

Forestry Support Program



Collaboration Between AID
and U.S. Forestry Schools

Report of a Meeting of:

- 1) the Office of Forestry and Natural Resources of AID's Bureau for Science and Technology,
- 2) the Ad Hoc International Forestry Committee of the National Association of Professional Forestry Schools and Colleges, and
- 3) the USDA/AID Forestry Support Program

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August 3-5, 1983
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ABSTRACT AND RECOMMENDATIONS

Abstract

A discussion meeting took place on August 3, 4, and 5, 1983 between USAID Bureau for Science and Technology, Office of Forestry and Natural Resources; The National Association of Professional Forestry Schools and Colleges, ad hoc International Forestry Committee and the USDA/Forest Service Forestry Support Program (FSP). Reasons for the meeting were to (1) begin a dialogue between AID and the NAPFSC International Forestry Committee and (2) identify specific mechanisms for strengthening collaboration between AID, FSP and the forestry schools and colleges.

During the meeting the three groups briefed each other on particulars of their activities. Not only is it significant that USAID's present forestry assistance policy continues to emphasize the important supportive role of forestry, but programs and projects more clearly recognize the economic development, income and employment opportunities of forestry and forest-based industry. The strong interest of NAPFSC in the long range outlook is to have influential involvement during project identification and design stages, particularly in the areas of education/training, research, and extension.

The meeting concluded by compiling a set of recommendations for further study and refinement. Opportunities for the forestry schools to work more closely with AID's forestry program fall into three main categories: (1) greater participation of the U.S. forestry schools in AID's forestry training and education activities; (2) enhanced role of the U.S. forestry schools in research of relevance to forestry in AID's host countries; and (3) possible forestry school input on decisions regarding the design and implementation of AID's forestry projects (particularly those project components which focus on education, training, research, and extension).

Recommendations

This section is organized into three parts: (1) recommendations on how to strengthen future communications between AID/FSP and NAPFSC; (2) issues for NAPFSC attention; and (3) recommendations on issues which require the attention of both AID/FSP and NAPFSC working together.

(1) Strengthening Communications Between AID/FSP and NAPFSC

(a) AID/FSP should consider the drafting of a "no-cost" memorandum of understanding (MOU) or similar agreement between itself and NAPFSC. The agreement would specify the objectives of collaboration and identify the mechanisms by which such collaboration could take place.

(b) With or without the MOU, there are several lines of communication between AID/FSP and NAPFSC that should be opened. For example, each forestry school should consider identifying one administrator or faculty member to act as primary liaison (contact person) to transmit, receive, and distribute communications to and from AID/FSP in matters of international forestry.

AID/FSP could benefit from periodic updates of university research of relevance to forestry in developing countries. In turn, the forestry schools could benefit from AID/FSP memos that would advise of upcoming AID forestry projects, changes in AID program directions, employment opportunities in international forestry etc.

(c) AID/FSP should explore programmatic ways of getting comments and recommendations from the forestry schools at critical stages in the formulation and execution of those forestry projects of greatest relevance to the universities. These critical stages include project identification (conceptualization) and project design (questions of team composition and focus). This recommendation is linked with (a) and (b) above.

(2) Issues for NAPFSC Attention

(a) NAPFSC should consider establishing a standing committee for International Forestry (as opposed to the ad hoc committee which exists presently). This standing committee would then be in a position to communicate with AID/FSP on a regular basis. Additionally, the other standing NAPFSC committees--e.g., for research, education, etc.--should consider appointing member(s) responsible for issues pertaining to the international dimension of those committees.

(b) The NAPFSC committee on International Forestry should brief the NAPFSC community at large on the long-range opportunities of making a commitment to international forestry. This briefing could include the opportunities available in AID's Joint Career Corps; the opportunities available in both basic and applied research of interest to AID; and the possibilities for collaboration in the recruitment and placement of more foreign students.

(c) NAPFSC should encourage its member institutions to evaluate how to bridge their international activities and aspirations with their campuses agricultural schools. It is frequently the agricultural schools which have long-standing international connections, programs, and funding linkages. In some cases it may be advantageous for forestry school deans and department heads to show the administrations of the agricultural schools--and the administrations of programs for fisheries, wildlife, marine resources, etc.--how forestry fits into their international activities on soil and water protection, agroforestry, and so on.

(d) NAPFSC should consider how its members might associate with firms in the private sector to jointly organize for certain kinds of AID forestry projects. While the universities may enjoy advantages in activities like teaching and research, the private firms often have advantages in project management and contracting. Partnerships thus afford the potential for mutually beneficial ventures in some lines of international forestry.

(e) NAPFSC should explore mechanisms to strengthen the relationships between the U.S. forestry schools and the forestry schools and other forestry institutions in the developing countries. Such mechanisms might include offering foreign professors adjunct status in U.S. forestry schools; offering academic credit for courses and research conducted in the developing countries; and finding means to better link foreign students with professors in their home countries at the same time that they are linked with professors in the U.S.

(3) Issues for Joint Attention by Both AID/FSP and NAPFSC

(a) The Title XII program, and especially the strengthening grants, needs to be studied, and its implementation at the various universities investigated, to learn how forestry is (or is not) affected by this funding.

(b) The U.S. forestry schools probably could be doing more as a force in Washington (and elsewhere) to affect the course of international forestry, possibly through the NAPFSC organization. Current examples are opportunities to review and comment on OTA's assessment of "Technologies to Sustain Tropical Forest Resources," and possibilities to seek reinstatement of NSF grants of relevance to natural resource issues abroad.

(c) The U.S. forestry schools may benefit by increased "twinning" arrangements with forestry institutions in the developing countries. This can be accomplished in several ways: (i) identify and study the model of successful previous arrangements between U.S. forestry schools and sister institutions abroad; (ii) encourage NAPFSC to produce and distribute a list of foreign student alumni who can be contacted during the many visits abroad by U.S. forestry faculty members and other U.S. forestry visitors; (iii) explore avenues of AID/FSP support for travel of foreign students and their U.S. professors to the student's home country for the conduct of the student's research; (iv) encourage foreign students to choose research projects of direct relevance to the context of their home countries (related to iii preceding, as well as to 2(e)).

(d) NAPFSC, together with AID/FSP, should consider the extent to which the U.S. forestry schools are in a position to improve their response to the need for forestry training at the technical and vocational levels. Perhaps this requires the pooling of talents from the universities, technical schools, and private sector (related to 2(d)).

(e) NAPFSC and AID/FSP and OICD should jointly find means to improve the recruitment and placement of foreign forestry students. This presents some difficulty to AID/FSP and OICD because of the large number of such students, and because of the obstacles in isolating a single profession within AID's larger mandate for education and training more generally. However, a few measures that might be in order include: (i) develop a referral system among the U.S. forestry schools so that School A can advise School B of a foreign student who A cannot place, but who may be of potential interest to B; (ii) promote the overseas visit of U.S. forestry school representative(s) to provide accurate information on what the U.S. forestry schools have and do not have to offer, and to scout prospective new students for the U.S. schools; and (iv) encourage visiting foreign professors of forestry--and other overseas forestry visitors--to study the programs and curricula offered by the various U.S. forestry schools.

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(1) Background and Historical Perspective (Deely)

The U.S. Agency for International Development (A.I.D.) administers development assistance aspects of the U.S. foreign aid program.

The predecessor agencies of what is now A.I.D. were significantly involved during the 1950's and the 1960's in providing forestry assistance to developing countries. The United States provided assistance along traditional forestry lines with conduct of timber volume inventories, construction of wood processing facilities and strengthening of forestry schools, forestry research institutions and government forest management organizations. These assistance programs required a cadre of several dozens of U.S. expatriot forestry advisors who resided within countries receiving assistance during this period. U.S. foresters who engaged in such work were either employees of A.I.D.'s predecessor agencies serving as foreign service officers overseas, or they were consultants serving under the auspices of the foreign aid program.

A major change in emphasis occurred within the U.S. foreign aid program during the late 1960's and the early 1970's. Capital intensive approaches and economic development orientations which had tended to dominate earlier assistance efforts gave way to programs by the early 1970's which were more targetted to provide direct benefits to the rural poor majority of developing countries.

U.S. development assistance in forestry was greatly curtailed during the late 1960's and by the early 1970's was effectively eliminated as a recognized and significant aspect of U.S. foreign assistance. U.S. government and university forestry institutions became disassociated from the U.S. foreign aid program thereafter, and specialized forestry staff positions associated with foreign aid were abolished.

Stimulated by such events as the extended drought in the Sahel Region of Africa and changing petroleum market conditions in the early 1970's, A.I.D. began to recognize the important role of trees and other woody vegetation in sustaining resource productivity and meeting the basic needs of the rural poor majority of developing countries.

Without significant numbers of foresters on its own staff, A.I.D. nonetheless began during 1973-1978 to develop and implement an increasing number of forestry-related projects. These projects responded to meeting energy needs, environmental degradation and natural resource conservation requirements within broader agriculture, energy and rural development assistance programs. Fuelwood, dune stabilization/shelterbelts, watershed management and community woodlot projects were developed which primarily focussed on meeting the needs of poor rural people living on marginal crop and range land.

By 1979, forestry-related development assistance was once more becoming recognized within A.I.D. as a valid aspect of U.S. foreign assistance, and at least modest Agency staff resources were again devoted to forestry. A.I.D.'s financial commitments to forestry assistance by 1980 stood at more than 50 projects and project components which involved more than \$70 million directed specifically toward forestry activities within a \$250 million total project cost program. A.I.D. formally established a small Office of Forestry, Environment and Natural Resources in its Washington, D.C. headquarters early in 1981. Current total financial commitments to forestry activity assistance

by A.I.D. within all ongoing and planned projects is now about \$300 million in over 80 assistance projects in some 35 countries. Forestry assistance began to receive more formal recognition as a legitimate component of U.S. foreign aid in 1981 with publication of the Agency's first official statement of policy on forestry. A.I.D.'s first forestry assistance policy statement gave emphasis to conservation and noncommercial forestry approaches within energy, agriculture and rural development assistance projects. A.I.D.'s initial policy statement was revised early in 1983 to reflect a maturing understanding by the Agency of the broader role of the forestry sector in national economic development.

The Agency's present forestry assistance policy continues to emphasize forestry's important supportive roles in relation to other sectors, particularly energy and agriculture, but now more clearly recognizes the economic development, income and employment prospects of forestry and forest-based industry for meeting local and commercial needs for forest products and other forest-derived goods and services.

(2) Purpose of Meeting

The U.S. Agency for International Development (USAID) and its Forestry Support Program (FSP) are assessing alternative means to improve linkages with the U.S. forestry schools. The newly organized ad hoc International Forestry Committee of the National Association of Professional Forestry Schools and Colleges (NAPFSC) provides a means to start these communications. The purposes of the August meeting were: 1) to begin a dialogue between AID and the forestry university committee by briefing the NAPFSC committee on AID's current portfolio of forestry projects, together with likely directions in the near-term future and 2) to identify specific mechanisms for strengthening collaboration between AID/FSP and the forestry schools--particularly in the areas of education, training, research, and extension--for mutual benefit to all parties.

(3) Discussion with Dr. Nyle Brady, Senior Assistant Administrator for Bureau of Science and Technology

Dr. Brady emphasized two points, (1) forestry is a neglected area which has witnessed a lack of resource replenishment and, (2) The mechanisms in forestry are not the same as agriculture as regards the intensive search for solutions. One of the answers is that forestry schools and colleges have to be more aggressive to become involved in international work. To be involved is not a short term proposition, but a long range venture, where projects are being designed with 10-15 year horizons.

Dr. Brady emphasized the long range outlook by describing the new Joint Career Corps Program (JCC) whereby technical input from the university system is placed at the field (missions) level. The University of Idaho is the only forestry school participating in the program.

(4) Agenda Items Discussed

(4.1) Overview and Update of USAID's Forestry Program

(4.1.1) Policy and Strategy (Deely)

To a large extent the foundation for USAID's Forestry Policy and Strategy lies in the history of AID's prior involvement which is summarized in the background section of this report. The two papers explaining AID's forestry policy and strategy were provided to the meeting participants:

o Forestry Policy and Programs, Policy Determination. PD-7, May 16, 1983.

o AID Forestry Strategy - Draft. Fall, 1982.

(note: It was agreed that copies of the policy and strategy papers would be sent to Dr. Bethel for him to circulate to the NAPFSC membership.)

(4.1.2) Research Implementation Plan (Josyln)

LDC's (Lesser Developed Countries), AID, and other donors are increasing the amount of resources invested in forest management, reforestation, and the production of forest goods and services. Forestry projects are being planned and implemented for meeting energy needs through fuelwood plantations and watershed protection; supporting food and livestock production through reforestation of degraded croplands, unproductive pasture, and eroded slopes; and contributing to broadly-based rural economic growth through meeting local and industrial needs for forest products. The scientific base upon which large investments in afforestation and tree planting are being made is very weak, due in part to the virtual absence of necessary basic and applied research on biological and socio-economic aspects of forestry projects. AID is now in the process of developing a long term forestry research program which will be a joint effort between S&T/FNR and S&T/MD, carried out in close collaboration with the Regional Bureaus and USAID Missions. The program will include the following:

Global Research - Direct S&T support and funding to provide services and technical assistance that are most effectively organized on a global or multi-regional basis, and for basic or applied research to be done separate from but closely related to bilateral assistance projects. Selected U.S. and LDC research investigations on fuelwood biotechnology (genetic improvement and tissue culture techniques for Leucaena spp., Prosopis spp., and other multipurpose fuelwood species); multipurpose tree species identification; and natural humid tropical forest management and regeneration. General research policy guidelines, environmental models, and data base management systems for applying research results on a global basis will also be developed by the Central Bureau. Selected U.S. and LDC research institutions will conduct a targeted program of research and development aimed at addressing the gaps in social science objectives in forestry. This research will focus initially on fuelwood questions in Asia but will extend also to other topics and regions.

Collaborative Research and Development - Resources will be provided in collaboration with the Regional Bureaus, for the establishment and maintenance of networks of forestry research institutions on the common themes of fuelwood production, watershed management, genetic improvement of multi-purpose and commercial timber species, and mangrove management. Actual research costs and activities will be provided principally through the bilateral assistance projects of AID and other donors, while networking costs are borne by this project in conjunction with AID Regional Bureau funds. Institutions doing socio-economic research related to forestry will be networked and supported. Formal sub-projects will be established where possible with Regional Bureaus to provide the basis for common theme networking on research topics.

Technical Backstopping - Regional consultant services, workshops and training will be provided to assist governments design national forestry research programs. Candidate countries are Kenya, Gambia, Philippines, India, Honduras, Peru and Yemen.

(4.1.3) Summary of Regional Programs

In 1979, Congress authorized and encouraged AID to increase its attention to forest resources depletion and associated soil and water deterioration. Currently AID supports 85% public sector forestry projects and projects with forestry components in 35 countries. The current ongoing life of project forestry obligations are \$279 million; an additional \$57 million of forestry activities are planned. Current (1983) annual forestry obligations are about \$52 million. The following table summarizes the forestry obligations by region.

Region	Life of Project Forestry Obligations (\$000)		Approximate Annual Forestry Obligations (\$000)	
	Current	Planned	Current	Planned
Africa	73,077	14,960	13,559	2,525
Asia	136,005	24,000	25,696	4,319
Latin America and the Caribbean	69,795	17,850	12,990	3,219
Total	278,877	56,810	52,245	10,000

(4.1.3.1) Africa (Resch)

Present AID activity in Africa is typified by numerous small (by AID standards) projects in what might be called the wood-poor countries. There are now forty-nine ongoing forestry projects or forestry components of larger projects in 17 countries. The life of project cost dedicated to forestry is estimated at 73 million. Twelve of these projects are regional or sub-regional in scope. Four additional projects are being planned.

Project activities stress institution building and related training. Activities include village woodlots, fuelwood plantations, resource inventory, natural forest management, improved stoves and kilns, and sawmill improvement. Forestry components are found in projects dealing with the environment, energy, private enterprise, manpower training, agriculture, both agroforestry and range management, and regional and rural development plans.

The present portfolio is largely a response to the devastating Sahelian drought of 1968 to 1976 with most activities directed at increasing or conserving fuelwood supplies. AID forestry is active in much of the arid and semi arid zones of Africa. Future trends do not see significant diminishment of activity in this zone but in addition see increased activity in what might be called the wood-rich countries or zones. This will be a result of private enterprise initiatives, "new lands" pressures, and agroforestry potentials.

(4.1.3.2) Asia (Ichord)

In addition to the AID Energy Programs in Asia paper given to the participants (Appendix 2) Dr. Ichord stressed understanding the important role individual country strategy papers have on developing AID's mission programs and the projects supporting the missions.

(4.1.3.3) Latin America and the Caribbean (Palmer)

AID supports 19 forestry projects or projects with forestry components in 11 countries in this region. They have a combined life of project cost of approximately 70 million. The projects range from \$100,000 to \$12 million and vary in theme with the major activities focusing on watershed management and education, tropical forest management, agroforestry, reforestation, and research on potential fuelwood species and their production. The number of professional foresters and technicians in countries varies widely as shown by Honduras with many forestry technicians and Haiti with only one forester who is presently not working in forestry.

Rather unique is the component of the Central Selva Resource Management Project in Peru where attempts will be made at managing, regenerating, and utilizing the native tropical forest. Another project of interest is the Fuelwood and Alternative Energy Resource Regional Project which has to date tested, in species trails, throughout Central America and Panama over 180 species. The results of this project will prove useful in present and future reforestation and agroforestry activities in this region. The latest approved project, Tropical Watershed Management, emphasizes education (MS and BS, and short courses) and institution building in Central America and Panama.

(4.2) Overview and update of NAPFSC (Ellwood and Bethel)

Dr. Ellwood stressed the strong interest NAPFSC has in the international forestry area. NAPFSC is a recent amalgamation of several organizations with similar objectives. They represent 65 professional forestry schools and colleges and are regionally (4) organized. Dr. Ellwood is President of NAPFSC and Dr. Bethel is chairman of the AD-hoc committee on International Forestry.

At present there are three standing committees: Research, Education, and Instruction and Extension. These are primary areas for university involvement. As a group, the NAPFSC schools are less interested in projects with implementation activities outside of the three areas. The point was made, however, that the university involvement during the project identification and design stages can be beneficial.

The strength of the university community is in education/training, research and extension. The problems they have in responding to international work are related to: (1) funding positions resulting from rapid program build-ups which cannot be maintained, (2) how to promote international work in state financed institutions, raising priorities within individual systems and the effects of priorities, (3) how to get university professors involved because of credentials, language, tenure and career track, (4) program development to allow U.S. university students to receive training overseas, and (5) having the university staffs respond to relevant and timely information services for international forestry.

The critical concerns of NAPFSC are related to how to knit together the following:

- o Ways that let the operation of involvement run smoothly
- o Liaison action
- o Joint planning of international development
- o The concept of aggregating effective consortia
- o The regional concept for overseas schools to be more effective in use of talent
- o What the schools can do to be more effective at the mission level

Dr. Thorud, University of Washington, who visited the meeting, said that the environment is now reasonable to have the forestry schools better linked and that NAPFSC is a good vehicle to access the university forum.

(4.3) Overview of the Forestry Support Program

(4.3.1) Background (Harcharik)

The Forestry Support Program (FSP) was established to bring the knowledge and experience of the professional forestry community to bear on forestry development activities of the U.S. Agency for International Development (AID). FSP provides technical assistance to AID in identifying, designing, managing and evaluating field projects and country strategies in forestry and related natural resources. This AID-funded program is managed jointly by

the Forest Service and the Office of International Cooperation and Development (OICD) of the U.S. Department of Agriculture.

FSP was authorized and funded for an initial period of four years beginning in 1980. The program became fully operational in 1981. In 1983, the project was amended to extend it through FY 1988.

The original program was designed to:

1. Provide AID's regional bureaus, regional offices and field missions with technical advice on tropical forestry and natural resources, including advice on project design and feasibility:
2. Identify qualified individuals for long-term or short-term AID or cooperative AID/Peace Corps forestry assignments overseas. FSP manages a roster of forestry and natural resources expertise which includes specialists in such disciplines as watershed management, forest economics, community forestry, remote sensing, agroforestry, plantation establishment, silviculture, nursery practice, arid zone forestry, entomology, pathology, soils, biometrics, research, education, training, extension and other fields.
3. Identify and evaluate qualified forestry institutions for participation in AID forestry projects.
4. Provide general forestry information to AID and Peace Corps staff and facilitate the exchange of technical information between natural resources project personnel.
5. Organize forestry training courses, develop training materials and aids, advise overseas forestry schools on curriculum design, and assist AID in designing adequate training components into forestry projects.

Under the amended and extended project, FSP will continue its original functions and will initiate new activities to stimulate private forest enterprise development in LDC countries. FSP will also expand its support services to AID in the areas of forestry research and agroforestry.

FSP consists of eight professional forestry and natural resources specialists, three in the field and five in Washington, all with overseas development experience. The Washington-based core of the FSP team consists of a program manager, training coordinator, and one coordinator each for Africa, Asia, and Latin America and the Caribbean. These staff members are on call to advise AID's Washington offices and also for short technical assistance visits to field projects.

The FSP field staff are also available to provide advice on forestry and related matters to AID's field projects and missions. The three field staff are funded through Personal Services Contracts from AID and are headquartered in Costa Rica for Central America, Kenya for East Africa, and Indonesia for Asia.

In addition to work on field projects, FSP assists AID on a number of related technical activities, such as:

1. Providing experts to help organize and/or assist with forestry workshops;
2. Conducting analytical studies in tropical forestry directed at examining technical, economic, training/education or social questions pertinent to successful project operation;
3. Assisting in developing new ideas for forestry or natural resources projects or programs;
4. Advising on questions relating to training, research and extension in the forestry and natural resources field.

FSP also serves as a reservoir of basic information on tropical forestry and natural resources. This basic information includes:

1. A bank of reference material on topics relevant to AID forestry projects, such as agroforestry, community/social forestry, wood for energy, watershed management, etc;
2. A working roster of individuals with technical expertise in forestry and natural resources, who could be available for either short-term consultancies or long-term assignments overseas;
3. Profiles on institutes, universities and other organizations in the forestry and natural resources field interested in engaging in contract work in forestry development for AID;

(4.3.2) Roster Development (Resch)

To support AID's need for short and long term technical assistance the Forestry Support Program maintains a roster of expertise in forestry and natural resource fields.

The roster now contains the names of some 1600 individuals, all with resumes on file with FSP in Washington. To quickly determine individuals qualified for a particular assignment, FSP has established a short computer form and program which allow the quick identification of, for example, Spanish-speaking entomologists, French-speaking project evaluators, or agroforestry specialists with Asian experience.

Persons selected for overseas assignments often have a unique combination of skills including pertinent technical specialization, language capability, cross-cultural sensitivity demonstrated by previous overseas experience, consulting skills, availability often on short notice and personal interest in undertaking such assignments.

The roster is composed of persons representing forestry broadly defined, both technically and institutionally. Not only are the obvious forestry skills such as silviculture, harvesting, watershed management, and nursery management represented but also skills such as economics, horticulture, range management, sociology, and computer science. Institutionally, only 20% of the roster is from the U.S. Forest Service, with 30% of the roster having some university affiliation and 40% identified as consultants.

About 1/3 of the people on the roster have former Peace Corps experience, about 450 individuals have Spanish language skills and about 350 have French language capability.

(4.3.3) Profiling (Stevens)

In addition to the roster described by Resch, FSP is developing a catalog of institutional profiles for use in backstopping AID field offices. The intent is to prepare a 4-6 page summary of each institution which will be used to better assist missions in selecting forestry schools for students and to advise AID missions on the capabilities and interests of forestry universities to design and implement forestry development projects overseas.

Plans are to use the following information in profile preparation:

- o School Catalogs and brochures
- o The SAF survey of forestry schools
- o Available BIFAD profile data
- o FSP trips and visits to campuses

(4.3.4) Training (Stevens)

Within the FSP the training coordinator's position was established in January of this year resulting in part from a recommendation of the 1982 SAF evaluation of the project. The position is to provide support services for forestry training.

The trend of American foresters' involvement in international forestry activities began in 1902 when Gifford Pinchot visited the Philippines and recommended a forestry program and organization for that area. Subsequently American foresters have participated in international forestry on a major scale. Not all of this involvement can be brought under the heading of training or education, but certainly the succession of events and ideas evolving from the many programs and projects conducted overseas has had a direct bearing on the development of a country's forestry enterprise: e.g., our early relationships with the Philippines and the large investment in Nepal since that country's entry to the developing world in 1951.

During 1960-68, the number of participants receiving education and training in forestry-related disciplines ranged generally between 200 and 350 annually, reaching a peak of 412 in 1966. Of the total number of participants in that year, 46 percent were financed by AID, 7 percent by FAO, and 47 percent by other agencies, national institutions, and private funds. (International Forestry in the U.S. Department of Agriculture, R. K. Winters, 1980).

The effectiveness of this effort is difficult to assess. The young people receiving the education cannot be expected to move into responsible positions for 10 or 20 years after receiving the education; although in some developing countries this probably occurs a lot sooner. Our early relationships with the Philippines and also the large investment in Nepal has had a direct bearing on forest policy and administration. Another example is Pakistan where in 1967, 36 Pakistani people were receiving some form of forestry training in the U.S. Upon return these people were placed in responsible positions and today are giving leadership to the countries program; i.e., Chancellor of the Agriculture University System, Inspector General of Forests, Director of the Forestry Institute, Chief Conservators of Forests in the Provinces, etc.

Today the magnitude of AID's Forestry training efforts has greatly surpassed the 1960's peak. The program is approaching a balanced relationship between conducting training on-site and in-country and scientific/technical training in the U.S.. In the fall of 1982 there were approximately 600 foreign resident students attending forestry schools as reported in the initial returns from a survey being conducted by the SAF on activities and linkage in international forestry at North American Colleges and Universities. Not all of these students are supported by AID. OICD reports that they are handling 20 students for FAO. Of the 600 students identified in the SAF study about 400 come from regions with countries in which AID has assistance programs.

The Institute of International Educator's annual report of 1981 points out that almost 312,000 foreign students were on 2734 campuses in the 1980/81 academic year (IIE, 1982). Also at this time there were about 8,000 people being financed for U.S. training by AID (about 50 percent of these are administered through contracts and the other 50 percent handled by other organizations such as OICD).

The training of men and women in the U.S. during the early stages of their career is only one aspect of AID's training activities. Equally impressive are the kinds of forestry training carried out on-site and in the countries.

Of the total obligations shown in section 5.1.3 summarizing regional programs about \$50 million is earmarked for training. Within the regions the following kinds of training are more dominant:

<u>Region</u>	<u>Kinds of Training</u>
AFRICA	(1) The largest segment is associated with regional training. (2) Workshops (national and regional), degree education in the U.S., study tours, strengthening institutions, curriculum development, and on-site actual training.
ASIA	(1) Mainly in Nepal, India and Sri Lanka. (2) Workshops symposium, short courses, study tours, short and long-term, institutional building, facility construction and local training.
CENTRAL AMERICA	(1) About 50 percent of training level is associated with the Tropical Watershed Management Project (ROCAP). (2) Workshops, seminars, short and long-term (mainly in U.S.) and local training.

In answer to accelerating training and education activities within the forestry sector, the need is to find ways that training can be more effective and fitting this training within AID's new training activity. The FSP's immediate objective is to provide backstopping in forestry and education to AID missions. Because of limited funds the training portfolio, to meet the objective, includes tentative major activities that are more regional in nature:

- o Agroforestry Training Package:
The objective is to produce a package of instructional material in Spanish for teaching the principles and practice of agroforestry to undergraduate college students and practicing professionals. It will also serve as a basis for regular short courses to be led by a forester or someone with a natural resources background or will allow independent study.
- o Managing Forestry Research
This training will be carried out in three regions (Asia, Africa, and Latin America) to provide a sensitization of the principles of forestry research decision making, problem identification and planning management. This lead in activity is in direct support of the AID's planned Forestry Research and Development Project (No. 936-5547). The initial session is planned to be held in the Asia region.
- o Forest Administration and Management Course
The purpose of this activity is to transfer applicable concepts of USA forest service and management to administrators and managers of forest services in developing countries. A pilot course to be held in the U.S. will focus on solutions to practical problems which confront forest administrators and will include case studies of problems which the U.S. and LDC's have in common.

- o Assistance to missions and regional offices to identify training components for programs and projects.

This activity recognizes the need for technical assistance to help field offices plan training approaches appropriate to AID's broader training initiative.

- o Continuing Investigations of Training/Education Opportunities.

This activity recognizes the need to make periodic management studies to insure that forestry training fits within AID's overall training program and is in line with AID's Forestry Policy and Strategy.

- o Studies on Forestry Training Strategies

The magnitude of training and education needs in the LDC's is greater than AID has available funding. As new programs are developed and as AID's Development Training policy is implemented there will be need to evaluate on-going or proposed forestry training activities to insure they are or will be effective and efficient. The activity provides for a training needs assessment in Africa which will support the ETMA and CDA objectives; i.e.: integrating forestry into planning policy and implementation.

(4.4) Overview of AID/University Relations (Barker)

Barker spoke about the various tasks that AID looks to the universities to carry out such as training of foreign nationals. Discussed was the policy and instruments to mobilize university forces such as contracts and cooperative agreements. Described were the initiatives to increase the effectiveness of these resources. These initiatives include the new Joint Career Corps (JCC) program, strengthening grants linked to the Title XII programs, technical support to AID's field missions, and memorandums of understanding. One line of communications that has not been used effectively is the linkage with previous graduates. Alumni could help to identify existing or potential relationships.

(4.5) Overview of OICD Training Activities (Hoffman)

The Office of International Cooperation and Development (OICD), USDA, is involved in international training in two ways. The first is in overseas course development. The second is in developing training programs for international students where the training occurs in the United States. Within OICD these functions are performed by personnel of the Division of International Training (ITD). All training activities undertaken by ITD are done at the request of AID, FAO, World Bank, or foreign governments on a reimburseable basis.

The Overseas Course Development Branch of ITD presents training programs of a short course nature, usually in the country requesting training. These training programs can be on any agricultural related topic. Usually trainers are hired on short term contracts to teach the course.

The branches of Agricultural Production and Economics and Policy of ITD are responsible for developing and monitoring training programs in the United States. A majority of the participants are in academic degree programs at U.S. universities, with most of them earning Masters of Science degrees. Other international participants come to the U.S. for short training programs, which vary from a term of two at a university to a study tour of selected facilities and agencies/institutions in various locations.

Participants in these U.S. training programs are provided with a living and book allowance and their tuition, fees, and other training costs are paid for them. They are also provided health insurance coverage and transportation for official training purposes.

(4.6) Participation in U.S. Forestry-Related Assistance Programs and Projects (Deely)

The Agency for International Development currently supports more than 80 forestry assistance projects in 35 countries. The majority of these projects are funded and procurements are controlled by the USAID Missions (local A.I.D. offices) and the local host country governments in each country.

A.I.D. maintains only a very limited government employee staff and relies heavily on U.S. consultants and contractors to conceive, to design and to implement its assistance projects in less developed countries. Contract and consultant services are most frequently sought for conduct of special technical studies, for project implementation especially in the forms of training and technical assistance.

Many of the Agency's project design and even some of its project implementation contracts are performed through contracts with individuals or through contractors who can quickly access a wide range of individuals in several interrelated disciplines. Agency interest has begun to increase toward involving more forestry institutions in support of A.I.D. projects and programs, and significant expansion of institutional involvement should be expected over the next several years.

(4.7) Overview of AID's Implementation of Development Training Policy (Schaler)

The Office of International Training (AID/S&T/IT) coordinates and provides the core services of AID's worldwide training program which includes academic and technical (nondegree) participants. The services are managed both by contractors and directly by S&T/IT. The Office (or its programming agents) processes and monitors about half of AID's participant trainees--3,500 annually. This number is being increased by 10% this year and again by 10% next year. AID sponsorship is based on the LDC's overall development plan.

Priorities are determined by the AID representatives in the LDC in conjunction with the host government which nominates the candidates for training.

The International Training Office (S&T/IT) monitors six Resource Support Service Agreements (RSSAs) with other U.S. Federal agencies. These agreements are with: the Department of Agriculture, the Department of Commerce (the Bureau of the Census and Bureau of Economic Analysis), the Department of Labor (the Bureau of Labor Statistics and the Office of International Visitors Program), and the Federal Aviation Administration. In addition, a single (private sector) contractor, Partners for International Education & Training, manages academic trainees and most technical participants not in agriculture. S&T/IT staff directly manages a small number of highly complex programs and the program for VIP participants.

The S&T/IT provides services and support to AID participants in the U.S. For example, the National Council for International Visitors (NCIV) arranges home hospitality and a series of midwinter seminars through its network of local volunteer organizations.

S&T/IT formulates, interprets, and disseminates training policy and procedural guidance through AID Handbook 10 (entitled Participant Training). All AID-sponsored participants are subject to the rules and procedures set forth in Handbook 10. This provides uniformity to a program with highly dispersed responsibilities and authority.

S&T/IT keeps statistics on all participants through the Participant Training Information System (PTIS).

S&T/IT's reimbursable training program provides participant training and support services which are paid for by the host government.

Appendix (1)

Participants

NAPFSC

Dr. Eric Ellwood, President, NAPFSC, North Carolina State University
Dr. Jim Bethel, Chairman, Committee on International Forestry, NAPFSC,
University of Washington
Dr. Donald Crews, Assitant Dean, College of Natural Resources, University
of Colorado
Dr. Janis Petriceks, Professor, College of Environmental Sciences and
Forestry, Syracuse
Dr. Jan Laarman, Professor, School of Forest Resources, North Carolina
State University
Dr. George Weaver, Chairman, Forest Resources Management, Southern
Illinois University

USAID

David Joslyn: Science and Technology/Forestry Natural Resources (ST/FNR),
Team Leader
Dan Deely: ST/FNR, Project Officer
Curtis Barker: ST/Research and University Relations, Deputy Coordinator
Otto Schaler: ST/International Training, Deputy Assistant
Dennis Panther: AFR/TR/SDP, West Africa Bureau Forester
Dr. Robert Ichord: Chief; Energy, Forestry and Environment/Bureau for Asia
Dr. Carl Gallegos: ST/FNR, Research Forester

FSP

David Harcharik, Program Coordinator
Mervin Stevens, Training Coordinator
Tim Resch, Coordinator for Africa
John Palmer, Coordinator for Latin America
Dr. Tom Geary, Coordinator for Asia

OICD

Joe Hoffman, Program Specialist
Greg Garbinsky, Technical Assistance Officer

USFS

Dr. Robert Brandt, Director, International Forestry

Visitor

Dr. David Thorud, Dean, College of Forest Resources, University of
Washington

Appendix (2)

AID Energy Programs in Asia

Overall AID Energy Policy

AID's energy policy calls for the development of programs that help developing countries make the difficult transition to a mix of energy sources that will sustain their economies in the future. AID's Energy Assistance Policy Paper of January 1981 directs AID to carry out energy programs in the following five areas: (1) energy analysis and planning; (2) energy training and institutional development; (3) site testing, demonstration, and evaluation of new energy technologies; (4) increasing energy supplies; and (5) rural electrification.

Energy Strategy in Asia

The Asia Bureau is evolving a strategy in which energy and natural resources is an important new sector. The focus of the strategy in this sector is on improving national policy and planning capabilities and on promoting technology transfer and private sector investment in the development and efficient utilization of the indigenous energy and natural resources of the Asia region. Major emphasis is on expanding wood, coal, and small hydro production and increasing energy supplies to agriculture and rural industries and households. Below is a description of the programs in the major AID/Asia countries.

Bangladesh

Although Rural Electrification (\$89 million) has been a centerpiece of the mission's program in the energy sector, the mission is currently designing a FY84 Rural Energy Sector project and an overall energy sector assessment, drawing on the World Bank's recent study, is underway. Natural gas and fuelwood production are two major options for reducing dependence on imported oil and meeting demands for traditional fuels in low-income households and rural industries. As a prelude to the FY84 project, a centrally-funded technical assistance project was recently signed under which Bechtel Corporation will provide assistance in natural gas production and utilization.

India

For several years, the mission has had a project for the development of solar and small hydro technologies for rural applications (\$1.5 million). A new project on Alternative Energy Resources Development (\$5 million) will transfer technologies for improved coal conversion and increased energy efficiency in industry and transportation and support collaborative research in fuelwood crops. Two large social forestry projects are underway in which trees will be grown on private and public lands for fuel, fodder, and food (\$55 million).

Indonesia

The second phase of an Energy Planning for Development project (\$1 million) will help create a viable energy policy and planning unit in the Ministry of Mines and Energy and improve analysis of the implications of alternative energy development strategies. An Energy Manpower and Training project (\$1 million) is developing an interdisciplinary energy program at the Institute of Technology at Bandung. A new project is assisting in the establishment of a national energy laboratory in Indonesia (Puspipstek Energy Laboratory - \$12 million) that will serve as a catalyst for the transfer of U.S. private sector energy technology, especially in coal, biomass conversion, and solar conversion. A \$41 million rural electrification project is expanding the distribution system on Java, Sumater, Sulawesi, and Lombok. A major future emphasis on watershed management is planned.

Nepal

The current Country Development Strategy Statement for FY85 highlights renewable energy and natural resource conservation as major areas of policy and program discussion with the Nepalese government. The RAD/Rapati and Resource Conservation Utilization projects have activities in forest management, fuelwood production, small hydro, biogas and solar technologies.

Pakistan

Energy is a principal program area under the six-year economic assistance program. A \$155 million Rural Electrification project was recently signed that will support institutional development of WAPDA, cofinancing of a gas turbine at Guddhu with the ADB, a program of loss reduction in transmission and distribution, and the expansion of the distribution system. A \$20 million Energy Planning and Development project is in final design that will have as its centerpiece an effort to develop a modern coal mining industry in Pakistan supplying coal to the power, industrial, and household sectors. A review of an initial 300MW power plant near Hyderabad was recently completed by Stone and Webster that indicated the Technical and economic feasibility of coal-fired electricity generation in Pakistan. A Forestry Planning and Development project (\$25 million) has been approved. The program therefore addresses directly the dual problems of oil-import dependency and deforestation.

Philippines

Forestry and bioenergy issues are central to both the DA and ESF programs in the Philippines. A \$25 million Rural Energy project is beginning under which farmer associations in upland areas of the Visayas will grow short-rotation trees on marginal land for conversion in SMU steam power plants, gasifiers for water pumping and charcoal kilns. A Non-Conventional Energy project (\$7 million) with the Energy Research and Development Center of the Philippine National Oil Company is testing a range of small-scale solar, biomass and wind systems and supporting a graduate energy program in the College of Engineering of the University of the Philippines.

Sri Lanka

In the context of the Mahaweli Development focus, the mission places major emphasis on energy and natural resources management. Fuelwood and hydroelectric power are the principal indigenous energy sources in Sri Lanka. The Reforestation and Watershed Management project (\$4 million) is supporting the upper watershed program of the GSL Forestry Department that is critical to the viability of the billion dollar investments in hydrofacilities downstream at Victoria and Kotmale. Likewise, the new Mahaweli Environmental Protection project (\$5 million) in the eastern zone will help to establish four national parks as a preserve for elephants and other wildlife and as a vital component of the Mahaweli water management system. The mission is planning a small effort in energy conservation and is proposing a new energy and environment project for FY85.

Thailand

The mission program has a current emphasis on small hydro, fuelwood and other renewable technologies for meeting rural energy needs (Renewable Non-Conventional Energy Technologies--\$5 million). The small hydro potential of Thailand is as much as 800MW and the development of this potential can make a contribution to reducing oil-import demand as well as rural development. A new \$8.1 million project in Thailand will demonstrate U.S. and Thai small hydro systems and help develop the capabilities of Thai private engineering and manufacturing companies. The mission envisions a role for energy and natural resources within its emerging strategy to promote scientific and technological cooperation. The new Minister of Science, Technology and Energy has expressed a strong desire to strengthen ties with the U.S. in this sector. A symposium on natural gas utilization is being planned for late 1983, in cooperation with the Commercial Office in the Embassy and TDP.

Regional

The promotion of regional cooperation in energy planning, training, and research, especially among the ASEAN countries, is a prime objective of the Asia program. A first ASEAN Energy project (\$500k) has supported the Asian Institute of Technology as a center of excellence in energy planning, training and research in the ASEAN region. A U.S.-ASEAN Energy Technology Seminar was held in Indonesia last summer which was organized by AIT. An ASEAN Energy II (\$1 million) project is just underway that will increase technical management capabilities in the coal sector; compare and promote private sector manufacturing of alternative energy systems for water pumping; and assess the potential for energy efficiency in buildings. Indonesia is the overall project coordinator and leader of the coal component, while Malaysia is lead on water pumping and Singapore an energy efficiency in buildings. A \$3 million ASEAN Watershed project has been approved. Finally, a new project is planned for FY84 on Forestry and Bioresource System Management that will support the development of a research network in fuelwood and biomass energy system management.