10	2	–	–		3	12		–	–		3	12		–	–
02		1	17	6	–	–			19	5	–	–		–	–		–	24
03			8		–	–			4	3	1	–		1	7		–	–
04		3	4	1	–	–	1	1	5	1	–	–			5	3	–	–
05		6	1		–	–		4	2	1	–	–	1	1	4	1	–	–
06			8		–	–			7	1	–	–			4	4	–	–
07		4	9	2	–	–		3	8	2	2	–		5	9	1	–	–
08		1	2		–	–		2	1		–	–			3		–	–
09			1	4	–	–			2	3	–	–			1	4	–	–
10			2	1	–	–			2	1	–	–			1	2	–	–
11			9	9	–	–	1		15	2	–	–	5	2	10	1	–	–
13			10		–	–			–	–	–	10			9	1	–	–
14			5	3	–	–			8		–	–		2	5	1	–	–
15		1	6	1	–	–		1	5	2	–	–		3	3	2	–	–
16			2	3	–	–			–	–	–	5			5		–	–
17			2		–	–				2	–	–			1	1	–	–
18		7	5		–	–		6	6		–	–		1	6	5	–	–
19			7	7	–	–		1	5	8	–	–		3	7	4	–	–
Totals	0	26	108	39	0	0	2	21	101	31	3	15	6	21	92	30	0	24
% of N	0%	15%	62%	23%	0%	0%	1%	12%	58%	18%	2%	9%	3%	12%	53%	17%	0%	14%

ITEMS: I.1. Usefulness of content to job
I.2: Adequacy of content coverage
II.1. Appropriateness of presentation methods
II.2. Adequacy and usefulness of materials
III. Course management

NOTE: Course# 12 : Invalid Data

RATING SCALE:

1 = Poor
2 = Average
3 = Very good
4 = Excellent
5 = No answer
6 = No data

Table 11 (Continued)

SUMMARY OF
COURSE EVALUATION PROFILE

II. 2						III						N Respon-	Total of Par-
1	2	3	4	5	6	1	2	3	4	5	6	dents	ticipants
				–	15		1	10	4	–	–	15	15
	2	12	10	–	–		2	16	6	–	–	24	24
		8		–	–		1	5	2	–	–	8	9
	3	4	1	–	–		–	–	–	–	8	8	11
2	3	2		–	–		6	1		–	–	7	7
			8	–	–			7	1	–	–	8	8
	3	8	4	–	–		–	–		–	15	15	20
		3		–	–			3		–	–	3	3
		1	4	–	–			3	2	–	–	5	5
		1	2	–	–		–	–		–	3	3	4
	4	8	6	–	–		–	–		–	18	18	19
	–	–		–	10		1	3	6	–	–	10	10
	–	–		–	8			6	2	–	–	8	8
	2	6		–	–			3	5	–	–	8	8
	–	–		–	5		1	4		–	–	5	6
	–	–		–	2				2	–	–	2	4
		5	7	–	–		–	–		–	12	12	12
	1	9	4	–	–			5	9	–	–	14	14
2	18	67	46	0	40	0	12	66	39	0	56	173	187
1%	10%	39%	27%	0%	23%	0%	7%	38%	23%	0%	32%		

Table 12

Course Codes and Titles for Evaluation

YEAR	CODE	TITLE
1988	01	Toxic and Hagardays Waste Management for Developing Countries
1988	02	Rational Use of Energy is Industry
1988	03	Information System Analysis and Design
1988	04	Management of Training Centers
1988	05	Project Management
1989	06	Quality Control in the Food Industry
1988	07	AIT-AC Berkeley Advanced Management Program
1989	08	Project Management
1989	09	Irrigation Project Rehabilitation and Management
1989	10	Management of Training Centers
1989	11	Planning and Design of Pumping Works
1988	13	Rural Infrastructure Development
1988	14	Rural Water Supply and Sanitation in Thailand
1988	15	Irrigation Project Rehabilitation and Management
1988	16	Environmental Impact Assessment and Review
1988	17	Farm Water Management
1988	18	Operating System
1990	19	Management of Training Centers

Table 13

TRAINING COST COMPARISION

Tuition & Fees (Cost for 1 week training)

Name of Training Center	Cost
AIT	$500
C.E.F.I.G.R.E. (Engineering Training)	$1,066
Euro-Asian Centre Insead (Human Resources Dev.)	$3,600
U. of London Wye College (Computer Training)	$510
Cranfield Disaster Prepardness Ctr. (UK)	$748

Accommodation Expenses (Cost for 1 week training)

Name of Training Center	Cost
AIT	$105
C.E.F.I.G.R.E.	$560
Euro-Asian Centre Insead	$700
U. of London Wye College	$255
Cranfield Disaster Prepardness Ctr.	$340

Travel Expenses (Round trip) roughly

Name of Training Center	Cost
AIT	$600
C.E.F.I.G.R.E.	$600
Euro-Asian Centre Insead	$600
U. of London Wye College	$1,250
Cranfield Disaster Prepardness Ctr.	$1,250

Table 14

Summary of Total Cost for 1 week Training **

AIT	(Thailand)	$ 1,205
C.E.F.I.G.R.E.	(Thailand)	$ 2,226
Euro-Asian Centre\INSEAD	(Singapore/Macau)	$ 4,900
University of London\Wye College	(England)	$ 2,015
Cranfield Disaster Preparedness CTR	(England)	$ 2,338

* *Please note that at AIT extra services and facilities are offered (24hrs. access) at no extra cost. i.e. computer access*

** *Cost includes training fees, training materials, accommodations and travel. Details attached.*

Table 15

SUMMARY OF RESPONSES TO A TRACER SURVEY OF AIT US/ASEAN FELLOWS

INFORMATION CATEGORY	CODE	DESCRIPTION
	00	ALL PROGRAMS
	01	DEGREE PROGRAMS
		NON-DEGREE PROGRAMS
	02	Asian School of Computer Science
	03	Disaster Management
	04	Ferrocement Technology
	05	Information Technology and Computer Applications in Library Science
	06	Integrated Farming Systems Management
	07	Management of Technology
	08	Management of Training Centers
	09	Programs in Computer Application Development (PCAD)
	10	Project Management
	11	Quality Control in the Food Industry
	12	Rational Use of Energy
	13	Remote Sensing
	14	Rural Infrastructure Development
	15	Toxic and Hazardous Waste Management
	16	Other Programs

		PROGRAMS																
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Distribution of Respondents																		
BRUNEI DARUSSALAM	N	8						1	1	2		2		2				2
INDONESIA	N	7	4								1							
MALAYSIA	N	18	3	1	2	1					8						2	1
PHILIPPINES	N	15	1			1					10						1	2
SINGAPORE	N	9			2		3										2	2
THAILAND	N	33	2	3				2	2		5		9	1	2	2	1	4
TOTAL	N	90	10	4	4	2	3	3	3	2	24	2	9	3	2	2	6	11
Location of Office																		
URBAN	%	87.4	90.0	50.0	100	100	100	33.3	100	100	100	50.0	77.8	100	100	100	100	70.0
RURAL	%	12.6	10.0	50.0				66.7				50.0	22.2					30.0
Assumed same position after training	%	84.3	70.0	100	75.0	100	100	100	66.7	100	82.6	50.0	88.9	66.7	100	50.0	100	90.9
Promoted at least once after training	%	40.0	60.0	0	50.0	100	0	0	66.7	50.0	47.6	50.0	33.3	66.7	0	50.0	16.7	30.0
Considered training appropriate for current job	%	98.9	100	100	100	100	100	100	100	50.0	100	100	100	100	100	100	100	100
Skills gained from training applicable in present work situation	%	97.8	100	100	100	100	100	100	100	50.0	100	100	100	100	100	100	100	100
Present activities focussed on:																		
URBAN Area	%	44.3	20.0	25.0	50.0	0	100	0	100	100	70.8	50.0	22.2	0	0	0	66.7	36.4
RURAL Area	%	25.0	60.0	50.0	0	50.0	0	66.7	0	0	0	50.0	11.1	33.3	100	100	0	36.4
BOTH	%	30.7	20.0	25.0	50.0	50.0	0	33.3	0	0	29.2	0	66.7	66.7	0	0	33.3	27.2

NOTE: Percentage calculation is based on actual number of responses which is less than or equal to number of respondents.

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Table 16

US-ASEAN TRACER STUDY
COVERING TRAINING PERIOD OF
OCTOBER 1989 - DECEMBER 1990
BREAKDOWN BY COUNTRY

COUNTRY / ITEMS	Brunei		Indonesia		Malaysia		Philippines		Singapore		Thailand	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Level of Present Position												
1.1. Senior Management	3	33.3%	0	0.0%	0	0.0%	2	7.4%	1	9.1%	2	11.8%
1.2. Middle Management	4	44.4%	5	100.0%	4	28.6%	8	29.6%	2	18.2%	5	29.4%
1.3. Tech./Professional	1	11.1%	0	0.0%	7	50.0%	12	44.4%	3	27.3%	7	41.2%
1.4. Others	1	11.1%	0	0.0%	3	21.4%	5	18.5%	5	45.5%	3	17.6%
Sub-Total	9	100.0%	5	100.0%	14	100.0%	27	100.0%	11	100.0%	17	100.0%
2. Type of Employer's Org't												
2.1. Government	9	100.0%	1	20.0%	13	92.9%	18	66.7%	9	81.8%	11	64.7%
2.2. State Enterprise	0	0.0%	0	0.0%	0	0.0%	1	3.7%	0	0.0%	1	5.9%
2.3. Int'l Organization	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
2.4. Educational Inst't	0	0.0%	4	80.0%	1	7.1%	1	3.7%	1	9.1%	3	17.6%
2.5. Non-Gov't Org't	0	0.0%	0	0.0%	0	0.0%	7	25.9%	1	9.1%	0	0.0%
2.6. Private Enterprise	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	5.9%
2.7. Self-Employed	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
2.8. Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	5.9%
Sub-Total	9	100.0%	5	100.0%	14	100.0%	27	100.0%	11	100.0%	17	100.0%
3. Change in jobs after training												
3.1. None	6	66.7%	3	60.0%	7	50.0%	3	11.1%	7	63.6%	6	35.3%
3.2. Promotion	0	0.0%	0	0.0%	0	0.0%	6	22.2%	0	0.0%	4	23.5%
3.3. Added Responsibilities	2	22.2%	2	40.0%	6	42.9%	15	55.6%	4	36.4%	5	29.4%
3.4. Transferred Org't	0	0.0%	0	0.0%	0	0.0%	1	3.7%	0	0.0%	1	5.9%
3.5. Self-enployed	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		0.0%
3.6. Others	1	11.1%	0	0.0%	1	7.1%	2	7.4%	0	0.0%	1	5.9%
Sub-Total	9	100.0%	5	100.0%	14	100.0%	27	100.0%	11	100.0%	17	100.0%
4. Type of Training												
4.1. Non-degree	9	100.0%	5	100.0%	14	100.0%	26	96.3%	11	100.0%	15	88.2%
4.2. Degree	0	0.0%	0	0.0%	0	0.0%	1	3.7%	0	0.0%	2	11.8%
Sub-Total	9	100.0%	5	100.0%	14	100.0%	27	100.0%	11	100.0%	17	100.0%
5. Usefulness of Training												
5.1. Very useful	6	66.7%	2	40.0%	8	57.1%	17	63.0%	5	45.5%	8	47.1%
5.2. Useful	1	11.1%	2	40.0%	6	42.9%	9	33.3%	3	27.3%	8	47.1%
5.3. Slightly useful	2	22.2%	1	20.0%	0	0.0%	1	3.7%	3	27.3%	1	5.9%
5.4. Not useful	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sub-Total	9	100.0%	5	100.0%	14	100.0%	27	100.0%	11	100.0%	17	100.0%

Table 17

SUMMARY OF CONTRIBUTIONS RECEIVED FY 1989-90 IN CASH AND IN KIND (%)

GOVERNMENTS	
Australia	4.74
Brunei	0.02
Canada-CIDA	12.47
People's Republic of China	0.82
Chinese Taipei	1.35
Finland	2.79
India	0.45
Japan	10.61
Republic of Korea	0.25
New Zealand	0.52
Norway	2.38
Pakistan	0.13
Philippines	0.12
Sri Lanka	0.02
Sweden	0.69
Switzerland	0.95
Thailand	9.87
United States of America	4.49
European Economic Community	
- Commission of European Communities	2.09
- Belgium	0.75
- Denmark	2.58
- France	4.78
- Germany	7.69
- Italy	0.21
- Netherlands	4.18
- United Kingdom	2.86
Sub-total	77.81

INTERNATIONAL ORGANIZATIONS	
ADB	2.97
Commonwealth Secretariat	0.10
ESCAP	0.10
FAO	0.45
ICLARM	0.05
ILO	0.10
IMO	0.04
Mekong Secretariat	0.14
UN - Geneva	0.21
UNCHS - Habitat	0.32
UNDP	1.71
UNDRO	0.09
UNEP	0.26
UNESCO	1.26
UNICEF	0.07
UN University	0.03
WHO	0.11
WMO	0.03
World Bank	0.43
Sub-total	8.47

NATIONAL GOVERNMENT AGENCIES	
Bangladesh	
Bangladesh Water Development Board	0.01
Belgium	
University of Antwerp	0.03
Canada	
CUC	0.01
IDRC	2.01
Fiji	
Native Land Trust Board	0.02
France	
European Space Agency	0.14
Federal Republic of Germany	
Universitat Hohenheim	0.02
Hong Kong	
Auxiliary Medical Services	0.01
Indonesia	
Bandung Institute of Technology	0.04
Lembang Horticultural Research Institute	0.01
Ministry of Agriculture	0.08
Ministry of Forestry	0.14
Ministry of Public Works	0.08
Ministry of Transmigration	0.62
Petra Christian University	0.03
University of Tarumanagara	0.07
Japan	
International Development Center	0.12
Lao PDR	
Department of Forestry	0.01
Malaysia	
Dewan Bandaraga Kuala Lumpur	0.02
Institute of Engineers	0.01
Ministry of Education	0.10
Ministry of Science, Technology, and Environment	0.02
Nepal	
Mechi Hill Program SNV.	0.09
Redd Barna South Asia	0.03
Small Business Promotion Project	0.02
Papua New Guinea	
Department of Finance and Planning	0.01

Philippines	
University of the Philippines	0.01
Sri Lanka	
Integrated Rural Development	0.02
Irrigation Department	0.13
Mahaweli Authority	0.10
Ministry of Lands, Irrigation and Mahaweli Department	0.07
National Housing Development Authority	0.02
National Water Supply and Drainage Board	0.02
Rubber Control Department	0.11
Sweden	
Lund University - LCHS	0.07
Switzerland	
Geographisches Institute	0.04
Thailand	
Bank of Agriculture and Cooperatives	0.01
Bureau of the Budget	0.09
Communications Authority of Thailand	0.15
DTEC	0.23
EGAT	0.53
Metropolitan Waterworks Authority	0.10
Ministry of Agriculture and Cooperatives	0.03
Ministry of Science, Technology and Energy	0.05
NESDB	0.17
National Energy Authority	0.03
National Inland Fishery Institute	0.03
National Research Council	0.05
Petroleum Authority of Thailand	0.02
Royal Thai Army	0.17
United Kingdom	
AFRC Institute of Engineering Research	0.29
United States	
Academy for Educational Development	0.02
Institute of International Education	0.32
Ohio State University	0.01
U.S. Peace Corps	0.44
University of Delaware	0.08
University of Hawaii	0.06
University of Michigan	0.22
Sub-total	7.44

Table 17 (Continued)

BUSINESS, FOUNDATIONS, PRIVATE and OTHERS

Anichata Co. Ltd., Thailand	0.05
Argonne National Laboratory, USA	0.19
Asian Engineering Consultant Corp., Thailand	0.05
BASF Vita Ltd.	0.01
BES Engineering Corp.	0.21
BP Solar International	0.04
Caltex Oil (Thailand) Ltd.	0.03
Chareon Pokphand Group Ltd., Thailand	0.77
China Technical Consultants Inc.	0.01
China Trust Co. Ltd.	0.06
Chinese Petroleum Corp., Chinese Taipei	0.13
DHV Consulting Engineers, Indonesia	0.06
Diakonisches Werk, Germany	0.03
Ebara Corp., Japan	0.04
Exotissimo International Travel, Thailand	0.04
F.E. Zuellig (Bangkok) Ltd.	0.02
Hassall & Associates Pty. Ltd., Australia	0.02
IBM Korea	0.01
IBM Singapore Pte.	0.01
IBM Thailand Ltd.	0.24
Kiso Jiban Consultants Co. Ltd.	0.02
Louis Berger International Inc.	0.07
National Petrochemical Corp. Ltd. Thailand	0.01
Nikken Consultants Inc., Japan	0.33
North West Hydraulic Consultant	0.19
Ret-Ser Engineering Agency Chinese Taipei	0.11
P.T. Arun Natural Gas Liquefaction, Indonesia	0.01
Rice Engineering Supply Co. Ltd. Thailand	0.02
Sarawak Electricity Supply Corp.	0.02
Serco Education Ltd., Indonesia	0.03
Shell International Petroleum Co.	0.06
Siam Cement Co. Ltd.	0.14
Siam City Cement Co. Ltd.	0.02
Stichting Hivos, Netherlands	0.02
Taiwan Power Company	0.22
Takanaka Civil Engineering Co. Ltd.	0.02
Tata Consultant Engineers, India	0.10
Team Consulting Engineering Co. Ltd.	0.05
Telecon Oy, Finland	0.06
Thai Central Chemicals Co. Ltd.	0.01
Thai CRT Co. Ltd.	0.01
Thai Engineering Consultants Inc.	0.04
Thai German Specialty Glass Co.	0.01
Thai Shell Exploration and Production Co.	0.01
UMI Property Co. Ltd., Thailand	0.03
URS International Inc., Indonesia	0.14
AIT Foundation Inc.	0.16
AIT Foundation Inc. Phase V	0.18
Asia Foundation, Bangkok	0.04
Education and Public Welfare Foundation, Thailand	0.01
Forbes Foundation, USA	0.06
Ford Foundation Inc.	0.20
KEIDANREN	0.43
Ramon Magsaysay Award Foundation	0.18
Rockefeller Foundation Inc.	0.21
Winrock International, USA	0.19
Agency for Assessment and Application of Technology, Indonesia	0.02
AIT Alumni Association	0.02
Asean-Canada Forest Tree Seed Center	0.02
Asean Timer Technology Center	0.03
ARPLA, ILO	0.01
Concern - Bangladesh	0.02
Cooperative Institute for Applied Meteorology, USA	0.01
Human Resource Development Group, UK	0.03
ICRISAT, India	0.01
International Atomic Energy Agency, Australia	0.01
IHP/OHP National Committees, Germany	0.03
Japan Scholarship Fund for Asean Youth	0.02
Kozai Club, Japan	0.10
Prof. Dina Lavoie, Canada	0.01
Lutheran World Services	0.01
Marden Family	0.11
Menonite Central Committee	0.06
Nepal/Swiss Development Cooperation	0.01
Pakistan Participant Training Program, USA	0.03
Save the Children Fund, UK	0.08
Thai /Australia Northeast Village Water Resources Project	0.02
World Council of Churches, Switzerland	0.02
Others	0.14
Sub-total	6.28
TOTAL	100.00

Table 18

TOTAL DONATIONS FY 1989-90 IN CASH AND IN KIND (BAHT '000)

	Cash	In-Kind	Total
Scholarship	206,073		206,073
Research Projects	61,215		61,215
Continuing Education	56,833		56,833
Capital Grant	6,717		6,717
Equipment/Books	10,872	3,896	14,768
Endowment Fund	779		779
Faculty/Staff	29,478	46,952	76,430
Operating Grant	13,499		13,499
Local Currency Grant	534		534
Total	**386,000**	**50,848**	**436,848**

Table 19

SUMMARY OF DONATIONS RECEIVED FY 1959-60 TO FY 1989-90 IN CASH AND IN KIND (%)

Governments	*%Contribution*
Australia	5.45
Austria	0.02
Bangladesh	0.02
Canada	5.45
People's Republic of China	0.07
Chinese Taipei	3.14
Finland	0.39
India	0.29
Indonesia	0.13
Israel	0.04
Japan	10.96
Republic of Korea	0.30
Nepal	0.03
New Zealand	0.77
Norway	1.91
Pakistan	0.17
Philippines	0.19
Sri Lanka	0.02
Sweden	0.11
Switzerland	0.81
Thailand	11.99
USA	11.53
Vietnam	0.01
European Economic Community	
Belgium	1.12
Denmark	1.44
France	3.19
Federal Republic of Germany	8.89
Italy	0.32
Netherlands	3.63
United Kingdom	3.9
International Organizations	**5.35**
National Government Agencies	**5.74**
Business, Foundations Private and Others	**12.62**
Total	**100.00**

Table 20

FACULTY MEMBERS BY NATIONALITY
as of May 1991 Term

NATIONALITY	DIRECT HIRE		SECONDED		TOTAL
	Full-Time	Visiting	Full-Time	Visiting	
1. American	5	1	3	3	12
2. Australian	0	0	1	1	2
3. Austrian	0	0	1	0	1
4. Bangladeshi	2	1	0	0	3
5. Belgian	0	0	2	1	3
6. British	3	1	5	0	9
7. Canadian	1	0	2	2	5
8. Chinese	1	0	0	3	4
9. Danish	0	0	2	1	3
10. Dutch	1	0	1	0	2
11. Filipino	3	1	0	0	4
12. Finnish	0	0	3	0	3
13. French	0	1	5	2	8
14. German	0	1	8	0	9
15. Indian	13	4	0	0	17
16. Indonesian	1	0	0	0	1
17. Japanese	0	0	13	1	14
18. Korean	0	0	0	1	1
19. Myanmar	0	1	0	0	1
20. Nepalese	1	0	0	0	1
21. New Zealand	1	0	0	0	1
22. Nigerian	1	0	0	0	1
23. Norwegian	0	0	1	0	1
24. Pakistani	1	0	0	0	1
25. Sri Lankan	8	0	0	0	8
26. Swedish	0	0	2	0	2
27. Thai	17	12	0	0	29
28. Turkish	1	0	0	0	1
29. Vietnamese	2	0	0	0	2
TOTAL	62	23	49	15	149

Table 21

Distribution of AIT Alumni by Country
1961-1990

South East Asia and Pacific . (48.4%)		
1.	Brunei	8
2.	Cambodia	3
3.	Fiji	1
4.	Indonesia	257
5.	Laos	2
6.	Malaysia	235
7.	Myanmar (Burma)	45
8.	Papua New Guinea	5
9.	Philippines	546
10.	Singapore	28
11.	Thailand	1,283
12.	Vietnam	108
South Asia & West Asia . . . (33.5%)		
13.	Afghanistan	19
14.	Bangladesh	393
15.	India	357
16.	Iran	12
17.	Nepal	209
18.	Pakistan	354
19.	Sri Lanka	398
20.	Turkey	6
East Asia . . . . . (17.7%)		
21.	Chinese Taipei	632
22.	Hong Kong	82
23.	Japan	39
24.	Korea	82
25.	Macao	5
26.	P.R.C.	81
N. America, Europe & Africa . (0.5%)		
27.	Canada	3
28	Ethiopia	1
29.	Ghana	2
30.	Honduras	1
31.	Kenya	1
32.	Malawi	2
33.	Tanzania	7
34.	U.K.	2
35.	U.S.A.	5
Total		5,214

Table 22

US–ASEAN PHASE II

(1 September 1987 to 31 August 1991)

Financial Status as of 31 December 1990

Budget Item	Total Budget for 1987-91	Expenditures (9/87-12/90)	Projected Expenditures **	Balance
Scholarships (Master's Certificate, Short-Term Courses)*	Baht	Baht	Baht	Baht
Brunei	12,579,999	3,238,033	0	9,341,966
Indonesia	12,579,999	6,114,349	856,800	5,608,850
Malaysia	12,579,999	9,187,913	0	3,392,086
Philippines	12,579,999	6,393,717	214,200	5,972,082
Singapore	12,579,999	2,870,354	0	9,709,645
Thailand	12,579,999	5,939,441	0	6,640,558
TOTAL	75,479,994	33,743,807	1,071,000	40,665,187
	$2,960,000	$1,323,287	$42,000	$1,594,713

US$1 = Baht 25.5

* Special Courses not included

** for currently enrolled Master students until graduation

Scholarships

1 Master =$21,000

1 PCAD =$7,000

1 Short-term =$4,200

Table 23

AIT DEVELOPMENT OFFICE

US-ASEAN Scholarship Grant-Phase II
Allocation of Scholarships By Country

SPECIAL COURSES

(as of 31 December 1990)

Country	Total Budget Baht	Total Expenses (31-12-1990) Baht	Total Balance Baht
Brunei	1,870,000.00	806,813.00	1,063,187.00
Indonesia	1,870,000.00	491,983.00	1,378,017.00
Malaysia	1,870,000.00	1,699,134.00	170,866.00
Philippines	1,870,000.00	1,636,355.00	233,645.00
Singapore	1,870,000.00	852,573.00	1,017,427.00
Thailand	1,870,000.00	425,644.00	1,444,356.00
Total	11,220,000.00	5,912,502.00	5,307,498.00
U.S. Dollar Equivalent	440,000.00	231,862.82	208,137.18

US$ 1 = Baht 25.5

Table 24

US-ASEAN SCHOLARSHIPS PROJECT (PHASE II)
1987-1990
COUNTERPART FUNDING (US$)

ITEMS	ASEAN COUNTRIES	AIT	TOTAL
Salary Contribution* (Estimate)	$238,910	NA	$238,910
In-country Travel* (Estimate)	$2,126	NA	$2,126
Contributions to AIT operating costs*	$756,392	NA	$756,392
RTG waiver of taxes*	NA	$2,380,253	$2,380,253
TOTAL	$997,428	$2,380,253	$3,377,681

* *Details attached*

Table 25

Salary Contribution Estimate
US-ASEAN 1988-1990 Trainees

	Level	Number of Participants	Approx. Monthly Salary (US$)	
Brunei	Managerial	8	3,000	
	Supervisory	4	1,700	
	Technical/Prof.	29	500	
				45,300
Malaysia	Managerial	3	1,500	
	Supervisory	9	1,000	
	Technical/Prof.	59	730	
				56,570
Indonesia	Managerial	4	400	
	Supervisory	3	300	
	Technical/Prof.	26	180	
				7,180
Philippines	Managerial	14	450	
	Supervisory	5	320	
	Technical/Prof.	46	200	
				17,100
Singapore	Managerial	14	3,000	
	Supervisory	5	2,000	
	Technical/Prof.	30	750	
				74,500
Thailand	Managerial	9	680	
	Supervisory	8	550	
	Technical/Prof.	73	380	
				38,260
				238,910

Assumes average of one month training

Table 26

IN-COUNTRY TRAVEL
(in US$)

INDONESIA

Point of Origin	Travel Cost to Jakarta	# of Trainees	Total
Bandung/Sumedang	30	6	$ 180
Padang/Bandar Lampung	110	5	$ 550
Yogyakarta/Solo	56	5	$ 280
Banjar	86	1	$ 86
TOTAL			$ 1096

PHILIPPINES

Point of Origin	Travel Cost to Manila	# of Trainees	Total
Capiz	90	3	$ 270
Davao	190	1	$ 190
Iligan	190	2	$ 380
Cagayan de Oro	190	1	$ 190
TOTAL			$ 1030

Table 27

CONTRIBUTIONS TO AIT OPERATING COSTS (BAHT)

COUNTRY	1987–1988	1988–1989	1989–1990	1990–March'91	TOTAL
Philippines	171,000	–	508,000	609,000	1,288,000
Thailand	4,000,000	4,000,000	5,000,000	5,000,000	18,000,000
TOTAL	4,171,000	4,000,000	5,508,000	5,609,000	19,288,000

US$756,392

Table 28

AIT COUNTERPART
(RTG Waiver of AIT Taxes)

	1978–1988	1988–1989	1989–1990	TOTAL
Income tax, Import duty, Others (Auto, household app., equipment)	$563,078	$906,808	$910,367	$2,380,253

ANNEX (d) Site Visits - A.I.T.

Mr. Harry J. Petrequin, Jr., the evaluation team leader and Dr. Tung Au, the engineering educator in the evaluation team, visited the campus of AIT and met with its administrators on July 10, 1991. Dr. Tung Au stayed on campus in the next two days to meet with the US-ASEAN Scholarships Project (Phase II) participants and the Directors of four of AIT's Centers which offer training programs.

The Asian Institute of Technology was chartered as a post-graduate institute. The Institute's teaching faculty and research staff represent 29 nationalities. However, its research projects are based on problems of practical importance to the development of Asia and to the participants who are being prepared to contribute to the development processes of their own countries. The international character of the Institute and the spirit of regional development prevail in all aspects of education, research and training activities. A visitor can easily detect the vibrant and dynamic atmosphere of the institution and the excitement of participants in the programs who are eager to be effective agents of change in the region.

The Regional Computation Center (RCC) provides computing services not only for AIT but also for local and regional agencies. The Library and Regional Documentation Center (LRDC) addresses its activities to the needs of developing countries which include the utilization of new technologies in information handling and the training of qualified manpower. The Asian Disaster Preparedness Center (ADPC) assists countries in Asia and the Pacific in formulating their policies and strengthening their capabilities in disaster management. The Continuing Education Center (CEC) provides Asian professionals with training and development in new expertise, technologies and strategies for achieving professional and organizational goals. These centers are the principal components in implementing the US-ASEAN Scholarships Project (Phase II).

A visitor is left with the impression that AIT is a well managed organization. The personnel is competent and friendly, with excellent rapports with students and training participants. The physical facilities are excellent and up-to-date for its missions. The general environment is conducive to the advancement of education, research and training.

III. ANNEXES - TROPMED

ANNEXES - TROPMED

Annex (a) Documents Reviewed for TROPMED

1. Report of the 28th meeting of the Governing Board of Tropical Medicine and Public Health Project of SEAMEO, Vol.1, Manila 26th-29th Sept. 1989

2. SEAMEO Regional Tropical Medicine and Public health Project; Proposed TROPMED's Fifth Five-Year Plan--Chinag-Mai 4th-7th Feb. 1990.

3. Summative Evaluation of the Thailand-SEAMEO Pilot Project for Community-Based Human Resource Development, Bangkok 1989

4. TROPMED, Recommendations for Action and Research from a Symposium and Workshop on the Complications, Management and Prevention of Malaria, held in Ho Chi Minh City, Vietnam, Sept 1990

5. Cross, J.H. and Murrell, Darwin K."The 33rd. SEAMEO-TROPMED Regional Seminar on Emerging Problems in Food-Borne Parasitic Zoonoses; Impact on Agriculture and Public Health", Uniformed Services University of the Health Sciences, Bethesda, Md. Vol.22, No.1 March 1991.

6. TROPMED. A Strategic Plan of Seameo for the 1990's, TROPMED, Bangkok 1991

7. TROPMED Newsletter, Vol. 1, No.1,2,3,4, No. 2. Vol.1, Bangkok, 1990,1991

8. SEAMEO Quarterly, Vol 14, No. 1, J-March 1991

9. SEAMEO-TROPMED, Annual Report of Activities, 1990, 1989, 1988, 1987, Bangkok.

10. SEAMEO Regional Tropical Medicine and Public Health Project, Project Description, Bangkok, 1989

11. Report of SEAMEO Curriculum Task Force;Annexe.TROPMED March 1989

12. Report of the TROPMED SEAMEO Course Evaluation Task Force, March 1989.

13. Edison, Pamela. "Evaluation of the ASEAN scholarship for Tropical Medicine and Public Health Project., USAID/ASEAN Regional Office, Bangkok 1985

14. Report of SEAMEO Strategic Planning Workshop and Centre Director's Meeting, 24-27 June 1991, Pattaya, Thailand.

15. TROPMED, special Documents prepared for USAIDs mid-term evaluation team. a) TROPMED Problems b) Impact of Scholarship Termination on TROPMED activities.

16. USAID-TROPMED correspondence including Vouchers, Requests for Reimbursement, Trainee lists and Project Implementation Letters(PIL).

17. Report of the TROPMED Task Force. 1990

Annex (b) Persons Interviewed at TROPMED

TROPMED SECRETARIAT

1. Dr. Chamlong Harinasuta
   Coordinator, TROPMED
   Bangkok, Thailand

2. Dr. Nelia Salazar
   Deputy Coordinator
   TROPMED
   Bangkok, Thailand

3. Ms. Vimolsri Panichyanon
   Assistant Coordinator, TROPMED
   Bangkok, Thailand

MAHIDOL UNIVERSITY

4. Prof. Supranee Changbumrang
   Course Director for Msc. (Trop. Med)
   PhD. (Trop Med)
   Dept. of Tropical Nutrition and Food Science
   Faculty of Tropical Medicine
   Mahidol University,
   Bangkok, Thailand

TRAINEES

1. David M. Mojian- Malaysia-Dip. Trop. Med and Hygiene course
2. Temsiri Hinjiranandana-Thailand- DTM&H
3. Robert Lachica- Philippines-DTM&H
4. Dyah Yarlisari-Indonesia-DTM&H
5. Marohren C. Tobias-Philippines-MSc. Trop Med
6. Tri Baskoro-Indonesia- MSc Trop. Med.
7. Alma S. Abila-Philippines- DTM&H
8. Ooi Choo Huck-Malaysia-DTM&H
9. Nilarat Narula-Thailand-DTM&H
10. Chutamangee Charoencharatkul-Thailand-DTM&H
11. Sivaporn Jungpichanvanich- Thailand-DTM&H
12. Manuel L. Barnes-Philipines-DTM&H
13. Bhutisti, Antonio B.-Philippines- DTM&H
14. Asnahi, Zain- Indonesia- DTM&H
15. Dr. Leonard I. Ortega-Philippines-MSc. Med Epi.
16. Asuiretty Nurgosmy Yerly-Indonesia-MPH Urban Health
17. Dinah N. Medel-Philippines-MPH Urban Health
18. Nurman Soeka Sutisna- Indonesia-MPH Urban Health
19. Setiawan Soeparan- Indonesia-MPH Urban Health

Annex (c) Scope Of Work at TROPMED

This is an interim evaluation of the ASEAN Human Resources Development Project. The specific Scope of Work for evaluating the TROPMED component is:

a) To measure progress towards achieving TROPMED's purpose.

b) To review the effectiveness of TROPMED in meeting project benchmarks.

c) To identify and analyze problems inhibiting TROPMED's progress.

d) To recommend actions to correct problems.

e) To assess TROPMED's management capability of its training program.

f) To discuss potential private sector interest in the project.

g) To assess TROPMED's sustainability in regard to the contributions of ASEAN member countries.

h) Assess the possibility of TROPMED expanding its training and research services to Laos, Vietnam and Cambodia.

i) To identify lessons learned.

Annex (d) Site Visits at TROPMED

Site Visits were conducted to Mahidol University Faculty of Tropical Medicine to meet with students and faculty of on-going courses (July 19, 1990) and to the TROPMED Secretariat to meet with the Coordinator and his staff (July 9, 10, 17, 18)

IV. ANNEXES - ADPC

ANNEXES - ADPC

ANNEX 1 A

LIST OF REPORTS AND OTHER DOCUMENTS REVIEWED

1. ASEAN Human Resources Development Project Paper.
2. Project Grant Agreement between the Kingdom of Thailand representing ASEAN and The United States of America for ASEAN Human Resources Development: Asean Agricultural Development Planning Center Phase II Project.
3. Evaluation of ASEAN Agricultural Development Planning Center Phase I - 1985.
4. Progress Reports of ASEAN Agricultural Development Planning Center, 1987-1991.
5. Non-Federal Audit of the ASEAN Agricultural Development Planning Center - 1991.
6. USAID ADPC Phase II Project files.
7. ASEAN ADPC Phase III Project Proposal.
8. Miscellaneous Documents Prepared by ADPC for the Mid-Term Evaluation of ASEAN HRD Project.

ANNEX 1 B

LIST OF ASEAN ADPC PHASE II PUBLICATION REVIEWED

1. The Indonesian Agricultural Economic situation (1988)
2. The Malaysian Agricultural Economic situation (1988)
3. The Philippine Agricultural Economic situation (1988)
4. Review of Agricultural Economic situation in Thailand (1988)
5. Review of Agricultural Economic situation in the Agricultural Producing ASEAN Member Countries : A Synthesis Report (1988)
6. Agricultural Development Planning Experience in Selected ASEAN Countries (1988)
7. Review of Performance and Targets of National Economic and Social Development Plans in Selected ASEAN Countries (1988)
8. ASEAN Statistical Yearbook on Food, Agriculture and Forestry, 1978 - 1987 (1989)
9. Synthesis of the Workshop on Rural Development in the ASEAN Region (1989)
10. Policies and Strategies for Rural Development in the ASEAN (1989)
11. Case Studies on Selected Rural/Agricultural Development Projects in the ASEAN (1989)
12. Report of the Workshop on Perspectives and Implications of the Comparative Advantage Study on Selected Feedcrop and Livestock Production Systems in the ASEAN (1989)
13. Synthesis of Comparative Advantage of Livestock and Feed Grain Production in Indonesia, Malaysia, Philippines and Thailand (1989)
14. Plans, Policies and Programmes on Feedcrop-Livestock Production and Development and Country Papers on Comparative Advantage Study on Selected Feedcrops and Livestock in Selected ASEAN Countries (1989)
15. Synthesis Report and Country Papers on the Utilization of Natural Forest in the ASEAN Region (1989)
16. Agricultural Marketing Information Systems in Brunei Darussalam (1990)
17. Agricultural Marketing Information Systems in Indonesia (1990)

18. Agricultural Marketing Information Systems in Malaysia (1990)

19. Agricultural Marketing Information Systems in the Philippines (1990)

20. Agricultural Marketing Information Systems in Singapore (1990)

21. Agricultural Marketing Information Systems in Thailand (1990)

22. Towards an Effective Agricultural Marketing Information Systems in the ASEAN : Policy Issues and Problems (1990)

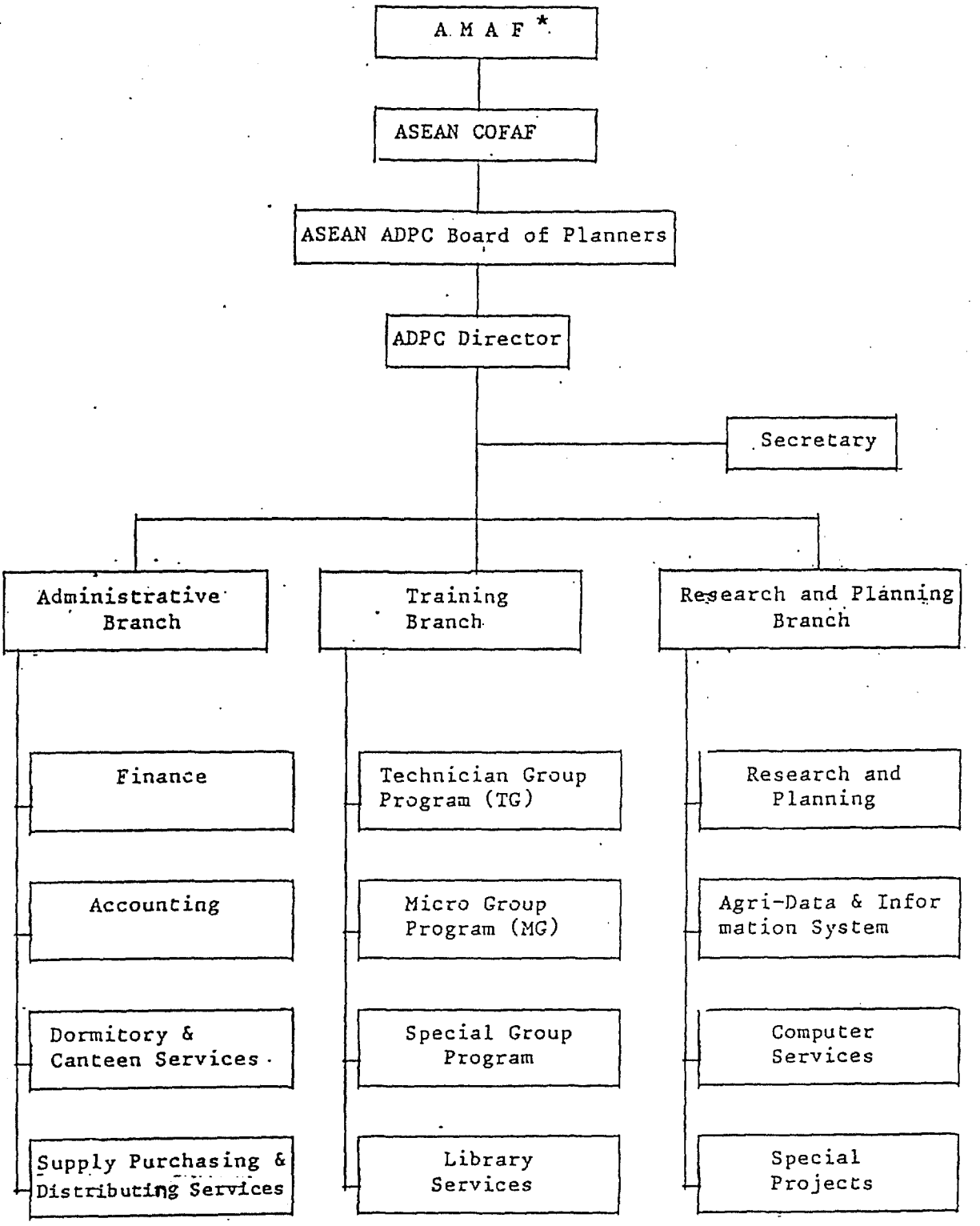
23. Report of the Regional Consultation on Selected Planning and Policy Studies in Agriculture Development in the ASEAN (1990)

24. Inventory of ASEAN-COFAF Projects and Actions (1988, 1989, 1990)

25. Nine issues of ASEAN ADPC Newsletter (Quarterly published)

ANNEX 2

Present Organizational Structure of ASEAN ADPC



* ASEAN Ministers of Agriculture and Forestry

ANNEX 3

LIST OF PERSONS INTERVIEWED AT ADPC

Mr. Nguen Srisuraksa
Director
ASEAN ADPC

Mr. Preeda Chantagul
Chief of Training Branch
ASEAN ADPC

Mr. Roberto M. Dalag
Chief of Research and Planning Branch
ASEAN ADPC

Mrs. Nonglug Pongsrihadulchai
Economist
ASEAN ADPC

Mr. Widjatmiko
TG-5 Participant
Research AIDE
ASEAN ADPC

Ms. Perlita G. Mecha
TG-7 Participant
Chief Planning Officer
Philippine Dept. of Agriculture
Region VI, Philippines

Mr. Montol Jeamcharoen
TG-6 Participant
Crop Forecasting Section
Center for Agricultural Statistics
Office of Agricultural Economics
Bangkok, Thailand

Mr. Pinit Kulamongkon
TG-6 Participant
Economist, Oil Crops
Agric. Economic Research Division
Office of Agricultural Economics
Bangkok, Thailand

Mrs. Wipada Supakalim
MG-12 Participant
Agricultural Scientist
Thailand Dept. of Agriculture
Bangkok, Thailand

Mr. Chanchai Toviwat
MG-12 Participant
Statistician
Office of Agric Economics
Bangkok, Thailand

Dr. Kanok Khatikarn
Resource Person
Director
Center for Agriculture and Rural Development
Operation and coordination
Office of Agric-Economics
Bangkok, Thailand

ANNEX 4

NUMBER OF PARTICIPANTS UNDER ASEAN ADPC SCHOLARSHIP

PHASE II (1987 - JULY 1991)

COUNTRY	No. of Participants TG	MG	SG	TOTAL	%
Brunei Darussalam	1	1	7	9	4
Indonesia	9	31	11	51	24
Malaysia	8	29	13	50	23
Philippines	5	26	11	42	19
Singapore	0	1	0	1	<1
Thailand	11	35	17	63	29
TOTALS	34	123	59	216	100

Note: TG - Master's Degree program in Agricultural Economics

MG - Non-degree training in Agricultural Project Formulation, Monitoring, and Evaluation.

SG - Seminar/Workshop in Agricultural Development Planning and Policy.

ANNEX 5

STAFF COMPLIMENT OF THE ADPC AS OF JULY 1991

		Position
1.	Mr. Nguen Srisuraksa	Director
2.	Mr. Roberto M. Dalag	Chief of Research and Planning Branch
3.	Mr. Preeda Chantagul	Chief of Training Branch
4.	Mrs. Nonglug Pongsrihadulchai	Economist
5.	Mr. Smith Sampattavanija	Secretary
6.	Ms. Suchitra Kitprasert	Computer Programmer
7.	Ms. Suangsuda Tansahavat	Accountant
8.	Ms. Tassanee Srichupeam	General/Distributing Officer
9.	Ms. Parichatt Krongkant	Training Aide
10.	Mr. Widjatmiko	Research Aide
11.	Mrs. Pornwipa Homklinkaew	Clerk/Typist
12.	Ms. Uracha Kohpeth	Training Aide
13.	Mr. Sumath Sammatha	Clerk/Typist
14.	Mr. Weerayuth Sansrimon	Librarian
15.	Mr. Chanin Chomprayoon	General Administration Officer
16.	Mr. Apichai Srisuraksa	Procurement Officer

Support Staff - 15 persons

ANNEX 6

ADPC SUMMARY OF PROJECT EXPENDITURE

FOR THE PERIOD THROUGH MAY 1991

BUDGET LINE ITEMS	CURRENT OBLIGATIONS	CUMULATIVE EXPENDITURES THRU 5/1991	REMAINING BALANCE
	US$	US$	US$
1. Training	782,000	635,265	146,735
2. Research/Planning	128,000	74,546	53,454
3. Commodities/Equipment	65,000	60,564	4,436
4. Salaries	644,000	418,745	225,255
5. Operation/Maintenance	131,000	80,580	50,420
TOTALS	1,750,000	1,269,700	480,300

V. ANNEXES - PLANTI

ANNEXES - PLANTI

Details of Projects Plant Quarantine Annexes

Annex 1 PLANTI and PQ Staffing
- a) PLANTI Organizational Structure
- b) PLANTI Professional Staff
- c) - ASEAN PQ Staffing
  - ASEAN PQ Entry Points
  - Phytosanitary Certificates Issued

Annex 2 Training/Technical Activity Detail for Phase II (1987-1991)
- a) Summary of Training Provided
- b) Summary of Training Programme and Number of Participants for Phases I and II
- c) PLANTI Short Courses
- d) PLANTI Courses, October 1987 - June 1991
- e) Comparative Distribution of Short-term Courses by Subject Matter
- f) PLANTI Courses with Outside Participation (Phase II)
- g) Participants Recruitment/Selection Process
- h) Accomplishment of PLANTI's Research Goals
- i) PLANTI's Cooperative Research Efforts (Phase II)
- j) List of PLANTI Consultant
- k) PLANTI Technical Meetings
- l) PLANTI Publications

Annex 3 Detail of Cost Estimates
- a) Staff Support Cost Summary
- b) Training Plan and Cost Summary
- c) Technical Assistance Needs and Cost Summary
- d) Original Life of Project Financial Plan for Phase II
- e) Disbursement Report (1987-1990)
- f) In-kind Contributions

Annex 4 Evaluation Annexes
- a) Documents Reviewed
- b) Persons Interviewed

PLANTI ORGANIZATIONAL STRUCTURE

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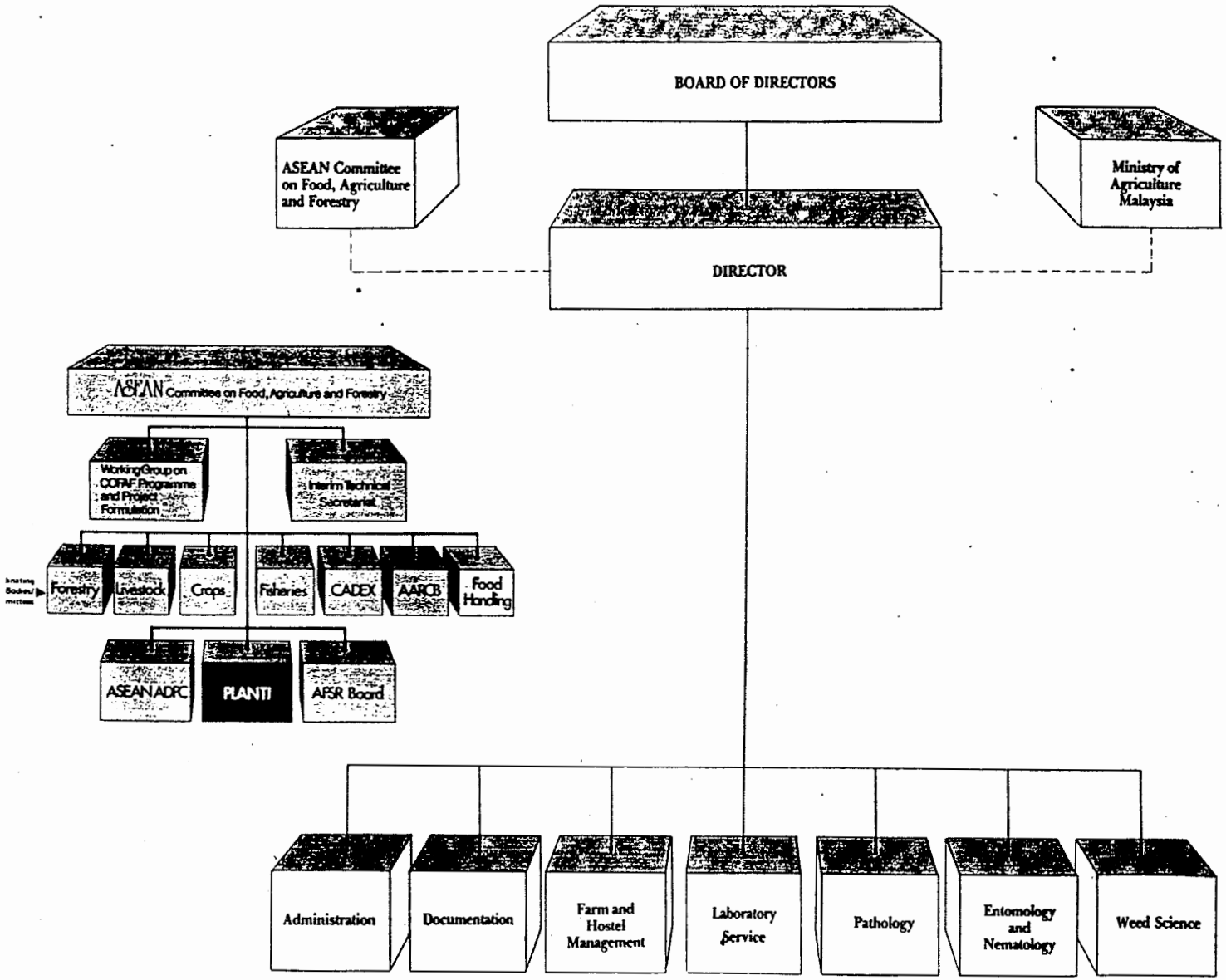

Annex 1-a

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PLANTI PROFESSIONAL STAFF
(June 1991)

Country	PLANTI Professional Staff
Malaysia	M. Sivanaser, M.Sc. Director
Indonesia	Soetikno S. Sastroutomo, D.Sc. Weed Scientist
Malaysia	Nathan Ganapathi, Ph.D. Plant Pathologist
Malaysia	Pusparanee S.S. Durai, Ph.D. Entomologist
Malaysia	Lim Loon Gher, Ph.D. Seed Pathologist
Malaysia	Chan Kwok Chor, Ph.D. Plant Pathologist
Malaysia	Maria Christina Stephensons, M.Sc. Seed Technologist
Philippines	Paul L. Manalo, M.S Documentation Officer
Malaysia	Ibrahim Abu Ahmad, M.A (Econ) Administrative & Procurement Officer

Comparative profile of ASEAN Plant Quarantine Services, 1986 vs 1991

ITEM	+ Brunei Darussalam			Indonesia			Malaysia			Philippines			Singapore			Thailand			ALL		
	1986	1991	%Change	1986	1991	%Change	1986	1991	%Change	1986	1991	%Change	1986	1991	% Change	1986	1991	% Change	1986	1991	% Change
Total number of entry points																					
Air	1			15	nd	nd	10	10	0	5	4	-20	nd	1	nd	5	5	0	35	20	-42.9
Land	2			nd	nd	nd	14	14	0	0	0	nd	nd	1	nd	9	15	66.7	23	30	30.4
Sea	2			41	nd	nd	17	18	5	24	50	* 108.3	nd	1	nd	9	7	-22.2	91	76	-16.5
Post Office	7			24	nd	nd	5	5	0	14	25	78.6	nd	1	nd	1	1	0	44	32	-27.3
Total	12			80	nd	nd	46	47	2	43	79	83.7	nd	4	nd	24	28	16.7	193	158	-18.1
Staffing																					
Senior Professional	1			10	nd	nd	7	5	-29	70	65	-7	1	4	300	24	6	-75	112	80	-29
Junior Professional	1			278	nd	nd	4	21	425	30	107	257	3	8	167	0	110	nd	315	246	-22
Technicians	16			5	nd	nd	107	163 **	52	25	50	100	7	0	-100	59	0	-100	203	213	5
Administrative	1			125	nd	nd	0	5	500	50	20	-60	0	4	400	41	9	-78	216	38	-82
Part-time	-			nd	nd	nd	17	0	-100	0	0	nd	0	0	nd	0	0	nd	17	0	-100
Total	19			418	nd	nd	135	194	44	175	242	38	11	16	45	124	125	1	863	577	-33
Number of Phytosanitary Certificates Issued***	18			nd	nd	nd	12,825	5,248	-61	19,154	9,034	-53	nd	nd	nd	59,836	25,318	-58	91,815	39,400	-57

* Fourteen are major entry points and 36 are minor entry points.

** Six are Laboratory Technicians, 157 are Certificate Technicians.

*** First column represents data for 1990, not 1985, while second column shows the data from January to May 1991 for all countries.

nd: no available data

+ Brunei figures are not included in ALL

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Annex 1-c

Summary of Training Provided by PLANTI
(1987 – June, 1991)

Activity	1987	1988	1989	1990	1991*
>Number of Short-term Courses	14	16	14	7	3
>Number of participants/short-term Courses	235	234	190	119	3
>*Participants in Certificate Course	16	13	12	16	13
>*Participants in Diploma Course	4	4	5	6	5
>*Participants in Masters Program	4	2	–	–	–
>Senior Fellowships	–	1	–	–	–
>*Participants in Study Tour for ASEAN PQ Officers	–	8	–	–	6

*Incomplete

Summary of training programmes and number of participants for the Phase I and Phase II of the PLANTI Project.

Type of Training Programme	Phase I (1981-Sept 1987)		Phase II (Oct 1987-June 1991)		Percent Change in Annual Average*
	No. of Participants	Annual Average	No. of Participants	Annual Average	
Diploma in PQ	30	5	24	6	20.00
Certificate in PQ	39	7	70	18	169.23
Short-term Courses	398	66	643	161	142.34
Master of Science	6	1	4	1	0.00
Senior Fellowship	2	0	1	0	-25.00
Study Tour	46	8	8	2	-73.91
Total	521	16.67	750	188	115.93

*Based on annual increment for the two periods.

Computation: $\frac{P2 - P1}{P1} \times 100 =$

where: P1 = Annual average for Phase I
P2 = Annual average for Phase II

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1991 PLANTI TRAINING PROGRAMME

Type	Venue	Duration
MASTER OF SCIENCE	ASEAN/U.S. universities	Ongoing
DIPLOMA IN PLANT QUARANTINE	PLANTI	3 June-31 October
CERTIFICATE IN PLANT QUARANTINE	PLANTI	3 June-31 October
ON-THE-JOB TRAINING	U.S. PQ	May
SHORT-TERM COURSES		
Pest Risk Analysis	PLANTI	22 April-10 May
Postentry Screening Techniques	PLANTI	13-31 May
Advanced Course on Weed Seed Identification	PLANTI	3-21 June
Human Resources Management	PLANTI	8-26 July
Advanced Course on Identification of Fungi	PLANTI	8-26 July
Fumigation for Agricultural Products	PLANTI	5-16 August
Identification of Fruit Flies	PLANTI	5-23 August
Advanced Course on Insect Identification	PLANTI	9-27 September
Slugs and Snails of PQ Importance	PLANTI	16 September - 4 October
Advanced Course on Seedborne Pathogens	PLANTI	7-25 October
South American Leaf Blight and Other Diseases of Rubber	PLANTI	7-25 October
PQ Information and Documentation	PLANTI	4-22 November
Quarantine Procedures for Biological Control Agents	PLANTI	18 November - 6 December

The objectives, contents and other pertinent details of each of the proposed short-term courses are under the Short Course Section

PLANTI Courses, October 1987 - June 1991

No.	Course	Duration
	Short Course	
1.	Storage Pests	87 October 5 - 24
2.	Viruses in Ornamentals	87 November 2 - 14
3.	Techniques for Preserving Organisms	87 November 23 - December 12
4.	PQ Treatments	88 February 1 - 20
5.	Containerization: PQ Risks and Repsonsibilities	88 February 1 - 13
6.	SALB & Other Diseases of Rubber	88 April 4 - 23
7.	Collection, Preservation & Classification of Insects	88 April 4 - 16
8.	Cocoa Pests & Quarantine Measures	88 June 6 - 25
9.	Writing the PQ Message	88 June 6 - 25
10.	Advance Weed Identification	88 June 6 - 25
11.	Sampling Methods & Techniques for Seed Quality Control	88 July 4 - 16
12.	Some Major Diseases of Economic Crops	88 July 4 - 23
13.	Seed Health Testing Techniques for Cereals, Legumes & Vegetable Seeds	88 August 8 - 27
14.	PQ Interception of Nematodes	88 August 8 - 27
15.	Detection of Viruses in Ornamentals	88 September 5 - 17
16.	Grain Storage Pests & Control Strategies	88 September 12 - 24
17.	Cooperators of PQ	88 October 3 - 15
18.	Fumigation for Operators	88 October 3 - 15
19.	Slugs and Snails	88 November 7 - 26
20.	Stored Product Pests	89 February 19 - March 4
21.	Postentry Quarantine	89 February 13 - March 4
22.	Aquatic Plants as Hosts of Plant-parasitic Nematodes	89 March 13 - 31
23.	Seed Testing Techniques for PQ Officers	89 April 3 - 15
24.	Pests of Fruits and Vegetables	89 April 3 - 22
25.	Identification of Important Insect Pests	89 May 15 - 27
26.	Techniques for Preserving Pathogens	89 May 15 - 27
27.	Human Resource Management	89 August 7 - 18
28.	Soil Disinfestation Techniques & Safe Use of Pesticide	89 October 2 - 20
29.	Detection and Identification of Plant Pathogens	89 October 2 - 27
30.	Collection, Preservation and Identification of Weeds	89 November 6 - 24
31.	Fruit Flies	89 November 13 - 24
32.	Fumigation for Agricultural Products	90 February 12 - 23
33.	Insect Vectors of Economic Importance	90 March 12 - 30
34.	SALB and Other Diseases of Rubber	90 June 11 - 30
35.	Techniques for Detection & Identification Plant Pathogens	90 July 23 - August 30
36.	Interception & Identification of PQ Pests in Seed Consignments	90 September 3 - October 5
37.	Quarantine Procedures for Biological Control Agents	90 November 5 - 23

No.	Course	Duration
38.	Techniques for Detection & Identification of Plant Viruses	90 December 3 -15
39.	Pest Risk Analysis	91 April 29 - May 17
40.	Postentry Screening Techniques	91 May 31 - 31
41.	Weed Seed Identification	91 June 3 - 21
	Longterm	
1.	*Certificate in PQ*	87 March 2 - August 4
2.	*Certificate in PQ*	88 March 1 - August 4
3.	*Certificate in PQ*	89 March 1 - August 2
4.	*Certificate in PQ*	90 June 4 - October 19
5.	*Certificate in PQ*	91 June 3 - October 31
6.	*Diploma in PQ*	87 March 2 - August 4
7.	*Diploma in PQ*	88 March 1 - December 21
8.	*Diploma in PQ*	89 March 1 - December 21
9.	*Diploma in PQ*	90 June 4 - October 19
10.	*Diploma in PQ*	91 June 3 - October 31

Comparative distribution of short-term courses by type of subject matter, Phase I and Phase II of the PLANTI Project.

	Type of Subject	No. of Courses Completed		Percent Change
		Phase I*	Phase II**	
1	General PQ	1	0	-100
2	PQ Inspection	5	1	-80
3	PQ Procedures/Regulation	1	2	100
4	PQ Information/Documentation/ Communication	4	2	-50
5	Interagency Cooperation	1	0	-100
6	PQ Treatments	4	1	-75
7	Training for Trainors	1	0	-100
8	Human Resources Management	1	1	0
9	Fumigation	3	3	0
10	Nematology	5	1	-80
11	General Entomology	0	3	300
12	Fruit Flies	0	1	100
13	Stored Product Pest	8	3	-63
14	General Pests	4	2	-50
15	Plant Pathology	3	4	33
16	Virology	1	3	200
17	SALB of Rubber	1	2	100
18	Seedborne Deseases	2	1	-50
19	Seed Quality/Testing	0	3	300
20	Slug and Snails	0	1	100
21	Weed Science	4	4	0
22	Pesticide Application/Safe Use	2	1	-50
23	Quarantine Procedures for Biological Control Agents	0	1	100
24	Pest Risk Analysis	0	1	100
	Total	51	41	-20

* Includes courses from 1981 to September 1987
** Includes courses from October 1987 to June 1991 only.

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PLANTI Courses with Outside Participation (Phase II)

Course	Participants					
	Total	PLANTI-sponsored	non-PLANTI sponsored			
			Private (M'sia)	Govt. (M'sia)	ASEAN	non-ASEAN
1. Short course on Fumigation for Operators, 1988	29	12	14	3	0	0
2. Short course on Cooperators of PQ, 1988	11	5		1	5	
3. *Certificate in Plant Quarantine*, 1989	12	11				1
4. *Diploma in Plant Quarantine*, 1989	5	4				1
5. Quarantine Procedures for Biological Control Agents, 1990	18	14			1	3
6. *Certificate in Plant Quarantine*, 1990	15	9				6
7. Short course on SALB and Other Diseases of Rubber, 1990	22	17		2		3
8. *Certificate in Plant Quarantine*, 1991	13	12				1
9. *Diploma in Plant Quarantine*, 1991	5	4				1

Remarks: Participation from the Malaysian private and government sectors not sponsored by PLANTI was through personal contact and contacts made by the Department of Agriculture Malaysia. Training programme brochures were sent out to relevant agencies within and outside the ASEAN to solicit private participation. The brochures were also posted on request by individuals.

PARTICIPANTS RECRUITMENT/SELECTION PROCESS

I. Recruitment Through Invitation

A. The PLANTI Director sends invitations through:

1. The respective member country's relevant department in charge of Plant Quarantine Section (PQS) or the Members of the PLANTI Board of Directors.

2. Other government agencies and other relevant public and private agencies/organizations in the ASEAN Region and elsewhere.

B. Through Announcements/Circulars:

1. Once the proposed training programme is approved by the PLANTI Board of Directors, normally done during the Board's last of the two annual meetings (usually December), circulars/ correspondence are sent out announcing the year's lineup of training courses, which include the ongoing M.S. sponsored programme, on-the-job training, the *Certificate* and *Diploma in Plant Quarantine*, and short courses/workshops. Primary receivers of the circulars/correspondence are the member countries' departments in-charge of PQS, their local units/branches (eg. Regional offices as in the Philippines).

2. In the meantime, the booklet undergoes printing. Once printed, copies are rushed to the member countries and the donor agency. USAID normally requests a number of copies for distribution elsewhere. Copies of the booklet are also sent to a number of countries, organizations, agencies and individuals here and elsewhere who have indicated their interest in PLANTI's training courses.

3. The booklet carries with it general information on PLANTI's training programme. It carries the years' calendar of courses and details on course objectives, contents, among other pertinent information.

   It also specifies to whom each course is designed for, as well as expectations from prospective participants, to guide the nominating agencies on determining the type of participants qualified for the course.

4. For specialized courses, such as those catering to the private sector and those organized in collaboration with other agencies/organizations, separate circulars - mostly with printed leaflets - are sent to prospective participants, organisations/agencies.

II. Selection

A. If nomination was done by the respective member country, the PLANTI Management:

1. Requests member countries to send their respective lineup of participants for each of the year's short courses.

2. Further screens the participants based on the documents (eg. application forms, provided in the Training Booklet) submitted, if any, such as level of education, experiences and nature of work the of prospective participants.

3. Scans computer list of participants to check on the number of times (frequency) the prospective participant has undergone training at PLANTI, including the type/s and dates of training he/she attended before.

4. Counterchecks with relevant staff members, usually through staff meetings, on the background and other pertinent information on the prospective "returning" participant.

5. Informs the nominating country if the Management has any objection on their nominee/s; objections may range from the irrelevance of the nominee to the training course being applied for to the frequency of his/her participation in PLANTI's courses.

6. Sends letter of acceptance accordingly.

B. For private[1] and non-ASEAN participation, the PLANTI Management:

1. Depends on the sponsoring agencies' assessment of their nominees.

2. Sends letter of confirmation on their participation, after all requirements have been met.

3. Requires interested individuals and sponsoring agencies to bear the costs of training, including tuition fees, board and lodging, lecture notes, field trips, if any, and insurance coverage.

4. Seeks approval of the ASEAN Standing Committee (ASC) for applicants coming from non-ASEAN countries, after prior clearance with Malaysian authorities, such as the Ministries of Home Affairs and Foreign Affairs.

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1 PLANTI considers paid participation as private, whether the participant comes from the public or private sector.

Prior to the ASC's approval, all applications from non-ASEAN countries must first be approved by the Board, either on *ad referendum* basis or during Board Meetings.

C. The PLANTI Management adheres to the guidelines agreed upon by the PLANTI Board of Directors on the selection of candidates for the *Certificate* and *Diploma* courses as well as those nominated for graduate (M.S.) sponsorships as stated below:

C.1 ***Certificate in Plant Quarantine***

PLANTI screens/approves the applicant based on the following requirements, that the candidate:

C.1.1 Must at least be a graduate of Certificate in Agriculture or equivalent education; and

C.2.1 Must have at least three years of working experience in plant quarantine.

C.2 ***Diploma in Plant Quarantine***

Screening and approval depend on the candidate's qualification, such that he/she:-

C.2.1 Must be a holder of a Diploma or Bachelor of Science degree in agriculture or related field and must be a *bona fide* plant quarantine officer who has been in the service for a minimum of three years;

C.2.2 Must have excelled in his/her *Certificate* training at PLANTI and must have been adjudged as capable and willing to pursue the *Diploma* training; and

C.2.3 Must submit to PLANTI a research proposal for his/her *Diploma* Project duly approved by his/her supervisor/s relevant to his/her country's.

C.3 **Master of Science Programme**

Only *bona fide* Plant Quarantine Officers from the member countries are eligible to apply for sponsorship under this graduate programme. Qualified applicants must first get admission from any accredited university in ASEAN, other than his own, or in any accredited U.S. university.

Screening for qualified applicants is done at the country level. Those qualified are nominated by the member countries for PLANTI Management's further screening and approval. To further qualify, the candidate must:

C.3.1. Be a holder of Bachelor of Science degree in agriculture or related field.

C.3.2 Submit to PLANTI all credentials and pre-qualification requirements, including pertinent information on his/her field of study and letter of admission from the university of his/her choice.

III. Admission

Application forms from member countries should reach PLANTI at least one month before the course starts.

Private and non-ASEAN application should reach PLANTI three months before the course starts to allow more time for seeking necessary approval by relevant authorities/bodies.

Accomplishment of PLANTI's Research Goals

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JT/ros.

PLANTI's Cooperative Research Efforts (Phase II)

Undertaking	Partner	Remarks
1. Fumigation of khapra beetle	National Rice Authority (LPN)	Technical assistance was provided in carrying out fumigation at the LPN godown in Sungai Petani to ensure that the godown was 100% free of stored product pests, particularly *Trogoderma granarium* (khapra beetle).
2. Biological control agent of Mikania micrantha using Liothrips mikaniae	Dept of Agriculture (DOA) M'sia, the National Biological Control Committee, M'sia, with the assistance of the Commonwealth Institute of Biological Control (CIBC), U.K.	607 individuals of *L. mikaniae* imported from quarantine at CIBC were placed under postentry quarantine at PLANTI glasshouse. Tests confirmed all the series of earlier tests that *L. mikaniae* was totally specific to *M. micrantha* and would not become a pest on any other plant species.
3. Biological control of Salvinia molesta D.S. Mitchell using Cyrtobagous salviniae Calder and Sands in Malaysia	M'sian Agricultural Research and Development Institute (MARDI), DOA M'sia and CSIRO, Australia	2045 adult weevils of *C. salviniae* imported from CSIRO were placed under postentry quarantine at PLANTI. No-choice trials were carried out on 20 different plant species and choice tests were carried out for three different plant species. *C. salviniae* was totally specific to *S. molesta* and would not become a pest on any other species of plant. High competition for food was observed between the weevils and larvae of *Nymphula responsalis* which were very difficult to clean up from the culture. It is recommended that first release of the weevils in the field should be done as soon as possible to avoid all the remaining weevils (380 adults) from dying.
4. Postentry quarantine work on Colocasia sp.	Universiti Kebangsaan Malaysia	*Colocasia* germplasm imported from the Australian National University was held under postentry quarantine at PLANTI for a period of one year. The objective for the work was to ensure that the material was free from quarantine pests, particularly viruses, before they were released for field trials eventhough the material was earlier treated and certified free from pests. Dasheen mosaic virus was intercepted from the germplasm. The germplasm has not been released.
5. Request for PEQ studies on palms	Palm Oil Research Institute of Malaysia	PLANTI was requested to conduct postentry quarantine observations of oil palm germplasm material from Brazil and Colombia and beach palm material imported from Florida.
6. Postentry quarantine work on grape cuttings	DOA Malaysia	Postentry quarantine work was done on *Vitis vinifera* germplasm imported from Taiwan. The objective was to ensure that the material was free from quarantine pests, particularly viruses, before allowed to be released to the importer. The Universiti Pertanian Malaysia assisted in the detection of viruses using electron microscopy. The grape cuttings were rooted in PLANTI and observed for symptom development. Distinct symptoms of leaf curling, fan leaf and vein necrosis were seen. Plant vigour was poor and the plants showed general decline. Examination under electron microscope revealed the presence of fan leaf virus and leaf roll virus. The germplasm was destroyed.
7. Postentry quarantine work on mango from Mali	MARDI	Plants were grown under shade/glass-house. Diseased leaf samples on PDA revealed *Botryodiplodia* sp. The wedge-grafted scion did not sprout and shoots appeared only from the rootstock.

Undertaking	Partner	Remarks
8. Postentry quarantine work between BOH Plantation, Cameron Highlands and PLANTI on *Camellia sinensis* from Malawi	BOH Plantation, Cameron Highlands	None survived in all the rooted cuttings. Roots were damaged along transit. This could be attributed to the transplanting and treatment shock (the soil was completely removed and dipped in copper oxychloride and actellic). Diseased samples revealed the presence of *Fusarium* sp.
9. Study on resistance in stored product insects to common fumigants and residue levels in import and export of agricultural commodities	GTZ	Project staff from PLANTI are trained on pesticide residues and breeding of storage pests. Such fumigants as methyl bromide and phosphine are covered.
10. ASEAN integrated fuit fly management	GTZ	In line with the request of the ASEAN Standing Committee, the project proposal needed further submission to the Government of the Federal Republic of Germany for possible funding. After consultation with MARDI, a new proposal with regard to postharvest quarantine was prepared for consideration of the Board. A revised version was later discussed with Dr Reichmuth for transmission to GTZ.
11. Irradiation of cut flowers	IAEA, MARDI and M'sia's Nuclear Energy Unit	The project will determine the right radiation dose to get 100% kill of mites infesting cut flowers. Studies on life history of the red spider mite had been completed. Breeding of the mites was carried out so that the immature stages could be used for irradiation. MARDI, the second agency involved in the project was concentrating on shelf-life studies. Preliminary studies were made on roses, chrysanthemums and orchids. Roses were injured by low doses.
12. Quarantine Data Sheets	FAO-RAPA	PLANTI submitted ten Quarantine Data Sheets to FAO-RAPA.
13. Bilateral projects	DOA and other local agencies	PLANTI initiated the formation of bilateral committees with the various agencies with the objective of strengthening linkage programmes with them, specifically to identify priority areas for cooperation between and among the agencies. Similar bilateral efforts are planned with MARDI, Rubber Research Institute of M'sia and PORIM, the academe, and other government and semi-government entities whose thrusts can be aligned with those of PLANTI's.
14. Apprenticeship programme	Local universities and institution- Universiti Pertanian M'sia, Universiti Kebangsaan M'sia, Universiti Sains M'sia and Institut Teknologi MARA (ITM)	Through requests, PLANTI supervised 30 undergraduate agriculture students who underwent six-week practical training in the Institute from 1989-1991. They were placed under PLANTI's Documentation, Weed Science, Entomology, Nematology, Virology and Pathology Sections. PLANTI also conducted a one-and-a-half week training in 1990 for an ITM lab assistant on plant pathology, seed pathology, weed science, nematology, virology and entomology.

List of PLANTI Consultants

1 Dr. Robert P. Kahn

Qualifications: Former USDA/ARD Personnel

Duration of Consultancy: 6 December 1987 to 31 January 1988

Major Task: Technical Advisory Services in Connection with the ASEAN PLANTI Project's Transition from Phase I to Phase II.

2. Mr Roy Cole

Qualifications: Former USDA Senior Operations Officer

Duration of Consultancy: 29 October 1990 to 10 January 1991

Major Task: Evaluation of plant quarantine port operations in ASEAN

3 Mr Eugene Davidson

Qualifications: Former USDA/ARD Personnel

Duration of Consultancy: 20 April to 19 June 1991

Major Task: Assist in pest risk analysis and review technical problems related to criteria for pest risk analysis.

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List of Technical Meetings, 1987-1991

Title	Duration	Venue
1. Standardization for weed interception	1987 September 30-October 2	Manila, Philippines
2. Tolerance levels for seedborne diseases	1988 May 25-27	Bandar Seri Begawan, Brunei Darussalam
3. Slugs and snails of economic importance	1988 June 22-24	Bangkok, Thailand
4. Harmonization of postentry quarantine	1988 November 2-4	Cipanas, Indonesia
5. Plant quarantine legislation and documentation	1988 November 2-4	Manila, Philippines
6. Plant quarantine treatments	1988 November 16-18	ASEAN PLANTI, Malaysia
7. Training needs of plant quarantine in the ASEAN	1989 September 4-6	ASEAN PLANTI, Malaysia
8. Standardization of suitable plant quarantine measures	1989 October 23-27	Yogyakarta, Indonesia
9. Regional Workshop on Pest Management of Vegetables	1990 October 8-13	Cameron Highlands, Malaysia
10. PQ as an Element of International Trade Facilitation	1991 May 20-24	Singapore

PLANTI PUBLICATIONS

1. Monograph No. 1. Plant-parasitic nematodes intercepted in potatoes imported Malaysia
2. Pest Data Sheets (PDS)
   - PDS No. 9. CSSV complex (*revised version*)
   - PDS No. 11. Sudden wither of oil palm
   - PDS No. 17. Moniliophthora pod rot of cocoa
   - PDS No. 18. Alligator weed
   - PDS No. 19. Maize rayado fino virus
   - PDS No. 20. Rice yellow mottle
   - PDS No. 21. Potato ring rot
   - PDS No. 22. Ringspot of coffee
   - PDS No. 23. Lethal yellowing
   - PDS No. 24. Rice dwarf virus
   - PDS No. 25. Grapevine flavescence doree
   - PDS No. 26. *Aphelenchoides besseyi* Christie
   - PDS No. 27. *Salvinia molesta*(Aubl.) D.S. Mitchell
   - PDS No. 28. Cushion gall diseases of cocoa
   - PDS No. 29. Rye grass nematode
   - PDS No. 30. Rice gall midge
   - PDS No. 31. *Eichhornia* spp.
   - PDS No. 32. Mediterranean fruit fly
   - PDS No. 33. Cocoa pod borer
   - PDS No. 34. Rice hoja blanca virus
   - PDS No. 35. Rice transitory yellowing virus
   - PDS No. 36. *Trachysphaera fructigena* Tabor and Bunting
   - PDS No. 37. Rice stripe virus
   - PDS No. 38. Witchweed
   - PDS No. 39. Coffee berry disease
   - PDS No. 40. Stolbur
   - PDS No. 41. Bacterial blight of vine
   - PDS No. 42. *Sorghum halepense* (L.) Pers.
   - PDS No. 43. *Parthenium hysterophorus* L.
   - PDS No. 44. *Protomelittomma insulare* (Fairmaire)
   - PDS No. 45. *Bacterocera* (Bactrocera) *tryoni*
   - PDS No. 46. *Heterodera glycines* Ichinohe
   - PDS No. 47. *Ephelis oryzae* Syd.
3. PLANTI Biennial Report, 1986-1987
4. PLANTI Brochure 1990
5. PLANTI Infokit
6. PLANTI News, three times per year
7. PLANTI Training Programme
8. Proceedings on:
   - i. Movement of Pests and Control Strategies (1988)
   - ii. Introduction of Germplasm and Plant Quarantine Procedures (1989)
   - iii. Pest Management of Vegetables (*in press*)
   - iv. International Plant Quarantine Congress (*in press*)
9. Research Theses and Reports

   Diploma

   1987

   NATTHAPORN KRATES (Thailand) - Diseases of ornamental plants and their plant quarantine significance

   CECILIA S. INFANTE (Philippines) - Detection of seedborne mycoflora in cover crop seed consignments and seed treatment

   EVELYN F. CANET (Philippines) - Occurrence of nematodes in local and imported cultivated mushrooms in Malaysia

   ALBERTO U. RAMOS (Philippines) - Survey of fruit flies and disinfestation treatments

   1988

   MISRUDDIN HADIS (Malaysia) - The susceptibility of developmental stages of *Sitophilis zeamais*, *Trogoderma granarium* and *Lasioderma serricorne* to methyl bromide

   ARIFIN TASRIF (Indonesia) - Interception of weed seeds in grass seeds imported into Malaysia

   MANIT JAICHAGUN (Thailand) - Survey of fungal diseases of orchids

   LOLITA PAMA (Philippines) - Detection of fungal and bacterial pathogens in imported and local sweet corn seeds

1989

MYO NYUNT (Myanmar) - Plant quarantine treatments on plants and planting materials

BUDIMAN (Indonesia) - Screening of imported planting materials for diseases

GEORGE L. ABERILLA (Philippines) - Field survey of mango seed weevil, *Sternochetus mangiferae* and mango pulp weevil, *Sternochetus frigidus*, in Peninsular Malaysia

EDMUNDO P. REVILLA (Philippines) - Survey of aquarium plants of PQ importance and identification of nematodes associated with them

PETER JEE (Malaysia) - Interception of dasheen mosaic virus in taro *Colocasia esculenta* (L.) Schoff germplasm

1990

DJADJA KARIWIRA (Indonesia) - Detection and identification of fruit flies associated with imported vegetables in Peninsular Malaysia

SRIYONO (Indonesia) - Fungi of quarantine importance in rice seeds

MAZLAN B. SAADON (Malaysia) - Plant quarantine operation procedures in Port Klang, Malaysia

DZULKEFLI B. ALWI (Malaysia) - A survey of pests and diseases of major ornamental plants at Cameron Highlands

NEO CHIN ENG (Malaysia) - Study on the structure of the chrysanthemum cut flower industry in Cameron Highlands with emphasis on overcoming the chrysanthemun white rust (*Puccinia* sp.)

LEONARDO B. ACEBO (Philippines) - Fumigation of cut flowers

Master

ORATAI EUATRAKOOL (1987) - Survey of stored product insects with emphasis on import and export commodities in the Philippines and Thailand

WANNAPA SAKULMUTHITA (1987) - Physical properties of seeds associsted with viability and vigor of selected grain crops

YUSOF OTHMAN (1988) - Study on insecticide resistance in *Sitophilus zeamais* infesting milled rice

ERLINDA L. LEONES (1989) - Study on the biology of an aquatic weed *hydrilla verticillata* (L.F.) Royle

SUWANDA (1989) - Preliminary studies on phytopathological and genetical aspects of early leaf spot (*Cercospora arachidicola* Hori) in some varieties of groundnut

SUDARISMAN (1989) - Incorporating resistance against pepper veinal mottle virus (PVMV) and ideal morphoagronomic characters into chilli *Capsicium annum* L.

MOKHTARUD-DIN BIN HUSAIN (1990) - Some aspects of biology and control of Alternanthora philoxeroides (Mart.) Grisebs and its relevance to plant quarantine

Fellowship

REY D. DUHAYLONGSOD - Plant-parasitic nematodes associated with potatoes (*Solanum tuberosum* L.)

10. Symposium Programmes and Announcement Leaflets

11. Technical Meeting Reports

Standardization for weed interception, 1987
Tolerance levels for seedborne diseases, 1988
Slugs and snails of economic importance, 1988
Harmonization of postentry quarantine, 1988
Plant quarantine legislation and documentation, 1988
Plant quarantine treatments, 1988
Training needs of plant quarantine in the ASEAN, 1989
Standardization of suitable plant quarantine measures, 1989
Regional Workshop on Pest Management of Vegetables, 1990
PQ as an Element of International Trade Facilitation, 1991

1991
STAFF SUPPORT COST SUMMARY
US Funded Positions

Position/Category	No. of Persons	Salary & Allowance (M$) ($'000)	Salary & Allowance (US$) * ($'000)
A. PROFESSIONAL			
1. Filled	10	$404.93	$152.81
2. Vacant	-	-	-
B. LABORATORY STAFF	14	$172.22	$64.99
C. FARM STAFF	2	$34.86	$13.15
D. ADMINISTRATIVE STAFF	5	$93.58	$35.31
T O T A L:	31	$705.59	$266.26

* US$1 = M$2.65

1991
TRAINING PLAN AND COST SUMMARY

CATEGORY	DURATION	LOCATION	DISTRIBUTION *							TOTAL	TOTAL PROGRAM COST (M$)
			PLT.	B	I	M	P	S	T		
M.S. Degree	2 years	US/ASEAN	-	-	1	2	-	-	1	4	$69,419.00
Diploma	5 months	PLANTI	-	1	2	2	2	1	2	10	$51,248.00
Certificate	5 months	PLANTI	-	2	4	4	4	2	4	20	$102,496.00
Short Courses	3 weeks	PLANTI	-	28	56	56	56	28	56	280	$492,310.00
Study Tour (OJT)	6 weeks	USA	-	1	1	1	1	1	1	6	$150,027.00
Technical Meetings	6 days	ASEAN	12	6	12	12	12	12	12	72	$135,485.00
Senior Fellowship	-	-	-	-	-	-	-	-	-	-	-
Conferences (Local)	6 days	MALAYSIA	4	2	4	4	4	2	4	24	$36,309.00
Overseas Conferences	2 weeks	N.A.	2	-	-	-	-	-	-	2	$24,834.00
T O T A L:			18	40	80	81	79	40	80	418	$1,062,128.00

* PLT = PLANTI
B = BRUNEI
I = INDONESIA
M = MALAYSIA
P = PHILIPPINES
S = SINGAPORE
T = THAILAND

Technical Assistance Needs and Cost Summary
($ 000)

Category of Consultants	Duration in week	Year #1 Cost	Year #2 Cost	Year #3 Cost	Year #4 Cost	Total
Pathology (Palms)	8	24				24
Seed Technology	6	18				18
Serology	8	24				24
Bacteriology	6		18			18
Fumigation	6		18			18
Treatment Methods	8		24			18
Nematology	6			18		18
Toxicology	6			18		18
Weed Specialist	6			18		18
Acariology	6				18	18
Entomology	6				18	18
Pathology (Cacao)	6				18	18
General Legislation	6			18		18
Mycology	6			18		18
Post Entry Quarantine.	6	18				18
Quarantine Info. & Communication	6		18			18
Plant Quarantine Operations	52	60	59			119
T O T A L	154	144	137	90	54	425

LIFE OF PROJECT FINANCIAL PLAN , PHASE II

Use of Funds	Source of Funds AID	ASEAN	TOTAL
- Training	$2,035,000	$ 330,000	$2,365,000
- Technical Assistance	392,000		392,000
- Institutional Support			
a. Commodities	223,000	135,000	358,000
b. Staff Support	1,150,000	1,420,000	2,570,000
c. Informaton Dissemination	200,000		200,000
d. Other Operating Expenses		100,000	100,000
e. Construction		135,000	135,000
TOTAL	$4,000,000	$2,120,000	$6,120,000

ASEAN PLANT QUARANTINE CENTRE AND TRAINING INSTITUTE
Disbursement Report - USAID & GOM
Period January 1987 - December 1989

	Year		
Project Component/Details	1987	1988	1989
1. CORE BUDGET (FIXED)			
Staff Support (US)			
B1-01 Professional Staff	$357,215.00	$377,921.78	$395,643.87
B1-02 Laboratory Staff	$113,577.44	$133,180.55	$151,848.11
B1-03 Farm Staff	$35,248.80	$36,128.80	$33,706.20
B1-04 Administration Staff	$77,716.20	$82,754.60	$88,041.62
Salary (GOM)	$201,008.30	$232,531.22	$256,147.42
Utility (GOM)	$98,797.55	$131,542.99	$112,175.95
Maintenance (GOM)	$35,396.47	$55,736.20	$60,019.76
A1-04 Vehicle Maintenance (US)	$4,817.14	$8,492.79	-
SUBTOTAL (1)	$923,776.90	$1,058,288.93	$1,097,582.93
2. VARIABLE BUDGET			
A. Training (US)			
C1-02 Diploma/Certificate/MSc	$128,015.47	$154,519.76	$167,151.85
C1-03 Non-degree	$323,585.28	$404,542.96	$259,152.25
C1-04 Seminar &Conference/Technical Meeting	$98,030.25	$252,684.32	$91,873.17
C1-05 Travel PLANTI Staff	$17,066.90	$15,233.59	$21,638.15
A2-02 Office Supplies	$21,222.59	$31,786.88	$25,691.89
A2-03 Laboratory Supplies	$44,520.70	$53,380.76	$132,031.69
A2-04 Training & Visual Aid Supplies	$5,467.16	$6,282.97	$25,510.25
A2-07 Field Supplies	$18,393.80	$32,099.15	$25,584.78
SUBTOTAL (A)	$656,302.15	$950,530.39	$748,634.03
B. Information Dissemination (US)			
A2-05 Documentation	$39,389.34	$106,922.48	$88,724.10
SUBTOTAL (B)	$39,389.34	$106,922.48	$88,724.10
C. Institutional Support			
Commoddities (US)			
- Vehicle	-	$62,240.69	-
- Computer Software	-	$4,253.00	$22,728.00
Commodities (GOM)	$42,811.01	$113,044.95	$90,484.51
SUBTOTAL (C)	$42,811.01	$179,538.64	$113,212.51
D. Construction (GOM)	$15,848.92	$8,093.00	$16,846.00
SUBTOTAL (D)	$15,848.92	$8,093.00	$16,846.00
SUBTOTAL (2)	$754,351.42	$1,245,084.51	$967,416.64
GRAND TOTAL	$1,678,128.32	$2,303,373.44	$2,064,999.57

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In-kind contribution of ASEAN governments to trainees sent to PLANTI, June 1991 (in Malaysian Ringgit).

Country	No. of Trainees Sent	Average In-kind Contribution Per Trainee	Total Contibution Per Country
I. Short Course			
A. Course Title: Pest Risk Analysis			
Duration: 29 April to 17 May 1991			
Brunei Darussalam	1	68	68
Indonesia	4	517	2,069
Malaysia	4	711	2,844
Philippines	4	1,223	4,892
Singapore	1	1,260	1,260
Thailand	4	615	2,461
Total	18		
Average		755	2,266
B. Course Title: Postentry Screening Techniques			
Duration: 13 to 31 June 1991			
Indonesia	4	116	463
Malaysia	6	657	3,940
Philippines	4	1,261	5,044
Thailand	4	631	2,523
Total	18		
Average		665	2,993
C. Course Title: Advanced Course on Weed Seed Identification			
Duration: 3 to 21 June 1991			
Indonesia	4 *	453	1,358
Malaysia	5 *	591	2,365
Philippines	3	1,378	4,133
Thailand	4	736	2,945
Total	16		
Average		675	2,700
II. Diploma in Plant Quarantine			
Duration: 3 June to 31 October 1991			
Indonesia	3	719	2,156
Philippines	1	1,746	1,746
Total	4		
Average		976	1,951
III. Certificate in Plant Quarantine			
Duration: 3 June to 31 October 1991			
Indonesia	4	1,177	4,706
Malaysia	6	4,306	25,835
Philippines	2	1,953	3,905
Total	12		
Average		620	11,482

* No response from one of the trainees.

** In-kind contribution includes expenses on air-ticket to and from the nearest international airport, fare for local transport, clothing allowance (in the case of the Philippines), continuing salary while on training, pre-departure expenses and cost of research materials and supplies.

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Comparative in-kind contribution by ASEAN member countries to trainees sent to PLANTI, September 1987 to April 1991.

	Country	Actual In-kind Contribution to Training (Malaysian $)	Total Number of Trainees Sent	Average Contribution Per Trainee
1	Brunei Darussalam	nd	18	nd
2	Indonesia	169,805	160	1,061
3	Malaysia	450,450	264	1,706
4	Philippines	254,449 *	132	1,928
5	Singapore	13,110 **	12	1,092
6	Thailand	6,515 ***	144	543

nd no data available
* 1 Malaysian ringgit approximately equals 9.8 Philippine peso.
** 1 Singapore dollar approximately equals 1.2 Malaysian ringgit.
*** 1 Malaysian dollar approximately equals 12 Thai baht.

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IN-KIND CONTRIBUTION BY
ASEAN MEMBER COUNTRIES
(1987 - PRESENT)

COUNTRY	EXPENDITURE		
	BOD MEETING	TRAINING	TOTAL
	(S$)	(S$)	(S$)
1. SINGAPORE	5,957.16 (1988-1990)	9,363.79 (1987 - April 91)	15,320.95 (M$9,821.12)
	(M$)	(M$)	(M$)
2. INDONESIA	29,686.80 (Sept. 87 - April 91)	169,805.02 (Sept. 87 - April 91)	199,491.82
	(P)	(P)	(P)
3. PHILIPPINES	469,112.00 (Sept. 87 - May 91)	2,162,814.00 (Sept. 87 - May 91)	2,631,926.00 (M$292,436.22)
4. BRUNEI DARUSSALAM	-		
	(B)	(B)	(B)
5. THAILAND	51,505.00 (Sept. 87 - Sept. 90)	78,175.00 (Sept. 90 - Nov. 90)	129,680.00 (M$14,408.89)
			-- --
6. MALAYSIA	(M$) 37,600.00	(M$) 450,450.00	(M$) 488,050.00

Documents Reviewed

1. ASEAN Human Resources Development: AID Project Paper (1987).
2. Future Financing and Management of ASEAN PLANTI (1987).
3. Areekul, S; P. Hamzah; T. Darling. (1985). Report of the Evaluation Committee for the ASEAN Plant Quarantine Centre and Training Institute (PLANTI).
4. Cole, R. (1991). Plant Quarantine Port Operations in ASEAN
5. Report of the 14th Meeting of the Board of Directors ASEAN PLANTI (1987).
6. Report of the 15th Meeting of the Board of Directors ASEAN PLANTI (1988).
7. Report of the 16th Meeting of the Board of Directors ASEAN PLANTI (1989).
8. Report of the 17th Meeting of the Board of Directors ASEAN PLANTI (1990).
9. Report of the 18th Meeting of the Board of Directors ASEAN PLANTI (1990).
10. Report of the 19th Meeting of the Board of Directors ASEAN PLANTI (1990).
11. Report of the 20th Meeting of the Board of Directors ASEAN PLANTI (1991).
12. Davidson, E. (1991). Pest Risk Analysis
13. Harmonization of Postentry Quarantine: Report of the ASEAN PLANTI Technical Meeting No. 21 (1988).
14. Plant Quarantine Legislation and Documentation: Report of the ASEAN PLANTI Technical Meeting No. 22 (1988).
15. Plant Quarantine Treatments: Report of the ASEAN PLANTI Technical Meeting No. 22 (1988).
16. Training Needs of Plant Quarantine in the ASEAN: Report of the ASEAN PLANTI Technical Meeting No. 24 (1989).
17. Standardization of Suitable Plant Quarantine Measures: Report of the ASEAN PLANTI Technical Meeting No. 25 (1989).
18. Kahn, K. (1988). Technical Advisory Services in Connection with the ASEAN PLANTI Project's Tansition from Phase I to Phase II
19. Maehler, K.L. (1987). ASEAN PLANTI Phase II Implementation

Persons Interviewed

Mr. M. Sivanaser; Director, ASEAN PLANTI

Mr. Ibrahim Abu Ahmad; Chief Administrative & Procurement Officer

Dr. Soetikno S. Sastroutomo; Senior Weed Scientist, ASEAN PLANTI

Dr. Nathan Ganapathi; Senior Plant Pathologist, ASEAN PLANTI

Mr. Mohd. Azmi b. Ab. Rahim; Senior Nematologist/Entomologist

Mr. Paul L. Manalo, Senior Documentation Officer, ASEAN PLANTI