

ASSESSMENT  
of  
USAID's FORESTRY ACTIVITIES  
in  
INSTITUTIONAL MECHANISMS,  
PRIVATE ENTERPRISE,  
and  
TRAINING, EDUCATION, and RESEARCH  
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United States Department of Agriculture Forest Service  
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by  
Society of American Foresters  
Assessment Team

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## EXECUTIVE SUMMARY

### INTRODUCTION (CHAPTER 1)

USAID's Office of Forestry, Environment and Natural Resources and the Forestry Support Staff selected three basic areas for detailed study as a part of an overall assessment of AID's forestry activities. The Society of American Foresters was selected as the contractor to assemble a team to make a desk study of the following:

1. Mechanisms which USAID uses to interact with national and international organizations to implement its forestry programs.
2. Existing and potential private enterprise activities related to AID's forestry programs.
3. Existing and potential linkages between AID and U.S. educational institutions and opportunities for improving training and education of AID's programs in forestry.

The study team consisted of three senior level foresters, each of whom was assigned one of the three study subjects. Except for one- to two-day visits by one team member to Tucson, Arizona, and Chapel Hill, North Carolina, all work was performed in the Washington, D.C. area.

### MECHANISMS FOR INSTITUTIONAL PARTICIPATION IN AID FORESTRY PROGRAMS (CHAPTER 2)

USAID draws upon a wide array of technical expertise outside its own organization to assist in carrying out its forestry-related responsibilities in less developed countries. The logistics of matching person(s) or institutions with assignments are formidable if excellence in project execution is to be achieved.

This part of the study describes current practices and patterns of institutional use in carrying out the forestry program, and explores the possibilities for improvement.

The discussion of the network from which to draw technical expertise includes individual consultants, universities, private voluntary organizations, consulting firms, host country institutions, other donors, international organizations, and new direct hires.

The mechanisms with which technical expertise may be obtained ranges from simple purchase orders to complex, multi-agreement arrangements. A list of mechanisms appears in ANNEX 2.

### Conclusions

The FSP Roster is an effective system for locating qualified specialists in response to country mission requests for technical assistance. The Roster system can be made even more effective by

searching additional sources of expertise and incorporating new entries into the system.

Acquisition of university specialists for technical assistance has been used at a level consistent with the present program, but potential use has not been fully exploited. Most arrangements have been made through Personal Service or Non-Personal Service Contracts. In only one instance was a Joint Career Corps contract used. Several other mechanisms listed in Annex 2 could be used.

A number of universities are being or have been used by AID in support of its forestry program. Universities have been selected for a variety of institutional attributes such as bilingual instruction, arid land watershed curriculum, and training programs for foreign nationals from LDC. The pool of resident technical expertise is large, and is further described in Chapter 4.

The National Association of State Universities and Land Grant Colleges (NASULGC) may offer unique opportunity to explore a multidisciplinary approach to problem-solving through its Office of International Programs and Studies. This office serves as an information center for a wide range of disciplines.

The National Association of Professional Forestry Schools (NAPFSC) in addition to being a focal point for forestry expertise, has established a relationship with NASULGC that may also be helpful in pursuing multidisciplinary approaches to problem-solving in LDCs.

Case studies of two projects (Pakistan, Forestry Planning and Development, and Haiti, Agroforestry Outreach) revealed ambitious but contrasting approaches to project implementation. The broad scope of the Pakistan project will require participation of a wide array of contracted technical assistance. The Haiti project is relying on three private voluntary organizations to implement most of the project objectives. Both projects have extraordinary potential for restoring or preserving forest and land resources and concurrently improving living conditions for the rural residents involved.

Participation with other donors (IUFRO, FAO, ODA, CIDA, etc.) has been recognized as a possibility for accelerating achievement of forestry goals in LDCs. While some collaborative activities have occurred, the effort has been smaller than the potential. It would appear that greater use of collective efforts would be beneficial to AID's forestry program.

### USAID FORESTRY-RELATED PRIVATE ENTERPRISE ACTIVITIES (CHAPTER 3)

USAID policies encouraging both private enterprise and forestry suggest that AID projects should promote the development of the private enterprise forestry sector. A review of AID projects identified 83 private enterprise impact projects, with life of project funds totalling \$1.6 billion, judged to have moderate to high potential for forestry sector involvement. Another 47 projects, with LOP funds totalling \$422 million, are candidates for addition to the first list but specifics were not available to judge their potential for forestry involvement. All of these 130 projects are listed in Annex 7.

Interviews with AID and FSP officials and a review of available project papers and project descriptions found no private enterprise impact projects either planned or managed to give special recognition to the private enterprise forestry sector. Thus, the opportunity to integrate AID's private enterprise and forestry policies and the chance to utilize the forestry sector's powerful linkage between product manufacturing and rural areas for economic development are being underutilized at best.

#### USAID SUPPORT OF TRAINING, EDUCATION AND RESEARCH IN FORESTRY (CHAPTER 4)

Project Papers for 47 of 104 current forestry projects were reviewed for the nature of their forestry components (Annex 8). Total life of project funding for the 47 projects is almost \$478 million. The forestry component of these projects totaled \$199.9 million and was divided 8 percent for research, 14.7 percent for training and education, 48.9 percent for technical assistance, and 28.4 percent for other activities. If the 47 projects are a fair sample of the 104 AID forestry projects, total funding for forestry components in all projects is about \$490 million (42% of 1.166 billion). The team feels it is now time for developing the technical skills of forestry technicians, managers and scientists in the LDCs by allocating a greater share of the forestry component to training and education.

FSP has published profile information on U.S. forestry schools and consortia that should be helpful in the selection of institutions for training foreign students. Of the 45 forestry schools accredited by the Society of American Foresters, the Team identified 15 with high participation and resources for foreign forestry training and research. Evaluations of academic institutions by foreign students upon completion of their studies or by independent contractors would provide useful information for AID's purposes.

Visitors to several contractors included in the training emphasized the known fact that personal problems often result from moving the students from their home countries to the U.S. for training. While these problems are not peculiar to forestry students and may be largely beyond the ability of AID to solve, they might be mitigated by: better preparation in the English language; instruction in U.S. customs; providing financial counseling, providing adequate housing and food preparation facilities; placing students in locations with climates similar to those of their home countries, with other students from the same countries, and with opportunities for accompaniment by spouses, especially during lengthy assignments in the U.S. A check list of considerations such as these should be provided all students and institutions.

Some students avoid returning to their home country as assignments once their AID-funded training is completed. Because it was mentioned by the contractors, it appears well to mention that students must fully understand the terms of their agreements, and a system for monitoring contract compliance should be provided.

Training is needed to make foresters more effective in presenting their needs to the leaders of their governments and in training those who are expected to get a job done. Training-the-trainer courses

should be provided by field courses or short courses at local or regional levels. Professional traditions carried on by training institutions may be outmoded or inappropriate for the LDC situation. AID could influence curricula to promote their effectiveness in the use of AID funds. The development and improvement of indigenous facilities could allow much training to be conducted in home countries and probably reduce AID per-student training costs and reduce the personal problems mentioned earlier.

Research is now the smallest component of forestry projects, accounting for only 8 percent of total forestry expenditures. But, in addition to providing information important to project success, research is also important to developing the expertise and relevance of educators in the developing countries. Opportunities for research institution building should not be overlooked.

## Recommendations

### Access to Universities

- 2-1. Consider involvement with NASULGC's Office of International Programs and Studies as a source for multi-disciplinary approaches to problem solving in LDCs.
- 2-2. Consider building the FSP Roster to a greater level of effectiveness or develop a new roster, incorporating the capabilities of Consortia and of forestry schools and colleges now available from "Profiles."
- 2-3. Give greater consideration to the many kinds of mechanisms for acquiring the services of specialists from universities.

### FSP Roster Use

- 2-4. FSP should seek periodic consultation with systems specialists for maintaining state-of-the-art capability of the Roster system.

### Pakistan-Forestry Planning and Development (391-0481)

- 2-5. Make a greater effort to actively involve other donors in project planning and possibly in project implementation through their involvement in the external evaluation process as proposed in this project.
- 2-6. Exploit the experience gained from this project in the use of mechanisms to obtain technical expertise, other services and commodities. For example, build a case history experience document as a guide for subsequent project use.

### Agroforestry Outreach (521-0122)

- 2-7. The goal of this project is admirable. Our only suggestion is to strengthen GOH involvement, thereby creating a stronger government commitment to the project objective and hopefully to the land management programming necessary for a greater assurance of success.

## U.S. Government Programs

- 2-8. AID should consider exploring with the Forest Service an expanded Forest Service role in providing technical assistance for forestry programs in LDCs. For example, the development of a career track that would attract more Forest Service employees to become involved in international forestry.

## Coordination With Other Donors

- 2-9. Make an exploratory study to determine the feasibility of joining with one or more non-U.S. government donors in the pooling of resources to achieve a common forestry objective.

## Private Enterprise

- 3-1. Steps be taken to improve coordination between Bureaus within AID and between AID and other government agencies seeking to promote economic growth through the development of private enterprise. A private enterprise coordinator position within FSP is appropriate.
- 3-2. Greater assistance be provided project planners in Washington and in the missions in developing information on the private enterprise forestry sector and its problems in host countries. This could be achieved with the development of economics profiles of the sector during the early stages of project development.
- 3-3. A two-way flow of information be developed between AID and U.S. companies on product and service needs, supplies and forest sector market and investment opportunities in developing countries.
- 3-4. Missions and, perhaps, the Regional Bureaus need to be made more aware of the potential role of private enterprise in development. This is especially important for agricultural officers, and a growing cadre of private enterprise officers.

Progress on these above recommendations should develop from the new forest enterprise coordinator and market development specialist positions in the Forestry Support Program now in the process of being filled.

- 3-5. Where projects target certain industries as model industries in order to demonstrate unfamiliar financing mechanisms, the wood products industry should be considered.
- 3-6. AID should commission input-output or economic impact studies in selected countries to develop industry economic multipliers. These could be used to persuade project planners and managers of the powerful developmental linkages the forestry sector has when compared with those of other industries.

## Training, Education, and Research

### 4-1. Composition of Forestry Component

Increase emphasis on strengthening the technical skills of indigeneous forestry technicians, managers and scientists in those areas and LDCs where programs have successfully started.

### 4-2. Institutions Involved in Forestry Training

Evaluate academic institutions attended and the forestry education received. This could be included in the contract as an obligation of the student upon completion of his/her education. Another approach would be to have an independent organization, such as a professional society, set up a program under contract to monitor and rate curricula with regard to their excellence for training students from LDCs.

### 4-3. Student Personal Problems

A check list should be prepared for each individual or group of individuals from a given country itemizing the kinds of personal problems that could jeopardize the training objective, and matching each such item with one or more mitigating provisions.

### 4-4. Institutional Problems

Provide a system of monitoring contract compliance. The conditions agreed to must be fully understood by the student. Innovative approaches may have to be developed and supported. Documentation of contract compliance is indispensable.

### 4-5. Presentations to Home Country Policy Makers

Training should be provided in the suitable use of voice, mannerisms, presentation methods, visual aids and all the considerations necessary to present an effective message. The customs, practices, and styles of the countries involved must be considered and made part of the necessary training.

### 4-6. Training the Trainers

Training-the-trainer courses should be provided by field courses or short courses at local or regional levels for those who have not had such training...including graduates of colleges and technical schools.

### 4-7. Research-Education Linkages

USAID should develop a strategy for increasing the sophistication of forestry projects as host country capability advances due to education and technological improvements.

ASSESSMENT REPORT  
USAID FORESTRY PROGRAM  
(SAF/AID P.O. 40-319R-4-01017)

CHAPTER 1

INTRODUCTION

The Agency for International Development (AID) and its predecessor agencies were heavily involved in providing forestry assistance to less developed countries through the 1950s and 1960s. This assistance included institution building; inventories and management planning; construction of work camps, access roads, research laboratories, and training facilities; and funding of sawmills and other wood processing facilities. These traditional forestry activities were drastically curtailed in the late 1960s and, with few exceptions, discontinued in the early 1970s.

By the end of the decade, the public had begun to display a growing environmental awareness. A fuelwood crisis was occurring in many developing countries, accentuated by droughts in the Sahel and other arid lands. Stimulated by a gradual and widening recognition of the importance of trees to the well-being of rural people in developing countries, AID moved to re-enter forestry in the late 1970s.

Through the 1979 amendments to the Foreign Assistance Act, congress has given AID strong mandates for involvement in forestry as a part of the development assistance program. These amendments authorized bilateral assistance to deal with forest resource depletion and associated soil and water deterioration. AID is also authorized to furnish assistance for developing and strengthening the capacity of the less developed countries (LDCs) to protect and manage their environment and natural resources.

World wide international forestry activities in less developed countries (LDC) are increasing. According to World Bank data, total annual donor funds increased from \$30 million in 1978 to \$200 million by 1980. Spears (1983) estimated that funding of \$1 billion a year would be needed to effectively address a solid forestry program in the developing world.

AID has on record 104 forestry or forestry-related projects in LDCs, including ongoing, funded, and planned projects. Total current life-of-project costs to AID is \$1.166 billion.<sup>1/</sup> Annual costs could probably be more than \$100 million (or about one-half of the total donor annual costs) if substantial contributions through the PL 480 Food AID Program, non-government organizations, and private volunteer organizations were considered.

<sup>1/</sup> From latest computer printout of 104 forestry-related projects.

## PROCEDURE

Recognizing the added administrative obligations to effectively manage the rapidly increasing forestry activities, AID selected three basic areas for special study as a part of an overall assessment. The Society of American Foresters, a non-profit organization whose members are professional foresters, was selected as the contractor to assemble a team to make a desk-study assessment of the three basic areas abbreviated here as follows:

1. Review of mechanisms which USAID uses to interact with national and international organizations to implement its forestry programs.
2. Examination of the extent to which USAID private enterprise activities provide opportunities for the forestry sector and the mechanisms by which assistance to the private enterprise forestry sector is provided through USAID's organization.
3. Examination of the dimensions of AID forestry training and existing and potential linkages between AID and US educational institutions and opportunities for improving training and education for AID client country participants.

The study team consisted of three senior level foresters, each assigned one of the three study subjects. Each study subject is presented independently with recommendations. Grouping of recommendations occurs in the Executive Summary for easier reference. Except for one- to two-day visits by one member of the team to international training centers of Tucson, Arizona, and Chapel Hill, North Carolina, all work was performed in the Washington, D.C. area.

The team received oral instructions that the report should be more descriptive than analytical, and that it would be used primarily as a source document for another team which is in the process of making an overall assessment of AID's forestry and forestry-related project activities. For this reason, sections of the report are presented in more detail than if the intended audience were primarily AID personnel.

The basic source of information was a collection of Project Papers, each a comprehensive document that was the basis for final approval and subsequent implementation of a given AID project. Forty-seven Project Papers of current forestry projects were reviewed and data were tabulated, as shown in Annex 8. The chapter on private enterprise projects also involved review of Project Papers, but depended mostly on other sources, beginning with a list prepared in 1983 by Patrick Durst. These projects are tabulated in Annex 7. Project Papers for all projects exist, but many of them are filed at other locations, such as country missions, and were not readily available for use in this report.

The lists of both forestry and private enterprise projects included in this report should be regarded as preliminary lists, with the expectation that review in the Bureaus and country missions will result in amendments.

Several other sources of information were accessed, as illustrated in Annex 10. In addition, consultations were held with key persons in AID involved with the forestry programs, including those in the Asian, African, and Latin American and Caribbean Bureaus, as well as the Science and Technology Bureau and the USDA Forest Service Forestry Support Program.

The team effort started June 18, and the final report was completed September 7, 1984.

## CHAPTER 2

### MECHANISMS FOR INSTITUTIONAL PARTICIPATION

#### INTRODUCTION

National and international organizations play a variety of roles in developing and implementing forestry projects. Some organizations provide grants or loans, while others provide technical expertise in research, technical assistance, education and training. Some work at the project site on highly specialized subjects while others are organized for international efforts. Major categories of such organizations include the following:

- U.S. Government Organizations
- Nongovernment Organizations based in USA
- University Consortia
- Multilateral Development Banks
- Major International Nongovernmental Organizations
- United Nations Agencies
- Private U.S. Foundations Funding Tropical Forestry Research Projects
- Foreign Bilateral Organization
- Consulting Firms

A list of organizations for each of these categories appears in Annex 1.

AID policy relative to use of outside assistance is established in item B4 of its brochure on Forestry Policy and Programs, May 16, 1983, as follows:

"...employ all available assistance instruments in support of forestry assistance, including the use of P.L. 480 Food Aid, in an integrated manner. In so doing, AID will coordinate assistance in other spheres--agriculture, energy, environment, and the private sector--with forestry policy and programs. Also AID will work closely with other donors, the U.N. specialized agencies, other U.S. government agencies, private organizations in the U.S. and private voluntary organizations."

Even though many organizations are involved in forestry work in developing nations, the total amount of funding devoted to forestry remains small relative to the needs.

#### DIRECTORIES OF CONTRACTING ORGANIZATIONS

Not included in the lists of organizations mentioned above are other sources for obtaining technical assistance. A directory of the Technical Assistance Information Clearing House (TAICH) describes 497 nonprofit organizations involved in development assistance abroad. One hundred and eighty-nine of these are voluntary organizations most of which are registered with AID. Many of the other organizations are registered with AID, but only about 30-40 of the total list include the word "forestry" in individual descriptions.

Another document is the AID Directory of Development Resources. The Nov. 1983 issue of this directory provides one- or two-page descriptions of development-oriented institutions in the United States, and others that are international, regional, or national organizations. The descriptions are of services offered through AID-funded projects only, and cover such items as Objective, History, Personnel, Physical Facilities, Library, Training, Consulting Services, and Information Exchange. Of the 116 institutions described, only five actually listed forestry in their description.

A third source of information on service organizations is the Directory of AID Indefinite Quantity Contracts (IQCs). The IQC is a special method by which preliminary agreement can be reached on general work descriptions and company qualifications. The major saving is in simplification of contracting procedures for small work order requirements. Work orders under these IQCs are available only to AID Bureaus and Missions.

This directory describes IQC contractors for 18 categories of work, such as Accounting and Financial Management; Agriculture; and Environmental Protection and Natural Resource Management. The latter category lists three contractors, each of whom include forestry in the firm's area of expertise. The total number of IQC contractors described is 119.

The Forestry Support Program uses these directories in searching out potential contractors and in fact maintains a roster of candidate firms. Currently the Candidate Firm (CF) file contains information on 90 firms which are considered appropriate for contract assignments. This number of firms seems ample to draw upon for the near future. However, if the need for an expanded DF roster accrues, many additional firms could be added by considering those whose description contain key words such as institutional building, training, project design, rural developments, and biomass energy among many others.

#### MECHANISMS FOR TAPPING TECHNICAL EXPERTISE

The broad categories of AID forestry activities include: direct support for project development; technical assistance and research related to ongoing field projects; pilot initiatives to involve the private sector; and training coordination and curricula development. In all these activities, recognition must be made of the multifaceted nature of forestry-related management practices as well as to the complex biological diversity encountered in forest communities.

To meet the long and short term needs of LDCs a wide array of outside technical expertise must be utilized to supplement AID staff and project direct hire personnel. It is not likely that any one organization could provide the number of specialists needed, nor adhere to the scheduling demands for such assistance. AID, therefore, uses a variety of working agreements with other organizations and individuals to bring to bear necessary talents for project activities.

Direct hire employees, forming core units in the field and administrative staff in Washington, DC, provide the essential continuity for effective management and technical guidance for AID forestry programs. It is important however, that these staff and line

employees be reinforced or supplemented with technical assistance obtainable from the organizations referred to above. Mechanisms by which such arrangements can be accomplished include: Intergovernmental Personnel Act (IPA); Resources Support Service Agreements (RSSA); Participating Agency Support Agreements (PASA); Memorandums of Understanding (MOU); International Assignments for Technical and Research Assistance (IATRA); Indefinite Quantity Contracts (IQC); Personal Services Contracts (PSC); Non-personal Services Contract (NPSC); Cooperative Agreements; and Purchase Orders.

A Non-Personal Services Contract, one of the more frequently used mechanisms, is an agreement for a product, frequently a report. Such contracts are written for amounts over \$25,000. However, purchase orders for under \$25,000 can be issued for the same purpose. AID uses this mechanism to obtain services of specialists who may only be available for short periods of time.

### Access to Universities

AID frequently taps the expertise that resides in US universities to help carry out forestry project work in LDCs. For example, the University of Maine is frequently used by AID because of its uniqueness in offering French/English instruction--an attribute that is especially helpful in implementation of projects in some African countries. The University of Idaho is notable as the first university participating in AID's Joint Career Corps, (JCC) arrangements, and that it was for a forestry position. Currently 28 JCC arrangements are in effect, but still only one in forestry. The University of Michigan, in cooperation with the U.S. Forest Service has recently established an AID-funded forestry training program for AID clients from LDCs. North Carolina State University and Duke University are co-sponsors and participants of the AID-funded Southeastern Center for Forest Economic Research. AID has had several contracts with the University of Arizona which conducts a comprehensive consulting and training program in international forestry primarily with emphasis on the Middle East and Latin America. And, many universities are contacted directly by AID personnel at country missions for technical assistance contracts.

The MOU is the basic document upon which more specific arrangements can be made for technical assistance. In addition to the mechanisms mentioned above, some that apply more specifically to universities are: Collaborative Assistance Method (CAM); Technical Support to Missions (TSM); Joint Enterprise Contracting Mode (JEM); Collaborative Research Support Programs (CRSP); Joint Career Corps (JCC); and Strengthening Grants.

For the most part, the above "mechanisms" involve grants, loans, contracts, and exchange of personnel. Additional detail is provided in the Annex 2.

Consortia. The resident expertise at universities may also be obtained through access to a number of university and research institution consortia. Those active or having the potential to be active in international forestry include:

CAMCORE      Central America and Mexico Coniferous Resources  
Cooperative

CID	Consortium for International Development
MIAIC	Mid-America International Consortium
MUCIA	Midwest Universities consortium for International Activities, Inc.
NECID	Northeast Council for International Development
OTS	Organization for Tropical Studies, Inc.
SECID	South-East Consortium for International Development
UNIFOR	Universities for International Forestry

For the most part members of these consortia are all U.S. universities, colleges, or institutions.

Exceptions are CAMCORE which is made up of industrial and institutional research organizations only one of which is in the United States; and OTS which has three Central American institutions.

Purpose of each consortium and a list of member institutions are in Annex 3.

NASULGC. The National Association of State Universities and Land Grant Colleges is probably the most comprehensive and complex institution for purposes pertaining to technical forestry assistance. Its membership consists of 145 universities and colleges in the United States. NASULGC has an Office for Food and Agriculture and it maintains close liaison with the Science and Education Administration of the U.S. Department of Agriculture. One of its interests is forestry. NASULGC also maintains an Office of International Programs and Studies and serves as a center for information on legislation, government and non-government programs related to international education, research and development. This office helps establish and strengthen relations with developing countries, particularly in the area of development cooperation and international linkages.

Within NASULG's Division of Agriculture is the Commission on International Agricultural Programs (CIAP). The Division of Agriculture, within which all policies concerning agriculture originate, represents the Association in two joint committees with the U.S. Department of Agriculture. One of these Committees is the International Science and Education Council (ISEC).

Although international forestry may be of only minor interest to this association, it does offer access to the subject through several offices as described above. The one most relevant to AID's forestry program is that of the Office of International Programs and Studies. Through this Office, which serves as an information center for a wide range of disciplines, it appears that valuable contacts could be made with the intent of pursuing a multidisciplinary approach to problem-solving in LDCs. (See Recommendation 2.1).

NAPFSC and University Profiles. The FSP made two important initiatives in 1983 with the intent to improve liaison with forestry schools and colleges. The first was the establishment of direct contact with the National Association of Professional Forestry Schools and Colleges (NAPFSC) through their newly created Committee on International Forestry. An initial meeting between NAPFSC and AID organized by FSP, August 3-5, 1983, identified specific mechanisms for strengthening collaboration between AID, FSP and the forestry schools and colleges.

Objectives established are: greater participation of the forestry schools and colleges in AID's forestry training and education activities; enhanced role of the forestry schools and colleges in research in AID's host countries; and, possible forestry school input on decisions regarding the design and implementation of AID's forestry projects particularly those which focus on education, training, research, and extension.

A follow-up meeting was held in July, 1984, but the report was not available for this review. In the meantime, NAPFSC has established a relationship with the National Association of State Universities and Land Grant Colleges in Washington, D.C. This should begin to facilitate the flow of information on international forestry, among other subject activities, to members of NAPFSC. In addition, this association with NASULGC may be helpful in pursuing multidisciplinary approaches to problem-solving in LDCs.

The second initiative was the establishment of institutional profiles of forestry schools and colleges. In 1983, the FSP staff, with a short-term contractor, gathered the information that became the basis for the 1984 publication Profiles of U.S.A. Forestry Schools and Consortia. This publication, which has been distributed to all AID offices and missions concerned with forestry in LDCs contains the profiles of 44 professional forestry schools and colleges in the United States which are accredited by the Society of American Foresters. These profiles will be used to identify institutional capability in undertaking AID funded contracts for placing foreign forestry students in educational programs in the United States.

This publication also presents profiles on eight consortia which are active in international forestry. (See Recommendation 2.2).

Title XII Universities and Colleges. The university and college institutional structure of the United States has always been a foundation of strength and progress in the agricultural development of this nation. Forestry was not always recognized as an important part of agriculture. Forestry is still small compared with agriculture and receives only a small share of Title XII funding for international development.

Title XII refers to that part of legislation passed in 1975 by Congress that encouraged greater use of the intellectual capabilities and technology of our universities to help solve the food and nutritional problem of developing nations. On passage of the bill, Congress directed the President to establish a permanent Board for International Food and Agricultural Development (BIFAD) to carry out the program authorized by Title XII.

The institutions that qualify under this legislation are defined as land-grant and sea-grant colleges and universities; the black colleges known as the 1890 Institutions; and others which have demonstrated capacity in teaching, research, and extension activities in the agricultural sciences; and can contribute effectively to the attainment of the Title XII objective. Approximately 140 U.S. universities have been identified as Title XII institutions. We learned through personal contact with a member of the BIFAD staff that privately endowed universities such as Yale, Harvard, and Duke normally do not qualify.

However, they may request such consideration if they believe they can contribute effectively to Title XII objectives. Tufts University was successful in this regard.

Many qualifying institutions participate in AID-funded forestry projects in LDCs, but relatively few of them are processed through BIFAD, whose mission is a linking one--to help AID mobilize and utilize the faculty and institutional resources. One reason for this may be that forestry is a small part of the international food and agricultural program in Title XII activities and therefore attracts less attention than other components. Perhaps a more plausible explanation is the capability in AID to independently carry out the "linking" mission for forestry projects. This process is handled by the professional forestry staff in AID's Office of Forestry Environment and Natural Resources, and by the staff of the Forestry Support Program. The process also involves input from the Regional Bureaus of Africa, Asia, and Latin America and the Caribbean Islands, and from the country missions.

Selected Agreements With Universities and Affiliates. A recently approved agreement with the University of Michigan, AID, and the U.S. Department of Agriculture illustrates the use of administrative instruments for combining institutional expertise and facilities for a common objective.

The U.S. Forest Service and the University of Michigan are the key parties for carrying out a program as described here by excerpts from the Master Memorandum of Understanding:

"...the USFS is responsible for supporting a Resource Support Service Agreement (RSSA) administered and managed by USDA's Office of International Cooperation and Development (OICD) with the Agency for International Development (AID) to carry out technical assistance in identifying, designing, managing, and evaluating field projects, training programs, and development strategies in forestry and natural resources in LDCs."

"...the parties hereto (USFS and the University of Michigan) desire to cooperate on managing an international forestry training program and mutually agree to:

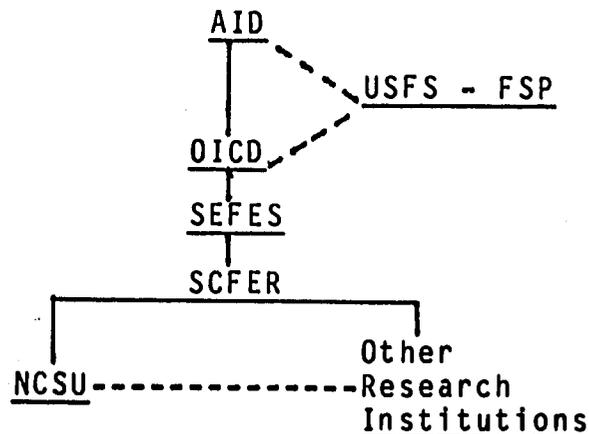
1. Consider a general program of instruction for countries throughout the world (including LDCs)
2. Consider undergraduate, graduate, and extension study
3. Draw upon all University and all USFS for qualified personnel to carry on instruction
4. Arrange for instruction to provide guidance to carry out international cooperative interdisciplinary programs."

The arrangement between the USDA and the University of Michigan was consummated under the authority of the Food and Agriculture Act of 1977, and the Forest and Rangeland Renewable Resources Research Act of 1978, among others. OICD will finance, under the USAID Forestry Support Program, all costs not to exceed \$325,000, for a 2-year period.

except those costs specifically identified as the responsibility of University of Michigan or USFS.

Recently a more complex agreement between USAID and USFS was arranged. The ultimate organization to receive funding to carry out the agreed upon programs is the Southeastern Center for Forest Economics Research (SCFER). Sponsoring institutions of this organization are the School of Natural Resources, North Carolina State University; the Forest Economics Research Work Unit of the USFS Southeastern Forest Experiment Station; and the School of Forestry and Environmental Studies, Duke University. Other universities and organizations are involved as research cooperators. Studies to be conducted over a five-year period will be designed to demonstrate the potential of forestry incentives; timber conservation policies on forest industries; effects of tax reduction on forest resources; effect of trade policies on imports and exports; and research on supply and demand of particleboard.

Funding for the SCFER will originate with AID and be transferred to USDA's Office of International Development (OICD) under an existing USDA interagency agreement. The OICD will transfer funds to the USFS Southeastern Forest Experiment Station (SEFES) which will allocate funds to SCFER for project implementation under standard Forest Service cooperative research agreements with North Carolina State University and other Organizations. USFS-FSP has an advisory role. Schematically, the basic flow of funds is as follows:



### General Statement

The universities are accessible at several levels--national organizations, consortia, and individual universities. Each level may be useful for different purposes--the national organization such as NASULGC and NAPFSC for major program developments; the Consortia for multi-subject or multi-country or country type projects; and individual universities for technical assistance or individual projects.

The last situation is the one employed most frequently by USAID, and which lead to the study by Kelly (1984) to summarize in profile form the education, research and extension resources of all SAF accredited forestry schools and colleges in the United States. The data can be used to: match the educational needs of foreign national students with an appropriate institution; strengthen "twinning" arrangements between foreign and U.S. forestry schools and colleges; serve as a reference in developing forestry education/training activities in project/program

design; and assist counterpart organizations in LDCs to upgrade their training skills.

Most of the contracts with university specialists have been either Personal Service Contracts or Non-Personal Service Contracts. To date 28 Joint Career Corps (JCC) arrangements have been set up to acquire individuals for periods up to two years, but only one in forestry (University of Idaho). There may be limitations which restrict use of the JCC, but it appeared to the reviewer that more JCC arrangements in forestry would benefit the AID forestry program. (See Recommendation 2.3).

#### SELECTED EXAMPLES OF FSP ROSTER USE

The Forestry Support Program (FSP) provides AID's regional offices and field missions with technical advice on tropical forestry and natural resources, including advice on project design and feasibility. As a part of that service FSP manages a roster of forestry and natural resources expertise.

The roster as a linking mechanism tool for identifying individuals with capabilities for long or short-term assignment--usually overseas. This roster, which now lists about 1900 candidates, substantially increases the effectiveness of AID in bringing to bear the necessary talents to design and implement forestry projects. In FY 83, FSP provided referrals in response to almost 100 requests. A few examples of recent requests follow:

1. Date Received: June 20, 1984

Request: The International Council for Research in Agroforestry (ICRAF) in Nairobi, through the Regional Economic Developmental Service (REDSO), requested assistance in identifying, recruiting and funding a qualified farming systems expert to participate in an October/November, 1984 donor-requested evaluation of ICRAF's program of work.

Qualification: Background in agriculture or range management/livestock production at the post doctorate level; should be well versed in developing country agricultural problems; possesses experience in "on station" and "on farm" research; and, preferably, played a leading role in farming systems methodology. Candidates must be available for at least four weeks between September 24 and November 20.

Response: A search of FSP's computerized roster produced the names of six persons meeting these qualifications. This information was sent to ICRAF for their consideration and subsequent recruitment of the selected individual.

2. In 1983 FSP received a request from USAID mission in Honduras for a consultant to develop a strategy for USAID support of the Honduran Natural Forestry Sciences School (ESNACIFOR) at Siguatepeque. A standard search of FSP's roster produced names of several individuals meeting the requirements for this assignment. The selected consultant worked in Honduras and Costa Rica during September of 1983. The information obtained provided the basis for

a 20-page final report on Development of Forestry Education in Honduras--with special reference to ESNACIFOR. The report contains major findings and recommendation.

3. Date Received: July 11, 1984

Request: From the AID Project Forestry Education Development in Upper Volta. A marketing expert is needed to complete a forest products marketing study team for six weeks starting August 15, 1984.

Qualification: The person needs third world marketing experience either in agriculture or forestry and can speak French. The candidate can be an economist, forester, or sociologist.

The consultant should have strong skills in third world, local internal market analysis.

Response: The FSP roster program produced 54 names of consultants with the French language requirement. A visual scanning of these produced two individuals with the other necessary skills and experience. This information was sent back to the project managers in Upper Volta for their consideration and subsequent recruitment of the selected person.

The Roster, a key part of the Forestry Support Program, is effectively and frequently used by AID Mission and Bureau persons. Other organizations, private and public, have explored the possibility of incorporating similar systems in their own businesses or institutions. The Team was impressed with the system and urges that FSPs leadership role in the Roster development continue through awareness of state-of-the art advances and opportunities for improvements. (See Recommendation 2.4).

#### NEW DIRECT HIRES

To further augment its forestry expertise, AID plans to recruit 5 to 6 professional foresters by direct hire. It is proposed that titles for these new positions identify the incumbent as a forester rather than as an agricultural officer. The suggested title is "Forestry Officer". These new positions will be located in certain developing countries in Asia, Africa, and Latin America. These assignments are considered to be part of the Agricultural Development Officers category within the agency. This buildup of professional forestry expertise in AID favorably complements the increased activity in contracting or otherwise employing outside technical assistance. In addition to strengthening the inservice capability to lay groundwork for new project proposals, these new hires can provide ongoing guidance and continuous technical input for the duration of individual projects.

#### SELECTED EXAMPLES OF PROJECT LINKAGES

##### Pakistan - Forestry Planning and Development (391-0481)

Fuelwood is one of the major sources of energy in Pakistan but only about 2 percent of the country's land area supports forests--one of the lowest ratios in the world. The influx of 3 million Afghan refugees,

who also traditionally use wood for fuel, further stresses the fuelwood supply situation. These and many other elements of the analysis of the living and economic conditions of rural Pakistan people promoted the need for this USAID project.

Project Description. The project consists of three closely related components:

1. institutional and manpower development; 2. farm and energy forestry research; and 3. farm and energy operational activities.

The required environmental analysis disclosed that such a project will have beneficial impacts on both the natural and human environments. It will stabilize soils and improve their productivity, reduce siltation of waterways and increase production of crops and other commodities to sustain and enhance rural economics. It was concluded that no negative environmental impact would occur.

The primary purpose of the project is to strengthen the capability of institutions at the federal, provincial, and local levels to design, implement, and evaluate policies and programs for increasing the production of fuelwood and timber in Pakistan. The secondary purpose is to demonstrate the economic, technical, and social feasibility of producing tree crops on privately-owned farm and range lands.

Total funding for the project period of 1983 - 1991 is \$25 million and allocated as follows:

Research	\$ 1.7 Million
Training	8.3 Million
Tech. Assist.	7.7 Million
Other	7.5 Million

This amount does not include a \$6,000,000 loan from the Agricultural Commodities and Equipment Program (ACEP). This entire amount is earmarked for forestry.

This project is closely related to four other mission projects. This project supports and is supported by the Energy Planning and Development Project (EP&D) (391-0478) which will conduct surveys to determine residential energy needs and identify areas where energy and fuelwood needs are critical. Other supporting projects are the On-Farm Water Management Project (391-0413); the Agricultural Education, Research and Extension Project (391-0477); and the Agricultural Commodities and Equipment Program (391-0468).

The government of Pakistan will contribute the equivalent of \$14.3 million over the life of the project to help finance the local costs. Such costs include staff salaries, in-country tuition for professional training, office costs, 25 percent of farmer training, vehicle and equipment operation, and a portion of the costs of field operation and construction.

Other donors active in forestry in Pakistan include the World Bank, the Asian Development Bank, the United Nation Development Program, the Food and Agriculture Organization, the World Food Program, the United Nations High Commission for Refugees, the government of Switzerland, and the government of West Germany. It was determined that none of

these donors were involved in precisely the same activities as outlined in this project. Therefore no other donor organization has financially contributed to this Forestry Planning and Development project. However, the World Bank and FAO will participate in evaluation and review of this project in anticipation of supporting activities later.

The basic financial arrangement for the conduct of this project is a USAID grant to the host government of Pakistan, O/IGF. However AID will undertake all contracting, and disbursement of grant funds used to finance foreign exchange costs. The following mechanisms will be employed to procure the technical assistance required.

- a. A direct AID contract with a U.S. private firm for the life of the project to provide the planning, policy, and management team for the Office of the Inspector General of Forestry. The contractor will subcontract for other technical assistance as needed. The contractor will also subcontract or participate in a joint venture with a university consortium for technical assistance for the training and research activities at the Pakistan Forest Institute (PFI). Joint Career Corp (JCC) contracts will be employed to arrange for obtaining some of these consultants.
- b. Personal Service Contracts and/or Indefinite Quantity Contracts will be used for evaluation teams.
- c. Direct AID contracts with a local architectural/engineering firm to design and supervise the construction of a hostel/dormitory at PFI.

Project Evaluation. Evaluation of the project is premature, since implementation has just started. However, evaluations are planned over the life of the project--August 1985, 1987, 1989, and 1991. Each evaluation will require about 8 weeks of effort. In addition, internal assessments are planned for every 6 months.

The strengthening of the monitoring and evaluation capacity in the O/IGF and the Provincial Forestry Departments, which is a specific objective of this project, is intended to be useful in making the four planned external evaluations more effective.

General Statement. The Project Paper for Forestry Planning and Development provides a comprehensive and detailed description of the problem and intended solutions. This document, 172 pages of text plus over 70 pages of annexes, provides the guidance that should assure at least reasonable success in this ambitious forestry project.

All the basic building blocks in project development were covered: the country environmental statement; the country development situation (how U.S. assistance can help); the list of elements that, when combined, form a complete project; and a plan for evaluation. However, as complete as the Project Paper appears, three items deserve further comment:

1. The environmental statement in the Project Paper was not very comprehensive. If a more detailed environmental assessment exists then it could be listed with the other reports in Annex

N of the Project Paper and more detailed excerpts could be included in the text of the Paper. If such a report does not exist then the reference to the environmental impacts in the Project Paper seems somewhat unsupported.

2. Coordination with other donors was covered quite well, but the explanation for their nonparticipation in this project seemed weak--none were active in this particular area of forestry at the time. It is understandable that additional administrative bodies could complicate the execution of the project, particularly one as complex as this one. It was noted in the Project Paper that the World Bank is expected to participate in the external evaluations, and that the Asian Development Bank and FAO may also participate in like manner. The beneficial consequences of such participation seem to far outweigh any adverse consequences. To avoid the possibility of overlooking involvement of the World Bank, the Asian Development Bank, FAO and, perhaps, others in external evaluations it may be helpful to include a "donor coordination" requirement in the external evaluation process. (See Recommendation 2.5)
3. The use of mechanisms by which institutions, organizations, and individual consultants or specialists are, or will be, employed in this project will probably serve as a test to their usefulness as project implementation gets underway. Of the 100 or more individuals that participated in development of the Project Paper, nine were consultants. The remainder were AID and GOP employees. The primary consultant was employed via an Indefinite Quantity Contract to a U.S. institution with which he was employed. The primary consultant will hire long and short-term consultants supplemented by sub-contracts with local universities. One consultant was provided by the U.S. Forest Service. (See Recommendation 2.6).

The Project Paper calls for a substantial grant to the host government for local and internal costs, but AID will issue contracts for some procurement of goods and services and for employing technical assistance. AID will contract one primary, private contractor who in turn will subcontract for special short or long-term technical experts. The primary contractor may use the mechanism of Joint Career Contract for obtaining university persons, or an Indefinite Quantity Contract to obtain the services of a firm so registered with AID. As the project moves ahead it is likely that these and other mechanisms will be employed to obtain the most qualified technical assistance within the time frame desired.

### Haiti-Agroforestry Outreach (521-0122)

This project is designed to reduce, and ultimately reverse, the ongoing degradation of Haiti's natural resources and thereby upgrade the productive potential of its land.

Project Description. The total cost of the four-year project is estimated at \$11,757,700 of which \$8,000,000 will be financed by AID and \$3,757,700 by other organizations--three private volunteer organizations (PVOs), Operation Double Harvest (ODH), Cooperative for

American Relief Everywhere (CARE), and the Pan American Development Foundation (PADF); and GOH PL 480 Title I local currency generation and Title II commodity food support.

The project is being carried out largely through non-governmental organizations in an attempt to generate the motivation to increase their income through the production of trees. Grants were made to the three PVOs mentioned above, and a direct technical assistance contract was used to employ an overall Project Coordinator. In addition technical backstopping is provided by the AID/FS Forestry Support Program, and by a Personal Service Contract for a Forestry Advisor.

Other donors who are active in forestry in Haiti, or plan to be active include FAO, the Inter-American Development Bank, the World Bank, and Fonds Agricole of West Germany. Although their objectives are complementary, these donors are not directly involved in this project.

Each of the PVO organizations have discrete parts of the overall project. ODH will strengthen its forestry programs by establishing both a central nursery to produce/distribute tree seeds and seedlings and develop demonstration tree farms in different ecological zones.

CARE will hire a three-person team to supervise two HACHO (a quasi-governmental Haitian development organization) agronomists/extensionists and two HACHO nursery managers. CARE/HACHO will also conduct four or more demonstration tree plantings.

The PADF will establish an Agroforestry Resource Center headquarters and three regionally-oriented extension teams. The team will provide training, design and technical assistance, and material support to PVOs and other groups active in agroforestry.

The Project Coordinator will help the three granters initiate training programs, coordinate resource flows and inter-grantee contracts, monitor progress, and will provide liaison between USAID/H and project participants.

Evaluation. A draft report completed December, 1983 provided a thorough evaluation of the Agroforestry Outreach Project in Haiti. The two team members who prepared the report were employed through local mission PSCs. Their findings were generally favorable for the progress made by CARE and PADF, but were somewhat concerned about the role played by ODH. The relative merits of one PVO compared with another is not the subject of this discussion. But the fact that this project was designed to rely more heavily on non-governmental organizations (NGOs) than on governmental institutions raises the question of continuing commitment by NGOs. Even if ODH were shored up to restore its effectiveness, how long would it last after completion of the project? It appears the course is set on continuing donor financing and technical assistance with the hope that the outputs of the project will motivate the peasants to accept such interventions as a way of life. (See Recommendation 2.7).

General Statement. The objectives of the project will require many years of commitment by the NGOs to establish a new attitude on the part of the rural population of Haiti and the activities of NGOs are subject to the GOH approval and/or control. While it may be a luxury to

operate in a non-bureaucratic framework, greater host government involvement may weigh on the side of both short-and long-term project success.

## U.S. GOVERNMENT PROGRAMS

U.S. AID is the major U.S. government donor to forestry projects or forestry components of other projects in LDCs. Current LOP funds total over \$1 billion and annual expenditures are in excess of \$100 million. In addition, a recent study of PL 480 funding revealed an estimated LOP of \$257 million for forestry-related activities in LDCs. This PL 480 study report is in the review stage and funding estimates may be subject to change.

The forestry part of the U.S. Peace Corps program is complementary to the AID forestry program. Currently about 450 Peace Corps volunteers are engaged in forestry projects overseas at a cost of about \$10 million per year. This amounts to almost ten percent of its total budget. In addition, through personal contact we learned that the Peace Corps receives about \$1.5 million annually from AID for forestry related project work in LDCs.

The Forest Service has the opportunity to play a special role in this program due to the vast pool of technically trained employees. This agency's part in providing professional foresters to staff the Forestry Support Program for AID has contributed in technical support to country missions and other aspects of AID's forestry activities. The Forest Service also makes short-term assignments of personnel where needed on related forestry projects.

Although the Forest Service is a major organization only a small percentage of its employees have international forestry experience. Many of those who do have such experience are former Peace Corps volunteers. However, few of these have continued their interest in international activities. The career track has been limited and does little to encourage international forestry assignments as a career option. (See Recommendation 2.9).

It is generally recognized that the Forest Service has the capability to play a much greater leadership role in international forestry. Indeed, the agency's plans for the next decade outline an expanded level of activity in this field. Budget constraints currently suppress such expansion plans, but the critical need for greater participation to forestry programs in LDCs should not be put off much longer. The already operational AID/FS Forestry Support Program constitutes an exceptional example between two agencies with the common goal of bringing professional forestry to bear on LDC forest resource problems.

## COORDINATION WITH OTHER DONORS

Evaluation reviews of ongoing AID projects reports that the required coordination with other donors in the host country or region have usually been carried out satisfactorily. However, the evaluation statement frequently only describes a kind of consultative check by the project coordinator during the formative stages of project development. Although our review of project papers on this point was made on a small sample we did not learn of any actual negotiations with other donors

that lead to active participation in project development and project implementation. Our small sample undoubtedly overlooked some joint USAID donor arrangements, but the point is raised here to question whether or not a greater effort should be made to actively involve other donors. (See Recommendation 2.9).

## RECOMMENDATION

### Access to Universities

- 2-1 Consider involvement with NASULGC's Office of International Programs and Studies as a source for multi-disciplinary approaches to problem solving in LDCs.
- 2-2 Building the FSP Roster to an even greater level of effectiveness or develop a new roster incorporating the capabilities of Consortia and of forestry schools and colleges now available from "Profiles."
- 2-3 Give greater consideration to the many kinds of mechanisms for acquiring the services of specialists from universities.

### FSP Roster Use

- 2-4 FSP should seek periodic consultation with systems specialists for maintaining or enhancing the current outstanding capability of the Roster System.

### Pakistan-Forestry Planning and Development (391-0481)

- 2-5 Make a greater effort to involve other donors in project planning and possibly in project implementation through their involvement in the external evaluation process as proposed in this project.
- 2-6 Exploit the experience gained from this project in the use of mechanisms to obtain technical expertise, other services and commodities. For example, build a case history experience document as a guide for subsequent project use.

### Haiti-Agroforestry Outreach (521-0122)

- 2-7 The goal of this project is admirable. Our only suggestion is to strengthen GOH involvement, thereby creating a stronger governmental commitment to the project objective and hopefully to the long-term land management programming necessary for a greater assurance of success.

### U.S. Government Programs

- 2-8 AID should consider exploring with the Forest Service an expanded Forest Service role in providing technical assistance for forestry programs in LDCs. For example, the development of a career track that would attract more Forest Service employees to become involved in international forestry.

## Coordination With Other Donors

- 2-9 Make an exploratory study to determine the feasibility of joining with one or more non-U.S. government donors in the pooling of resources to achieve a common forestry objective.

## CHAPTER 3

### U.S. AID FORESTRY-RELATED PRIVATE ENTERPRISE ACTIVITIES

#### INTRODUCTION

The Caribbean Basin Initiative (CBI), announced by President Reagan in February, 1982, gives evidence of the Administration's commitment to the use of the private sector in economic development. The CBI is a blend of economic assistance, trade, investment, and tax measures aimed at encouraging recipient countries to change their policies in order to promote the private sector and utilize free enterprise mechanisms. AID is only one of many agencies that play an important role in the implementation of the CBI. Its programs to the Caribbean region are continuing at a significantly higher level than in the past, with increased emphasis on strengthening the role of the U.S. and indigenous private sectors in economic growth.

The Caribbean Basin Economic Recovery Act (PL 98-67) implements some of the CBI and was enacted into law by the President on August 5, 1983. It provides for duty-free access to U.S. markets for exports from designated Caribbean-area beneficiary countries. The first group of countries were designated as beneficiary countries on December 1, 1983. Designation of most of the remaining countries should be completed by December, 1984.

Documents relating to AID's activities are replete with discussion of the importance of private enterprise in economic development. Free and competitive markets are seen as making allocations of scarce capital, labor and natural resources more equitably and more efficiently than those made by governments. The free market philosophy holds that market solutions to development problems promote the economic security and independence of citizens, values that are cherished by democratic societies. The countries that have shown the greatest rates of economic growth and highest levels of individual freedom have been those where private enterprise has been free to develop. AID also recognizes that as a practical matter the job of reversing forest depletion and using forest resources for economic development is too large for governments alone to handle and that the constructive support of private enterprise and market forces must be enlisted. While there has always been a role for private enterprise in AID programs, emphasis on promoting the private sector in LDC's has increased sharply over the past four years. The AID Bureau of Private Enterprise (PRE), started in July 1981, is only one manifestation of the agency's increased tilt toward the private sector. All the other bureaus in the agency are also looking to private enterprise as an efficient and sustainable engine for economic development.

The philosophy that seeks to strengthen weak economies through private enterprise is also evident in other initiatives from the Reagan Administration. On May 2, 1983, the President announced the formation of the Task Force on International Private Enterprise. Established by Executive Order 12395, the Task Force is charged with advising the President on the role of both indigenous and U.S. private enterprise in international economic development and in the implementation of foreign

assistance programs and activities. The Task Force is scheduled to present its report to the President and to the Administrator of AID in September, 1984.

#### BUREAU OF PRIVATE ENTERPRISE (PRE)

Although all AID Bureaus are responsive to the Administrator's private sector initiative, responsibility within AID for the promotion of economic growth in LDC's through the creation and development of private business enterprise is focused in the Bureau of Private Enterprise (PRE). The Bureau seeks to leverage AID's resources to promote the use of private, for-profit business enterprises to achieve development objectives. It is intended that these enterprises be self-sustaining in competitive markets and not require infusions of highly concessionary assistance.

The strategy is implemented by the use of two devices: a Bureau portfolio of loan- and grant-financed projects and programs (\$25 million in FY '83) in target countries and a set-aside program with technical support to AID missions (\$44 million in FY 83).

The Bureau's lending portfolio is focused to assist the development of all types of intermediate financial institutions (IFI's), including pension and mutual funds, commercial banks, insurance companies, venture capital firms, merchant investment banks and development finance companies. The legislative establishment of the Revolving Fund now allows for continuation of these developments beyond a single fiscal year, including the exploration of potential participation in loan brokering or origination through the Bureau's feasibility study financing program and through other institutional mechanisms (e.g., export trading companies). Such programs will identify and package financing ventures through intermediate credit institutions. These ventures might include enterprises in the forestry sector.

In addition to strengthening the financial structure in host countries, the use of IFI's allows leveraging of AID funds by 3-5 times and shifts risk to the local institutions. Loans are generally made to IFI's for a 5- to 7-year term at a rate of 1/4 to 1/2 percent above the rate for five-year U.S. Treasury notes. PRE's investment criteria are listed and explained in a memorandum from Robert Parra dated November 29, 1983 and included in Annex 5.

The Bureau's grant portfolio has been programmed to support the loan-financed activities in target countries. AID's resources are used for developing technical and managerial capabilities required in those intermediate institutions and private business which receive loan financing.

Resources are also provided for programs related to (1) policy dialogue, including analysis of investment laws, planning privatization strategies for government-owned industries, and developing capital markets; (2) assistance in building institutions capable of providing financing and other needed services to small and medium-scale enterprises; (3) technology transfer, with particular emphasis on agribusiness, which is defined to include forestry; (4) technical and management training needs of LDC private businesses; and (5) investment and promotion of non-traditional exports.

The Bureau's "set-aside" program seeks to institutionalize the utilization and incorporation of private enterprise in the development process throughout the rest of the agency and missions, including those in countries not designated as target countries for the loan- and grant-portfolio program.

#### GENERAL AID POLICY REGARDING FORESTRY

AID Policy Determination 7 (PD-7) of May 16, 1983 recognizes that the material benefits from forestry "are critical in enabling rural populations in developing countries to meet a broad range of their basic needs" and that forests also provide important environmental benefits. It declares, "The broad objective of AID forestry assistance is to enable developing countries to manage their forests, woodlands, ranges and other wildland resources more efficiently for sustained increases in the production of forest products". It also states that AID assistance should "promote the most economically efficient and ecologically sound use of forest resources and products."

One of the four inter-related policy elements listed in PD-7 that AID will focus on to achieve the objectives of forestry assistance is to:

Expand the role of private enterprise--defined to include individuals, cooperatives, voluntary organizations and profit-seeking entities--as a means to establish an industrial base for forest development, improve the production efficiency of forests and promote the utilization efficiency in conversion and consumption of forest products.

In addressing its implications for program development, PD-7 clearly links forestry development and private enterprise in its last sentence:

Thus, forestry development is not only a target for private enterprise but also an important agent of its expansion to other sectors of the economy.

The forestry policy set forth in PD-7 was given further stress in the agency's Forestry Strategy paper, approved by the Administrator on April 9, 1984, issued to "provide guidance for the development of Bureau and country assistance programs."

How well AID programs actually have involved the use of the forestry sector to stimulate desired growth of private enterprise will be revealed in much of the remainder of this report.

#### S&T AND THE FORESTRY SUPPORT PROGRAM

There are two routes by which the private enterprise forestry sector of a developing country may become involved in an AID project. In the first method, the forestry sector would be more or less equally eligible with other private enterprise sectors to participate in credit, management training or other development programs. In this category projects are likely to be designed by PRE or by the regional bureaus and host country missions with the assistance of PRE. This route is the one being reviewed in most of this report. The other route is where the private enterprise forestry sector participates in projects designed specifically for its development. These projects

likely originate in S&T or designed in the regional bureaus and host country missions with assistance from S & T. Cooperation and coordination between PRE and S&T will be discussed later.

Suggestions for AID's involvement in private enterprise forestry workshop project design were proposed in the proceedings of a workshop on AID's private sector initiatives for forestry held in Raleigh, N.C. on November 18-19, 1982 by the Southeastern Center for Forest Economics Research (SCFER 1982). In February, 1984 SCFER and the Southeastern Forest Experiment Station (SEFES) began an AID-funded program of cooperative research and demonstration on issues of forestry policies and market development. The results of the investigations would be useful for AID's program planning, as well as for technical support of field projects at the mission level.

The SCFER/SEFES effort is incorporated in an amendment of the RSSA between the Forest Service FSP and AID/S&T/FNR to provide for a forest policy and market development demonstration project in selected host countries. The demonstration project is being handled by the School of Forest Resources of North Carolina State University working in association with SCFER. It sets up two positions to be associated with FSP that would be filled by non-tenured employees of the university, a market development specialist and a forestry enterprises coordinator. The positions are currently in the process of being received.

As excerpted from the position description prepared by the university, the Market Development Specialist:

- Identifies promising markets for forest-sector goods and services produced in selected developing countries, primarily in Latin America and the Caribbean.

- Encourages studies of demand, investment feasibility, and government policy to improve marketing opportunities.

- Promotes local action and generates support in overcoming obstacles to forest products market development.

- Facilitates professional and business contacts to foster commercial forestry opportunities.

The position description for the Forestry Enterprise Coordinator states that he:

- Will strengthen communications and working relations between forestry enterprises in selected developing countries and those in the U.S.

- Facilitates information flows for U.S. forest products enterprises considering trade and investment opportunities with enterprises in the developing countries.

- Provides professional support for AID on all forestry matters related to private enterprise and commercial forestry development.

- Arranges for preparation of commercial forestry profiles, market outlook studies, and trade analyses.

A more detailed description of the coordinator position calls for establishing close communication and effective liaison with, among others, AID's Bureau for Private Enterprise. Detailed descriptions for both positions are included in Annex 6.

## PRIVATE ENTERPRISE PROJECT REVIEW

### Procedure

The major part of the present assignment is to identify those AID private enterprise projects that may have an opportunity for participation by the private enterprise forestry sector. Such an identification would ideally be based on a review of all the private enterprise project papers. But no single source for all such project papers exists, so, as a practical matter, the review depended largely upon a review of all available project lists together with some PIDs and PPs that were readily available.

Indeed, the ripple effects of any economic development program could benefit the private enterprise forestry sector wherever public policy allows such a sector to exist and develop. After discussion with the AID/FSP staff, it was necessary to narrow the scope of the review to those projects that provide private sector investment and profit opportunities in timber and harvesting and in the marketing and manufacturing of forest products. This definition is stretched to include such secondary manufacturing as furniture but does not include construction. For example, a project that could provide credit to a plywood plant or a furniture manufacturer is included in the review, but a home-mortgage credit program is not.

### Sources

The beginning point in the review was a report on the "Forestry-Related Implications of AID's Private Enterprise Initiative" prepared by Patrick Durst in March, 1983 (Durst, 1983). The report was based on a list of 105 private enterprise projects included on a recent AID list. After review of available project descriptions, Durst classified 37 of the 105 projects as having moderate to high potential for the forestry sector. His list also identified 34 projects with minimal potential for forestry. Project descriptions were not available on the remaining 34 projects, so their forestry potential could not be judged.

The list prepared for this report (Annex 7) omits the 34 projects Durst judged as having "minimal potential for forestry involvement" and adds 40 projects which, based on new sources of project information, have a moderate to high potential for forestry involvement. It also includes those that have been identified as private enterprise projects by PRE but about which no specifics were available during the brief review period for forming a judgement about their potential for the forestry sector.

The other sources used to compile the list are:

1. PRE.<sup>\*</sup> A memo by Edgar C. Harrell of PRE entitled "AID's Private Sector Initiative" and dated June 19, 1984 attaches a

\* The underlined titles in this list are used in Annex 7 to identify the information sources used for each project listed.

set of tables classifying AID projects impacting the private sector by country, region, or bureau and the "area" of the impact. The "area" categories are:

- a. IFI's - intermediate financial institutions
- b. Enterprise direct investment
- c. Major policy dialogue and analysis
- d. Private sector component
- e. Technology transfer
- f. Investment promotion
- g. Management development and

These "area" classifications were retained in the present review, since they are useful in showing the nature of the intervention in many of the projects reviewed.

It is reasonable to assume that the PRE table, considering its source, was developed from a complete list of AID projects impacting private enterprise. However, the covering memo makes clear that the table is subject to correction and refinement. Data in the PRE table sometimes conflict with data from other sources. For instance, PRE shows \$2.8 million invested in IFI's in Liberia (Project 669-0201), while PPC shows only \$2.55 million in total life of project (LOP) funds. Nevertheless, when matched with overlapping information from other sources, information from the PRE table helped to classify some projects on their potential for forest sector involvement.

2. DIS-AID's Development Information System (DIS) provided on request a computerized printout of descriptions of 133 projects by using keywords of "private enterprise", "private investment" and "private industry". Many of these projects have long been terminated. It appears that many current private enterprise (including private investment and private industry) projects are not included in the DIS library unless there somehow has been a failure to assign them with appropriate keywords. A point of interest: a further sort of the 133 projects using the five keywords associated with forestry pulled only two projects from the DIS system, only one of which is an active project. That is, DIS has only one current project that fits into both the forestry and private enterprise classifications.
3. Lundberg-Public sector Forestry Projects funded by the U.S. Agency for International Development, by Paul A. Lundberg. September 1983. 20 pp.
4. AFR-Bureau for Africa. Energy, Forestry and Natural Resources Activities in the Africa Region. January, 1984. 199 pp.

5. NE-Bureau for Near East. Project/Program Assistance Implementation. Implementation Report No. 36. February 29, 1984. 178 pp.
6. LAC-Bureau for Latin America and the Caribbean. U.S. Government Programs for the Caribbean Basin. An undated collection of country and regional activity summaries. 37 pp.
7. PP-Project Papers or project identification documents.
8. CP-AID FY 1985 Congressional Presentation, Main Volume.
9. PPC-Bureau for Program and Policy Coordination provided upon request a printout listing the project numbers, titles, planned LOP, and annual funding for all projects listed in the Bureau's FY 1986 budget submission.

The reader is cautioned that the only sources listed above that contained project descriptions sufficient to classify projects by their potential for private enterprise forestry sector involvement with a minimum of judgement on the part of the reviewer were DIS, AFR, NE, LAC, and PP. Durst's classifications were accepted unless the reviewer discovered other information indicating the contrary. PRE, CP and PPC did not, in themselves, contain sufficient information to judge unequivocally the forest sector potential, although they provided information often useful for completing the entries in the table (Annex 8). Projects for which descriptions could not be found were classified under "no specifics available" for possible retention or rejection from the list by some future reviewer.

The reader should also recognize that the population of projects is dynamic, that the number changes as projects are added and or terminated and that project life and funding are also subject to change. The list of projects assembled here is based on information available to the reviewer in July, 1984. Considering the manner in which it was assembled, no claim is made that the list is complete. However, the number of projects and their funding are indicative of the magnitude of the opportunity for the private enterprise forestry sector to participate in AID programs, which is the purpose of the review.

## Results

A review of available project private enterprise proposals, project identification documents and project lists uncovered 83 AID projects judged to have moderate to high potential for participation by the private enterprise forestry sector. The projects had a total life of project (LOP) funding of \$1 billion. The average project LOP funds was \$19 million. However, the total and average were both raised by two very large projects: one in Egypt with LOP funds of \$237 million and a project in the Dominican Republic totalling \$405 million. Without these two, the average project would have LOP funds of \$11 million. Another 47 projects impacting private enterprise with LOP funds totalling \$422 million are carried on the list (Annex 7) but insufficient information was available to judge their potential for the private enterprise forestry sector. For projects for which the project period information was available, the average project period was 4.4 years, with a range from 2 years to 11 years. These data are summarized in

Table 1 for each region. Seventeen other projects with undetermined LOP funding are also carried on the list but not included in Table 1.

Table 1

USAID Projects with Private Sector Impacts and  
An Opportunity for Forest Sector Participation, July 1984

Region	---Potential for Forestry---				Total	
	<u>Moderate to High</u> <u>No. Proj.</u>	<u>\$000</u>	<u>No Specifics Available</u> <u>No. Proj.</u>	<u>\$000</u>	<u>No. Proj.</u>	<u>\$000</u>
Africa	8	68,329	20	159,189	28	224,818
Near East	7	537,410	2	5,300	9	542,710
Asia	11	78,850	3	148,800	14	227,650
Lat. Am./Carib.	49	754,444	16	84,043	65	838,487
Centrally Funded	8	122,381	6	24,619	14	147,000
Total	83	1,561,414	47	421,951	130	1,980,665

Not included above are 17 projects for which LOP funding information is not available.

While the data on this point are far from complete, the list of projects assembled clearly shows that the most frequently used "area" of intervention is the intermediate financial institution. The second most frequently used "area" of intervention is management development and vocational education. That is, most AID projects impacting private enterprise do so by supplying or stimulating the availability of credit and investment funds through the use of commercial banks, insurance companies, and other financial intermediaries. Furthermore, much of the management training is directed at improving the operations of financial institutions. Even the "area" of major policy dialogue and analysis involves financial institutions through interventions to obtain public policy changes needed to enhance their operations.

Not shown in the list are the nature of interventions by such private volunteer organizations as the International Executive Service Corps (IESC) and the Joint Agricultural Consultive Corporation (JACC), whose activities are funded in part by AID and whose activities are largely in technology transfer.

### PLANNING WITH FORESTRY OPPORTUNITIES

The conjunction of AID Policies regarding private enterprise and forestry, both discussed in the Introduction in the section on General AID Policy Regarding Forestry, suggests that there should be a high level of coordination among the bureaus and missions to promote development of the private enterprise forestry sector in the less developed countries. Probably no country is without opportunities for the private sector to invest on a modest scale in growing, harvesting, marketing and manufacturing of forest products, whether those products be as crude as fuelwood or as refined as furniture.

If the opportunities for the private enterprise forestry sector are particularly abundant, tailoring the project to take advantage of those opportunities and having project management staffed with people who are familiar or even intimate with the financing and technical assistance needs of the forestry sector would promote the effectiveness of the project. To what extent are such opportunities actually considered and incorporated in the planning and execution of AID development projects?

The typical process of project development is as follows:

1. A country development strategy statement identifies what AID could do to help development of the country. It is normally a five-year projection.
2. A project concept paper, usually 2-3 pages in length, suggests specific interventions and proposed budget requirements.
3. A detailed project identification document (PID) provides a more in-depth analysis of the proposal for review by concerned bureaus.
4. The final step incorporating all amendments to the PID and budget estimates necessary for approval is the project paper (PP).

5. An evaluation paper may be prepared during the life of the project and/or upon its completion.

While this may describe the typical process of project development, it is by no means the only process. For example, AID has introduced a separate and concurrent process of environmental profiling, that is done in several stages. Also, projects may originate in the regional offices to attack problems that are common to several countries. Or they may originate in one of the AID bureaus. PRE began building its program after sending reconnaissance teams of experts from the U.S. business community to target countries to identify constraints on private enterprises development, determine sectors representing potential investment opportunities and recommend strategies for PRE and the missions.

There are several points in this process at which the opportunities for the private enterprise forestry sector might be identified. If the country mission is sufficiently aware and sensitive to such opportunities, they could be identified in the environmental and developmental statements. Then, if the opportunities are real enough to provide practical involvement of the sector, they might be included in a proposed intervention in a project idea paper. The best openings for PRE, S&T/FNR and the regional bureau forestry and private enterprise advisers to influence the integration of the sector into the project probably comes at the PID and PP steps in the project development process. How well this idealized process is being approached might be seen in several case studies.

#### Small Industry Development in the Dominican Republic

Project Number 517-0150, entitled "Small Industry Development" is directed at establishing a small-industry revolving credit fund in the central bank of the Dominican Republic to provide credit to small entrepreneurs through participating financial institutions. In the DR, approximately 45 percent of the manufacturing labor force is employed by small business.

The PID makes only brief mention of forestry-related industries. But the project paper gives much detail on the potential for the forestry sector. It cites a survey by the National Corporation for Development of Small Industries (CONADEPI) which found that of 159 of its members surveyed, 69, or 43 percent, were in the furniture and carpentry industry. The PP recognizes that the needs of different industries may vary widely:

This wide range in capital intensity appears to relate to the specific nature of the business. Furniture makers may require a considerable amount of machinery, but will require a relatively large number of workers to make and assemble the furniture parts. Dairies and food processors, on the other hand, have a high potential to become almost completely automated. Therefore, the degree to which employment is generated under this project may be a direct result of which industries become the beneficiaries. (PP, p 29) (emphasis added).

The PP concluded, "...clear criteria for the use of credit under this

project will need to be established if a large number of small industries are going to benefit." (PP, p. 30).

With the particular needs of the forestry-related industries and their numerical importance among all industries in the DR having been recognized, to what extent have these factors been allowed to influence the design or implementation of the project? The reviewer could find nothing in the PP suggesting AID's private enterprise and forestry policies were being integrated to give special consideration or bring specialized talent to bear on the potentially high employment generation opportunity presented by this situation. Furthermore, discussions with individuals in the regional bureau and in the mission uncovered no evidence that the project was in any way being managed to draw participation by forestry-related industries. Some allowances may be made for the fact that the project manager in the mission had been on the job only two weeks and claimed not to be completely familiar with it.

### Kenya Commercial Bank

The GEMS study reports a substantial area of Kenya's forest lands is in private ownership and that the country has an active forest industry (FAO 1981). Average annual production of sawlogs and veneer logs ranges between 275,000 m<sup>3</sup> and 360,000 m<sup>3</sup>. About 20 percent of total timber production is for export. Logging is mainly carried out by private firms. In 1976 there were about 180 sawmills operating under long- or short-term licenses. The country has a well-developed forest service.

The reviewer selected project number 615-0220, entitled "Rural Private Enterprise," as a case study but learned that the project is not yet under way. However, a prototype for the project was said to be PRE's project numbered 940-0002.03, entitled "Kenya Commercial Bank," which provides for loans to small Kenyan-owned businesses. The PP or other descriptions of the project were not available to the reviewer but he was told that, although there is no mention of forestry in the project, there is nothing to preclude forestry businesses from participating. None of the subprojects involve forestry or wood products, he was told.

### Asia Region

The reviewer was advised of several countries in the Asia Region, particularly Indonesia, the Philippines, Sri Lanka, and Thailand, where opportunities for the development of the private enterprise forestry sector are good. However, by this time the story told by those he talked to was becoming familiar. The poor availability of people for more detailed interviews and the constraints of time discouraged him from looking further for exceptions from the rule that was becoming apparent in this study. In Asia, as in the other two regions, there is no special consideration given to the development potential or the particular needs of the private enterprise forestry sector in the planning or management of private enterprise projects, no matter how significant that sector may be to the development of income and employment opportunities.

However, one interview revealed a different facet of AID private

enterprise projects that needs to be considered. Some projects are really not ripe for serious consideration of the forestry sector. They are those projects for investment promotion, intended to develop industry profiles for the use of indigenous and ex-patriate investors. The person being interviewed cited one project in Sri Lanka, entitled "Private Enterprise Promotion" (383-0082), where AID funds are used by the host country government to develop industry profiles. In the process, the Sri Lankans are learning how to carry on such studies once the AID project is terminated. It would be fair to ask whether such "private enterprise" projects, not large in number and tending to be small in funding volume, should be included in this review.

## SUMMARY, CONCLUSIONS AND COMMENTS

This review of AID project papers, project descriptions and project lists yielded 83 private enterprise projects, with life of project funds totalling \$1.56 billion, that appear to offer a moderate to high potential for involvement by the private enterprise forestry sector. Another 47 projects, about which sufficient information was not available to judge forestry potential, might be considered candidates for addition to the first list. Their LOP funds totalled \$478 million. No claim is made here that these numbers are the final word on the subject. A more thorough review of all project papers and interviews with project managers would probably reveal much different numbers.

Even if the numbers are not complete, their magnitudes indicate substantial opportunities to integrate AID's policies on private enterprise and forestry, which together seek to use the private enterprise forestry sector to promote economic development in LDC's. However, no evidence could be found to suggest a coordination of efforts within AID and its missions to realize the opportunities.

The review has proceeded on the premises that:

1. It is desirable to promote private enterprise as a means of promoting economic development.
2. It is desirable to promote forestry and forest-based enterprises as a means of promoting economic development.
3. In some countries the forestry sector is a significantly large portion of the total private sector. In virtually all countries, the development of the private enterprise sector would advance the environmental and economic objectives of AID projects.
4. As with any other economic endeavor, many of the problems of production, technology and marketing in the forestry sector are peculiar to the sector. Optimal handling of those problems - and their related opportunities - requires special handling.

These premises, when considered together, suggest that, where private enterprise forestry sector opportunities are significant, the effectiveness of AID private enterprise projects can be improved if the sector is given special recognition and treatment in the planning and management of projects. This review has not uncovered any such special

consideration.

Discussions with AID and FSP personnel suggested several reasons why this should be the case. First, especially in those countries where environmental problems loom large, the development of a viable private enterprise wood-based industry may seem antithetical to the purposes of forestry projects. That is, timber harvesting may be viewed as part of the problem, not part of the solution. Second, as competent in their areas as they might be, it is unrealistic to expect the generalists who plan and manage most AID projects to have much expertise, let alone interest, in the forestry sector. They cannot be expected to always recognize the special problems of the private enterprise forestry sector or to propose or execute plans to solve those problems. One AID official interviewed even asserted that "most mission people don't understand private enterprise. The ag people are corn breeders. They are not tree- or fish-oriented. AID needs to recognize these things, especially the agriculture officers." Another noted that agriculturists frequently regard trees as competitors with crops for land. At the other extreme, it would be unrealistic to expect to have personnel assigned for special handling of every industry sector. But the AID private enterprise and forestry policies appear to invite special treatment for the private enterprise forestry sector, particularly in those situations where such treatment would provide a significant spur to economic development.

There appeared to the reviewer to be a minimum of exchange between PRE and S&T/FNR. Indeed, several comments were heard from PRE people about S&T's failure to supply requested general information. Perhaps this is evidence of intra-agency rivalry. More generously, perhaps the two bureaus are like a shy boy and girl, watching each other from a distance and waiting to be introduced by someone. After all, PRE is the new kid on the block.

While little has been said on this point in this report, there should be many opportunities for U.S. private enterprise to participate in the development of the LDC private forestry sector. But if the projects have not shown special recognition of that sector in host countries, they are even less likely to identify a role in sector development by U.S. private enterprise.

## RECOMMENDATIONS

In order to integrate and implement AID's private enterprise and forestry policies and optimize the role of the private enterprise forestry sector in economic development, it is necessary to:

- 3-1. Improve coordination between the bureaus within AID and between AID and other government agencies working to promote economic development through the development of private enterprise.
- 3-2. Provide greater assistance to project planners in Washington and in the missions in developing information on the private enterprise forestry sector and its problems in host countries.
- 3-3. Establish a two-way flow of information between AID and U.S.

companies on product and service needs and supplies and market and investment opportunities in developing countries.

- 3-4. Raise the level of awareness at the mission level, and, perhaps, also in the regional bureaus, of the potential role of private enterprise in development, particularly among the agriculture officers who handle agribusiness, which includes forestry-related private enterprise activities. The reviewer admits he has not investigated this issue in depth, but, comments he received and evidence (or lack thereof) in projects suggest little awareness of opportunities existing with the private enterprise forestry sector.

(These first four recommendations would all be advanced by the forestry enterprise coordinator and market development specialist soon to be in place in the FSP.)

- 3-5. Where projects target certain industries as model industries in order to demonstrate unfamiliar financing mechanisms, as in Costa Rica, project number 515-0204, the wood products industry should be considered for preference because of its high employment and development linkages.
- 3-6. Wood products manufacturing has strong linkages all the way back to rural areas. Thus, the multiplier effects of an expanding wood products manufacturing industry tend to be greater than most other industries, especially those that rely on imported raw materials. Input-output studies or economic impacts studies would reveal the magnitudes of and differences between the multipliers for various industries. It is recommended that such studies be commissioned for selected countries. They would likely be useful in showing AID planners and managers the power of the forestry-related sector in economic development.

## CHAPTER 4

### USAID SUPPORT OF TRAINING, EDUCATION AND RESEARCH IN FORESTRY

USAID depends heavily on the academic community to accomplish its forestry objectives. This is evident in a review of forestry-related project papers.

#### TRAINING, EDUCATION AND RESEARCH PROJECT LISTING

While there are some 104 forestry-related AID projects, with a total funding of \$1.166 billion, the Project Papers for only 47 projects were available to the team for review in the Washington, D.C. area during its working period. The total life-of-project funding for these 47 projects is almost \$478 million. The purpose of the review was to update an earlier effort by Lundberg (1984). Annex 8 lists the projects reviewed.

Funds for the forestry components of the 47 projects were allocated among research, training, technical assistance and other programs. Because they were not neatly identified in the Project Papers, allocations of funds to these activities frequently required judgemental estimates based on the descriptive texts. Funding allocation for the various activities frequently varied from those shown in Lundberg's report. The judgemental estimates account for much of the difference, and access to different sources of information and changing status of projects--terminated, planned, ongoing but no expenditure to date--account for much of the remainder.

The reader is cautioned to recognize the difference between Annex 7 and Annex 8. The first lists projects that impact private enterprise in the client countries but are not targeted at the forestry sector. However, the private enterprise forestry sector may participate in those projects on a more-or-less equal basis with other sectors. Annex 8 lists projects with forestry components, which could involve the private enterprise forestry sector but, as shown in Chapter 3, rarely do. The two annexes were assembled from essentially different sources.

#### Composition of the Forestry Components

The information in Annex 8 is summarized in Table 2. Life-of-Project (LOP) funding for the 47 projects amounted to \$477.9 million. The forestry component of these projects is 42 percent of that total or \$199.9 million. However, funding for the forestry component could be identified for only 39 projects with LOP funding totaling \$407.5 million. The forestry component accounted, therefore, for 49 percent of the total funding for these 39 projects.

Allocation to the basic activities was 8 percent for Research, 15 percent for Training, 49 percent for Technical Assistance, and 28 percent for Other. The latter activity, "Other" included a considerable amount of institution building activity that could be included in Training, or separated out as a part of an educational

activity.

Two-thirds of the expenditures on forestry components in the projects reviewed were in Asian projects. While not shown in Table 2, institution building accounted for about 12 percent (\$23.2 million) of the forestry component and was located in the Technical Assistance and Other categories, \$3.6 million and \$19.6 million respectively.

Table 2

SUMMARY

Current USAID Forestry Project Grant and Loan Funds by Region, July 1984

(47 projects reviewed)

\$000

Region	Number of Projects	Total USAID Funds	Forestry Components				Total
			Research	Training & Education	Technical Assistance	Other	
Africa	15	101,482	2,879	2,356	5,066	2,295	12,596
Asia	17	241,125	6,961	21,006	64,753	41,017	133,737
Lat.Am./Carib.	15	135,326	6,237	5,929	27,955	13,442	53,563
Total	47	477,933	16,077	29,291	97,774	56,754	199,896
% of Forestry			8.0%	14.7%	48.9%	28.4%	100 %

Ratio of forestry components to total funds: 41.8 %

If the 47 projects reviewed and listed in Annex 8 can be regarded as a fair sample of the 104 forestry projects listed in AID's computer system, the total funding of forestry components is about \$490 million (42 percent of \$1.166 billion).

The 15 percent of forestry expenditures allocated to training and education seems low. In addition to building up economies of LDCs, a major objective in any AID forestry project should be to improve the expertise of the forestry technicians and scientists in the country. In the long run this is apt to have the most lasting benefits, not only to the forestry program but to the country as a whole. Certainly, it should not be considered as unrealistic to allocate 20 to 25 percent of the forestry component to the training and education of the people who will be carrying on the program and, hopefully, designing and managing new ones in the future. One is reminded of the maxim about giving a man a fish so he can eat today, or training him how to fish so he can eat for the rest of his days.

We realize heavy emphasis on Technical Assistance was needed in many desperate or near-catastrophic forestry situations. But now, where programs have been successfully started, the emphasis should be made towards developing the technical capabilities of the forestry technicians, managers and scientists in the LDCs involved. (See Recommendation 4-1.)

#### AID USE OF U.S. INSTITUTIONS FOR FORESTRY TRAINING

U.S. institutions are being used to provide mostly graduate level training to selected foreign students; to provide technical short courses in the U.S. and abroad for foreign students; to provide technical instructors at foreign schools and training centers; and to provide training materials such as training packages in native languages.

#### Institutions Involved in Forestry Training

FSP has recently published Profiles of U.S.A. Forestry Schools and Consortia (hereinafter referred to as Profiles) which is based on their review of schools and consortia in the U.S. that offer educational, research and extension resources in forestry (Kelley, 1984). Forty-four universities have forestry schools that have been accredited by the Society of American Foresters (SAF) and seven schools that are candidates for accreditation have been listed.<sup>1/</sup> In addition, FSP listed 54 other schools and eight consortia that are involved in some phase of forestry training or extension. A listing of the accredited and candidate schools is presented in Annex 9. (Since publication of the Profiles, one of the candidate schools, University of Arkansas, has also been accredited.)

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<sup>1/</sup> The Society of American Foresters is recognized by the National Commission on Accrediting as the professional organization qualified to evaluate university forestry curricula in the U.S.A.

The publication provides much information valuable to field missions, regional bureaus and regional offices in their contacts with host countries regarding forestry educational opportunities in the U.S. Profiles of the 44 accredited schools are presented and are of particular value because they summarize the institutions' involvement in international forestry activities, including courses taught, linkages between the school and foreign institutions, foreign experience and expertise of the faculty with geographic area of interest, and present efforts being made to strengthen international connections. This information can be used as a basis for developing the roster of academic institutions, referred to in Chapter 2, that are concerned with training and research in international forestry.

Profiles should also be useful to AID and host countries in identifying which institution is most apt to have the expertise, and experience, curricula and facilities to address specific resource problems. This can be done in several ways and by using a variety of criteria.

For example, the Team reviewed the profiles for each of the 44 accredited schools, and evaluated them based on the following criteria: training provided to foreign students; faculty participation in foreign projects and assignments; participation in ongoing foreign projects; suitability of courses and facilities for foreign students; and institutional relationships with various consortia and other foreign training groups. Fifteen schools were judged by the team to be the highest in overall participation and resources for foreign forestry training and research. They are:

- University of Northern Arizona
- University of Colorado
- Duke University
- University of Florida
- University of Georgia
- University of Idaho
- University of Michigan
- Michigan State University
- State University of New York at Syracuse
- North Carolina State University
- Pennsylvania State University
- Utah State University
- University of Washington
- Washington State University

This listing should not imply that these are the only schools suitable for training of foreign forestry students. Any other of the schools listed could be the best choice for a particular speciality, such as arid land forestry, or for a particular geographic location or problem. The University of Maine, for instance, as mentioned in Chapter 2, has a special role because it offers opportunities for bilingual (English and French) education.

Profiles was assembled to provide descriptions of academic programs, not to rate them. Nevertheless, there is a need for evaluation of

institutions to assure maximum effectiveness of AID funds. One way to obtain such ratings would be with evaluation of the institutions by the LDC graduates themselves. Perhaps this is already being done in an informal way, but the Team heard of no instance where this is being done in a formal manner. The graduates could present to AID, FSP and the host country their evaluations of the institutions attended. Another approach would be to have an independent organization, such as a professional society, set up a program under contract for rating curricula with regard to their excellence for training students from LDCs. (See Recommendation 2.)

### Mechanisms for Conducting and Providing Forestry Training and Research

Each project may involve several methods of contracting in meeting its objectives because of the lack of facilities in some cases and the large number of participating individuals or organizations in others. The make-up of participating units for a given project varies with the project objective, the country or region concerned, and the assortment of institutions involved, as shown in Annex 4.

Examples of Mechanisms. AID provides direct loans or grants to participating countries. Specialists may be contracted individually through PSCs, NPSCs, and JCCs with various colleges and universities or with cooperating institutions such as the South-East Consortium for International Development (SECID), the Center for Forestry Education Development (CFED) at the University of the Philippines, and the Tropical Center of Agricultural Research and Training (CATIE) in Costa Rica.

The training support provided by AID may be in the form of actual funds for student education or worker training, funds for travel to meetings and workshops, funds for staff and facilities to perform research or training, or funds for cooperating groups to provide material, staff, and facilities for these purposes.

### STUDENT TRAINING PROBLEMS

Personal interviews and telephone conversations with people involved in AID programs at North Carolina State University, University of Arizona, South-East Consortium for International Development (SECID), Partners for International Education, and OICD training staff revealed several existing or potential problems. The degree of seriousness of a particular problem may depend on the individuals or the country involved.

The problems can be categorized into two general groups: those relating to personal problems experienced by the students and those of sponsoring institutions resulting from their own procedures or problems with students they have sponsored.

#### Personal Problems of Foreign Students

In attempting to describe the problems of students, the contractors contacted tended to describe the personal problems of students which arise from their living situations, rather than those that might arise

from the administration of training projects supported by AID funds.

Many foreign students have difficulty in adjusting to U.S. foods, customs, and procedures which may be radically different from those of home countries. Undoubtedly, the language barrier intensifies the problem. The American language is full of idiomatic phrases and slang terms with imprecise translations into other languages. The food difficulties are often especially troublesome in mandatory cafeteria situations. Even where there is no mandatory use of cafeterias, personal finances may be inadequate to purchase foreign foods which, in this country, are often considered as specialty items. The normally high cost of housing, medical attention and school supplies further compounds the financial problems. Another problem relates to climate. Students accustomed to warm or hot climates may have difficulty adjusting to the cold climates in much of the U.S.

Because of these personal problems, the students may hold back from normal social contacts and become lonely or homesick. Net result is that their forestry training, the reason they came to the U.S., suffers and the home country loses on its investment. These problems are common among foreign students in the U.S. and are not peculiar to forestry students. The solution to some of them may be beyond the control of AID. Examples of possible solutions to some of these problems include:

1. To minimize the language barrier, require higher language proficiency of students or provide short preparatory courses in English. This should be done prior to the technical academic program and could be done at home, in nearby countries or in the U.S.
2. Instruction in U.S. customs and procedures could be combined with efforts to increase language proficiency during a "break'in" period.
3. Personal financial allowances and needs could be followed up with financial counselling and budget planning.
4. Adequate housing may require facilities for housekeeping and personal food preparation and consumption.
5. Select health insurance programs to meet individual requirements.
6. To reduce loneliness and combat home sickness, students from the same country may be grouped at one or two institutions. Climate should be considered as a factor in selection of the institutions. Provide opportunities for spouses to accompany students or provide home leave for students with lengthy assignments to U.S. institutions. (See Recommendation 4-3.)

#### Institutional Problems

Some problems are engendered by institutional practices. For example, short courses may be watered down to present a variety of subjects at

the expense of specifics because of the varied interests and experience backgrounds of the students. Another example concerns recent offerings of short courses. Notices of the courses were combined in a single cable to the missions. Of necessity, course descriptions and prerequisites were much abbreviated. This may have caused some of the problems as well as resulting in insufficient enrollment to justify holding the course.

Other institutional problems relate to the students after the education contracted for has been completed. Some students press to stay in the U.S. for further degrees rather than return to the country of origin. Others return, but avoid going to the positions or do the type of work in the home country agreed to in the educational contract. This problem was also pointed out by OTA in their discussion about tropical forest resources. (USOTA 1984). They stated, "Recruiting students to work as forestry technicians is a problem. Few students who complete technical training take field jobs and many who do may leave them soon. Educated people generally prefer to live in urban areas." However, the problem is apparently not a universal one. Of 19 graduate students from Duke University checked by SECID, 18 were working as contracted. (See Recommendation 4-4)

## MORE EFFECTIVELY MOBILIZING AND DELIVERING U.S. EDUCATION AND TRAINING IN FORESTRY TO HOME COUNTRIES

### Identifying Forestry Problems, Programs and Opportunities to Policy Makers

A statement made to the reviewer concerning Asian forestry problems was, "Foresters don't know how to present needs to leaders of government." That statement, if valid, is a problem worthy of attention.

Properly presenting needs to those persons who can influence programs may be the basic step needed to start the process of solving various problems related to forestry. AID personnel and host country personnel involved in presenting needs requests should be skilled in this practice. (See Recommendation 4-5.)

### Training the Trainers

At the other end of the influencing scale, and equally important, is the training ability of those who are expected to train others to do the job once needs are known and action is to take place. The World Bank reported, "Forestry training is given at a variety of institutions, often by people with little or no teaching experience or training in teaching procedures," (World Bank 1983). In a report to Congress GAO stated, "A Canadian representative said that Nepal community forestry assistants often lack the technical skills to teach farmers about planting and nurturing trees," (GAO 1982). Similar statements could likely be made for most field level trainers in most countries.

The need for women as both trainers and trainees should be considered where local custom permits, especially in those project situations where women are likely to make up a segment of the work force or are known to be active locally in the planning of project activities.

Whatever the level of training involved, the best trained people are usually the result of trainers who know how to effectively present the material. The ultimate success of a project will depend upon the effectiveness of project people who have been properly trained.

Training in "how to train" should be mandatory for all who are expected to train others. This includes the extension worker who trains a small crew to plant and maintain trees as well as the technical instructor dealing with forestry subjects for a class of future foresters or technicians.

The Centre for Forestry Education Development at Los Banos in the Philippines offers teaching and training materials development as part of the curriculum. Similar courses should be stressed in other local and regional training centers and institutions. Although such courses could be part of university level training, they are usually most effective when taken and practiced under "at home" conditions. (See Recommendation 4-6.)

### Institution Building

Report reviews and representatives of AID projects often addressed the need for "institution building". This is reflected in some of the previous concerns regarding lack of teacher training and analytical learning deficiencies. A report on TRAINING NEEDS FOR FARM FORESTRY IN PAKISTAN states: "...the old imperial approach to custodial forestry on which the profession has been built and which the training institutions provide is no longer apt." This is apparently true in some other forestry-training institutions abroad and reflects an attitude which would benefit from change.

Improvement of Curricula. AID influence in curriculum development at existing schools and institution building programs is needed to ensure effective use of AID funds. The better prepared foreign students will be better able to use to advantage the advanced degrees, short courses, workshops and seminars made available to them.

Use of Indigenous Facilities. In addition to the prospect of better prepared students, institution building should permit the more effective use of indigenous training and education facilities. This should reflect a lower cost per student when compared to use of U.S. institutions. The U.S. figure that SECID uses to estimate the cost for two years per student could be considerably lowered if similar education could be provided closer to the student's home country. This would also permit concentration of education in U.S. institutions on advanced technical degrees without the slow-down of basic or intermediate courses.

Training of students at home is usually less expensive for student travel and board and room. Climate and loneliness problems are apt to

be minimal and the training environment is likely to be more like that of the proposed project areas.

A general statement could be made that advanced degree education is best provided in the U.S. and basic training is best provided in project area countries and regions. However, improvement of learning institutions in LDCs could enhance local advanced degree education. Meanwhile, lower level training in project countries and regions should be increased. While the use of indigenous facilities is already promoted by AID policy, the emphasis provided by discussion here is justified.

#### FORESTRY RESEARCH FOR DEVELOPING COUNTRIES

As shown earlier in this chapter, research accounted for only 8 percent of the \$199.9 million funding for forestry components in the 47 projects reviewed (Table 2). Grants accounted for 86 percent of the \$16.1 million allocated to forestry research. The research was largely on topics such as plant species for biomass production or the physical and mechanical properties of wood species.

The techniques used to manage tropical forest resources frequently are based on trial and error experience over a long period of time. Management practices and applied research, therefore, have been tailored to provide products or information to meet immediate needs. This tradition has conditioned host country governments and rural populations to be receptive to projects that have a 2-3 year payoff. This mode of operation is probably valid for a large part of the AID forestry program, but should not be conducted at the expense of developing knowledge needed to achieve long-term goals. Innovation, based on new fundamental research and management techniques, will be necessary to attain such goals as sustained yield under a burgeoning population, or an enrichment of environmental living conditions.

Some of our contacts conclude that sustaining tropical forests is not so much a technical problem as it is an institutional one. The problem is seen as a need to determine the interactions between the social as well as the biological factors of forest systems. Thus, problem solutions and particularly research elements should take on an interdisciplinary character.

#### THE RESEARCH-EDUCATION LINKAGE

Although it is often lamented in the U.S. academic community, the "publish-or-perish syndrome" has a justifiable basis. Publications result from research and research provides a means for academicians to stay current in their fields. Encouraging them to be active in research promotes their expertise and relevance in the subjects they teach.

The same principle applies in developing countries. The more the academicians in the educational institutions of developing countries are encouraged to be active in research, the better their teaching results are likely to be. In turn, the development of better technologies from research and the improved application of those

technologies through improved education are likely to increase the success of development projects. This linkage between research, education and project results should be kept in mind as projects are being designed. Opportunities for research institution building and increasing the research part of the forestry component should not be overlooked.

The GAO (1982) recommended that USAID "...avoid designing projects which propose to do more in forestry and natural resource conservation than developing countries are capable of doing without adequate education and training plans and means." The design of projects certainly should be geared to the home country's capabilities. However, such capabilities in terms of intellect can change rapidly, particularly with the increased emphasis currently being directed by AID toward education and training of host country foresters. Therefore, it seems appropriate to begin phasing in a greater degree of sophistication of research and management techniques in USAID forestry project design. (See Recommendation 4-7)

## RECOMMENDATIONS

### Composition of Forestry Component

- 4-1. Increase emphasis on strengthening the technical skills of indigenous forestry technicians, managers and scientists in those areas and LDCs where programs have successfully started.

### Institutions Involved in Forestry Training

- 4-2. Evaluate academic institutions attended and the forestry education received. This could be included in the contract as an obligation of the student upon completion of his/her education. Another approach would be to have an independent organization, such as a professional society, set up a program under contract to monitor and rate curricula with regard to their excellence for training students from LDCs.

### Student Personal Problems

- 4-3. A check list should be prepared for each individual or group of individuals from a given country itemizing the kinds of personal problems that could jeopardize the training objective, and matching each such item with one or more mitigating provisions.

### Institutional Problems

- 4-4. Provide a system of monitoring contract compliance. The conditions agreed to must be fully understood by the student. Innovative approaches may have to be developed and supported. Documentation of contract compliance is indispensable.

### Presentations to Home Country Policy Makers

- 4-5. Training should be provided in the suitable use of voice,

mannerisms, presentation methods, visual aids and all the considerations necessary to present an effective message. The customs, practices, and presentation styles of the countries involved must be considered and made part of the necessary training.

#### Training the Trainers

- 4-6. Training-the-trainer courses should be provided by field courses or short courses at local or regional levels for those who have not had such training...including graduates of colleges and technical schools.

#### Research-Education Linkage

- 4-7. USAID should develop a strategy for increasing the sophistication of forestry projects as host country capability advances due to education and technological improvements.

## ANNEX 1

### Organizations Dealing With Tropical Forest Resources<sup>1/</sup>

#### U.S. Government Organizations

Agency for International Development, Washington, DC  
National Science Foundation, Washington, DC  
National Academy of Sciences, Washington, DC  
Peace Corps, Washington, DC  
Smithsonian Institution, Washington, DC  
U.S. Department of Agriculture  
    Office of International Cooperation and Development  
    Agricultural Research Service  
    Forest Service  
    Soil Conservation Service  
U.S. Department of the Interior  
    National Park Service (International Park Affairs)  
    Fish and Wildlife Service  
U.S. Department of State

#### Nongovernment Organizations Based in the United States

Arnold Arboretum, Cambridge, MA  
East-West Center, Honolulu, HI  
International Institute for Environment and Development, Washington, DC  
Missouri Botanical Garden, St. Louis, MO  
National Wildlife Federation (International Program), Washington, DC  
Natural Resources Defense Council, Washington, DC  
The Nature Conservancy (International Program), Washington, DC  
The New York Botanical Garden, The Bronx, NY  
Rare Animal Relief Effort, Washington, DC  
Pacific Tropical Botanical Garden, Kauai, HI  
Sierra Club International, Earth Care Center, New York, NY  
Volunteers in Technical Assistance, Arlington, VA  
World Resources Institute, Washington, DC  
World Wildlife Fund-U.S., Washington, DC

#### Multilateral Development Banks

African Development Bank  
Asian Development Bank  
Inter-American Development Bank  
World Bank

#### Major International Nongovernment Organizations

BIOTROP  
CARE  
Centro Agronomico Tropical de Investigacion y Ensenanza (CATIE)  
Permanent Interstate Committee for Drought Control in the Sahel (CILSS)  
Commonwealth Forestry Institute

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<sup>1/</sup>Source: See reference Office of Technology Assessment, 1984

Consultative Group on International Agricultural Research  
Eastern Caribbean Natural Areas Management Program  
International Council for Research in Agroforestry  
Institute for Terrestrial Ecology  
Intermediate Technology Development Group  
International Development Research Center  
International Society of Tropical Foresters  
International Union for the Conservation of Nature and Natural  
Resources  
International Union of Forest Research Organizations  
Lutheran World Relief  
Lutheran World Service  
World Wildlife Fund-International

#### United Nations Agencies

Food and Agriculture Organization  
United Nations Environment Programme  
United Nations Educational, Scientific, and Cultural Organization  
United Nations University (Natural Resources Program)  
World Food Programme

#### Private U.S. Foundations Funding Tropical Forestry Research and Projects

Ahmanson Foundation  
Andrew W. Mellon Foundation  
Atlantic Richfield Foundation  
Camille and Henry Dreyfus Foundation, Inc  
Exxon Education Foundation  
Ford Foundation  
Ford Motor Company Fund  
Inter-American Foundation  
John D. And Catherine T. MacArthur Foundation  
Mobil Foundation  
Morgan Guaranty Trust Co. of New York  
Richard King Mellon Foundation  
Rockefeller Brothers Fund  
Rockefeller Foundation  
Shell Companies Foundation  
Tinker Foundation  
W.K. Kellogg Foundation  
Wallace Gerbode Foundation  
Weyerhaeuser Foundation

## Major Foreign Bilateral Organizations

<u>Country</u>	<u>Organization</u>
Canada	Canadian International Development Agency (CIDA)
France	Centre Technique Forestier-Tropicale (CTFT)
Japan	Japanese Overseas Afforestation Association (JOAA)
Sweden	Swedish International Development Authority (SIDA)
United Kingdom	Overseas Development Administration (ODA)
West Germany	Bundesministerium fuer wirtschaftliche Zusammenarbeit (BMZ) Gesellschaft fuer Technische Zusammenarbeit (GTZ)

## ANNEX 2

### Mechanisms That Can Be Used to Interact With Domestic and International Organizations

**CAM:** Collaborative Assistance Method. Designed to help shorten the procurement process for AID missions to tap university expertise early--while a project is still in the design stage.

**Cooperative Agreement.** A written agreement between a federal agency and one or more non-federal parties for the principal purpose of transferring money, property, services, or anything of value to the cooperator to accomplish a public purpose when substantial agency involvement is anticipated in the subject activity.

**CRSP:** Collaborative Research Support Programs. Built around global research problems of mutual interest to U.S. universities and to developing countries. Provides U.S. universities the dual opportunity of strengthening domestic programs while contributing useful research to developing countries. CRSP requires at least 25 percent of cost be provided by participating universities.

**DH:** Direct Hire. Each government agency may hire persons up to the limits set by personnel ceilings.

**Grant.** A written agreement between a federal agency and a recipient for the principal purpose of transferring money, property, services, or anything of value to the recipient to accomplish a public purpose of support when no substantial agency involvement is anticipated.

**Inter-Agency Agreement.** A written instrument between a federal agency and one or more federal agencies to document a mutual agreement between the parties. Inter-agency agreements may have the characteristics of either grants, cooperative agreements, memorandums of understanding, or procurement transactions.

**IATRA:** International Assignments for Technical and Research Assistance. Assignments with the purpose of helping foreign agencies and institutions with technical research problems. AN IATRA may be a detail, transfer, or project under a PASA.

**IPA:** Intergovernmental Personnel Act. Assignments up to two years to or from states, local governments, universities and other eligible organizations to improve capabilities in management and technology transfer.

**IQC:** Indefinite Quantity Contracts. A method by which preliminary agreement can be reached on general work descriptions and company qualifications, resulting in simplification of procedure for small work order requirements. Such "work orders" are available only to AID Bureaus and Missions.

**JCC:** Joint Career Corps. To allow U.S. faculty members to alternate their work assignments between their universities and service to AID. A corps of

senior level professionals who work in their discipline overseas for approximately one-third of their time in tours ranging from two to four years. Individuals selected serve under the IPA.

JEM: Joint Enterprise Contracting Mode. Designed to improve AID's access to the resources of smaller universities by structuring certain projects into segments or modules.

MOU: Memorandum of Understanding. A written plan between one agency and other non-federal parties for carrying out their separate activities in a coordinated and mutually beneficial manner. Each party directs its own activities and utilizes its own resources. An MOU is not a fund-obligating document.

NPSC: Non-Personal Service Contract. A contract for a product, usually a report, used in transactions of over \$25,000.

PASA: Participating Agency Service Agreement. PASA's are agreements with other federal agencies for specific services or support. Usually the technical assistance provided is tied to a specific project goal to be performed within a definite time period.

PO: Purchase Order. Used for amounts less than \$25,000, and may include the characteristics of NPSCs for work-to-be-done such as for a report type product.

PSC: Personal Services Contract. This a person-oriented contract used more often at the mission level than at the agency level.

RSSA: Resource Support Service Agreement. RSSAs are used for obtaining continuing general support assistance from a participating agency and have no specific, readily measurable goal to be accomplished within a set time period. Example: An agency agrees to handle participants, provide informational support, or furnish continuing technical advice for AID's forestry program.

Strengthening Grants: To enable universities to do a better job of helping AID carry out Title XII programs. Direct costs are shared on a matching formula.

TSM: Technical Support to Missions. Establishes a direct relationship between a particular university and an AID mission on virtually any aspect of mission country programs. Agreements are for 3-5 years and are renewable.

### ANNEX 3

#### Profiles of University Consortia Involved in International Forestry

##### CAMCORE - Central America and Mexico Coniferous Resources Cooperative

###### Purpose

The purpose of the Cooperative is to preserve, test and utilize the coniferous resources of Central America and Mexico so as to increase the productivity of tropical and subtropical forest lands. The members of the Cooperative recognize an urgent need to protect from destruction the best genetic materials in the forests of this region before they are forever lost to mankind. The members also recognize that the scope, cost and duration of this effort are such that the foregoing purpose can be achieved only through cooperative, rather than individual, action. The Cooperative is managed from North Carolina State University.

###### CAMCORE Membership Institutions

Aracruz Florestal - Brazil  
Compania Nacional de Reforestacion (CONCARE) - Venezuela  
Container Corporation of American (Carton de Colombia) - Colombia  
Carton de Venezuela  
Empresa Brasileira de pesquisa Agropecuaria/Instituto Brasileiro de Desenvolvimento Florestal (EMBRAFP/IBDF) - Brazil  
Jari Florestal - Brazil  
PIZANO/Monterrey Forestal - Colombia  
South African Forestry Research Institute (SAFRI) - Republic of South Africa  
Weyerhaeuser Corporation - U.S.A.

##### CID - Consortium for International Development

###### Purpose

The Consortium for International Development (CID) facilitates the involvement of the member universities and their faculties in international development, especially in arid and sub-humid areas, and promotes orderly scientific development, management, and use of the world's natural resources.

###### CID Membership Institutions

University of Arizona	California State Polytechnic University
Colorado State University	University
University of Idaho	Montana State University
New Mexico State University	Oregon State University
Texas Tech University	Utah State University
Washington State University	University of Wyoming

(Cornell University is not a member but has cooperated on projects.)

#### MIAC - Mid-America International Agricultural Consortium

##### Purpose

To provide for a combination of university resources so as to strengthen and enlarge the international agricultural outreach services. To complement the areas of strength in each of the member universities and at the same time expand the opportunities for faculty to participate in worldwide agricultural development activities. To strengthen and enrich the academic and the technical staffs of the member universities in international agriculture. To build upon the history of harmonious working relations among these universities and take advantage of the close geographic proximity, especially as this would relate to an effectual and rapid response capability.

##### MIAC Member Institutions

Iowa State University  
Kansas State University  
University of Missouri  
University of Nebraska  
Oklahoma State University

#### MUCIA - Midwest Universities Consortium For International Activities, Inc.

##### Purpose

MUCIA's objectives are to (1) have an internationalizing impact on the curriculum, research, and teaching of its universities, (2) carry our share of this country's obligation to improve the lot of developing nations and their people by means of a qualified technical assistance programs, and (3) influence the priorities and agenda of donor and assistance agencies.

##### MUCIA Member Institutions

University of Illinois  
Indiana University  
University of Iowa  
Michigan State University  
University of Minnesota  
Ohio State University  
University of Wisconsin

#### NECID - Northeast Council for International Development

##### Purpose

To gather and share information about international program and project opportunities relating to agriculture, natural resources and rural development. To cooperate in developing proposals for external funding

where such cooperation has clear advantages over individual proposals and is consistent with the objectives of the activity. To develop and disseminate a statement about the areas of strength of universities and colleges in the Northeast which may be applied to problems in developing countries.

#### NECID Member Institutions

University of Connecticut  
University of Delaware  
University of Massachusetts  
University of Puerto Rico  
Rutgers University  
West Virginia University

Cornell University  
University of Maine  
University of New Hampshire  
University of Rhode Island  
University of Vermont

#### OTS - Organization For Tropical Studies, Inc.

##### Purpose

OTS is a non-profit corporation established in 1963 to promote the study of science in the tropics; to conduct organized programs of graduate training and research on tropical problems; and to serve as a national and international agency for coordinating and facilitating the work of individuals and groups in the tropics. Its central purpose is to acquire and disseminate a broad understanding of tropical environments and man's relationship to them by means of a sound program of teaching and research.

##### OTS Member Institutions

University of California-Los Angeles  
University of Chicago  
University of Connecticut  
University de Costa Rica  
University of Georgia  
University of Iowa  
University of Miami  
University of Minnesota  
University of North Carolina  
University of Southern California  
Tecnologico C.R.  
Texas Tech University  
Washington State University

Duke University  
City University of New York  
Cornell University  
University of Florida  
Harvard University  
University of Kansas  
University of Michigan  
Museo Nacional U. Nacional  
Autonoma  
Smithsonian Institution  
SUNY Stony Brook  
University of Washington  
University of Wisconsin

#### SECID - The South-East Consortium for International Development

##### Purpose

The member institutions collaborate through SECID on international activities which utilize their main disciplinary skills of education, research, and extension. SECID provides the opportunity for member institution involvement in projects which would not be feasible to staff from a single institution.

### SECID Member Institutions

Alabama A & M University	Alcorn State University
Auburn University	Clemson University
Delaware State College	Duke University
Florida A & M University	Fort Valley State College
Georgia Institute of Technology	Kentucky State University
Langston University	Louisiana State University
Lincoln University	Mississippi State University
North Carolina A & T University	North Carolina State University
Pennsylvania State University	Prairie View A & M University
Research Triangle Institute	South Carolina State College
Southern University	Tennessee State University
Tuskegee Institute	University of Arkansas
University of Florida	University of Georgia
University of Kentucky	University of Maryland
University of Maryland (Eastern Shore)	
University of North Carolina	
Virginia Polytechnic Institute and State University	
Virginia State University	

### UNIFOR - Universities For International Forestry

#### Purpose

UNIFOR was established in June 1978 to provide a basis for combining the faculty, staff and other resources of cooperating member institutions to conduct joint programs of education and training, research and professional services in the field of international forestry. The basic interest has been to utilize combined resources in programs than can better be accomplished in concert than by a single institution acting alone.

#### UNIFOR Member Institutions

University of Arizona  
Colorado State University  
University of Idaho  
University of Michigan  
University of Minnesota  
North Carolina State University  
State University of New York  
University of Washington

## ANNEX 4

### Partial List of Government, Private, University, and Volunteer Institutions Participating at the Project Site

#### LACs

<u>Country</u>	<u>Project Number</u>	<u>Institute</u>
Caribbean	538-0032	Caribbean Community Secretariat
	538-0032	Caribbean Development Bank
Ecuador	513-0023	World Wildlife Fund
	513-0023	Nature Conservancy
	513-0023	CONOCOTO
	513-0023	Ecuadoran University
	518-0012	Ecuadoran Institute for Agriculture and Livestock Research
	518-0012	Ecuadoran Water Institute
Haiti	518-0012	Ecuadoran Land Reform and Colonization Agency
	521-0122	Inter-American Development Bank
	521-0122	Cooperative for American Relief Everywhere (CARE)
	521-0122	Operation Double Harvest
Honduras	521-0122	Pan American Development Foundation
	522-0168	Inter-American Development Bank
ROCAP	596-0089	Volunteers in Technical Assistance

#### Africa

Burundi	695-0103	Irish Peat Board
	695-0105	Ministry of Agriculture Department of Water and Forests
Guinea, Bissau	657-0005	Canadian University Service Overseas
	657-0005	Ministry of Rural Development
	657-0005	Ministry of Natural Resources
Kenya	615-0172	Better Living Institute
	615-0172	Ministry of Agriculture
	615-0172	Environmental Remote Sensing Institute of Michigan
	615-0205	Bejer/Clark Institute
	615-0205	SUNY-Stonybrook Institute of Energy Research
	615-0205	Ministry of Energy
Niger	683-0226	Institute Pratique De Development Rural
	683-0240	Pan African Institute of Development
	683-0230	Peace Corps
	683-0205	Ministry of Energy
Somalia	649-0123	Interchurch Response for the Horn of Africa
	649-0123	Save the Children Federation
	649-0123	World Concern International

Asia

India	386-0478	Institutional & Technology Unit
	386-0474	BHEL-Bharet Heavy Electrical Ltd.
	386-0474	Jyoti Solar Institute
	386-0475	Forest Research Institute
	386-0475	Forestry Department Panchayet
	386-0475	Social Forestry Directorate
	386-0474	Commission for Additional Sources of Energy
Indonesia	487-0281	CRIA, A Citanduy Research Center
Nepal	367-0129	Canadian International Development Agency
	367-0132	Duke University
	367-0132	VPI & State University
	367-0132	Western Carolina University
	367-0129	His Majesty's Government of Nepal
Pakistan	391-0481	Pakistan Forest Institute
	391-0184	Ministry of Food, Agriculture & Cooperative
Philippines	492-0352	National Electrification Administration
Thailand	493-0294	Highland Area Development Committee
	493-0294	Northern Agriculture Development Office
	493-0308	Northeast Rainfed Agriculture Development
	493-0304	Asian Institute of Technology
	493-0304	King Mongkut's Institute of Technology
	493-0304	Applied Scientific Research Corporation
	493-0294	Royal Forestry Project

ANNEX 5

November 29, 1983

MEMORANDUM TO OPIC/F/O, MR. DANIEL ROBERTS

FROM: AID/PRE/I, Mr. Robert Parra

SUBJECT: P.R.E. Investment Criteria

A.I.D.'s Bureau for Private Enterprise (PRE) would welcome the chance to collaborate with OPIC on occasional joint investments. I hope this summary of PRE's current investment criteria will give your staff a fairly precise idea of the range of projects we are interested in.

Form of Investment

A.I.D. is precluded from ownership of actual equity. Thus all of PRE's investments are in loan form, although a profit-sharing feature is occasionally included by means of convertible debentures, warrants, etc. (In such cases, provision must be made for disposition of the shares upon exercise of the convertibility or warrant.)

Loan Size

PRE's typical loans range between \$1.0 million and \$2.5 million, though larger or smaller loans might be made in exceptional cases.

Terms

PRE's loans are longer-term (up to 15 years); interest is fixed, and usually pegged near the rate on Treasury Notes of corresponding maturity, although somewhat lower rates are possible, especially where a profit-sharing feature is present. A moratorium on principal repayments is usually included.

Leverage

PRE usually requires that project capitalization (debt plus equity) from non-U.S. Government sources must equal at least three times the amount loaned by PRE.

Ownership

The project must include "substantial" indigenous ownership --often interpreted to mean at least 40 percent.

Target Countries

The following countries are of particular interest to PRE (though it may invest in any A.I.D.-assisted country, particularly in the Caribbean):

Costa Rica	Kenya	Sri Lanka
Indonesia	Pakistan	Sudan
Ivory Coast	Peru	Thailand
Jamaica		Zimbabwe

Procurement and Shipping

U.S. procurement and shipping requirements are sometimes imposed, depending on certain project characteristics.

Direct Lending vs. IFI Loans

Of the \$15 million which PRE will probably place in FY 1984, the majority will be loaned to intermediate financial institutions. Direct loans to individual businesses will usually be limited to projects in which there is a particularly strong development impact, or in which some party other than PRE takes primary responsibility for loan administration.

Development Impact

PRE's focus differs somewhat from OPIC's in that the preeminent criterion for PRE lending is the project's contribution to the economic and social development of the host country. (This does not mean that PRE is unconcerned with the project's commercial viability: obviously, little lasting development impact will derive from a project which is not commercially successful.) While PRE has no set formula for measuring development impact, a project it funds will usually display some of the following characteristics:

- High employment generation, including both direct and identifiable indirect employment, net of any jobs displaced.

- High foreign exchange generation, including identifiable import substitution, net of cost of imported inputs and expatriated profits.
- Significant technology transfer.
- Upgrading of skills of labor and management.
- Focus on agribusiness, health, or renewable energy.  
(At present PRE is particularly interested in satellite farming projects, which often combine many of the above benefits.)
- Involvement of U.S. firms and technologies in the development process.
- Leveraging of outside resources--especially private banks--through co-financing.
- Impact on host-country policies toward private enterprise, or other effect on the environment for private business.



# North Carolina State University

Department of Forestry

School of Forest Resources  
Box 7602, Raleigh 27695-7602

## DESCRIPTION

The "Market Development Specialist" will be an off-campus employee of North Carolina State University working in association with SCFER (Southeastern Center for Forest Economics Research). The appointment (non-tenure track) will be for a five-year term. The assignment will support the efforts of the USDA Forestry Support Program (FSP) to provide technical assistance in forestry matters to the U.S. Agency for International Development (AID). Office space will be provided in the Research Triangle area of North Carolina. However, the Market Development Specialist will reside for long periods in Latin America, where he/she will maintain an office.

## Responsibilities

The Market Development Specialist identifies and promotes market opportunities for forest-based goods and services produced in the developing countries in which AID has missions. He/she will focus primarily on the AID client countries of Latin America and the Caribbean. The Market Development Specialist encourages forestry agencies and enterprises in these countries to analyze market conditions (demand, investment feasibility, government policies, and trade prospects), and to work together to develop viable market opportunities (with support, as needed, from the U.S. private sector).

In support of this role, the Market Development Specialist undertakes the following activities:

- in cooperation with SCFER/FSP/AID, screens a number of AID client countries in Latin America and the Caribbean where market development prospects for forest-based goods and services stand to be improved through assistance from this project;

- in cooperation with SCFER/FSP/AID, helps conduct on-site reviews of the most promising countries identified by means of the screening described above, ultimately selecting two target countries as "best opportunities" for the proposed market development activities;

- establishes professional connections in the business, government, and civic communities of the two target countries in order to acquaint them with how they can identify and implement forest-based market development to meet their own several needs;

- facilitates information flows between forestry enterprises in the target countries and appropriate contacts in the U.S. and elsewhere;

- works with the Forestry Enterprises Coordinator and AID/FSP in the preparation of commercial forestry profiles and market outlook studies, especially in the target countries; and

- interacts with SCFER personnel on issues of SCFER economics research supported by this project.

#### Qualifications

Applicants should have: (1) a strong background in forestry economics or marketing; (2) fluency in both Spanish and English; (3) a practical grasp of market and enterprise development; (4) willingness to live and work for long periods of time in selected countries of Latin America; (5) ability as highly motivated self-starters who are able to work independently; and (6) communications skills and maturity to effectively converse with key persons in business and government in a number of countries. Also desired are personal entrepreneurial experience, and a realistic approach to problem resolution.

#### Method of Evaluation

A panel of professionals from North Carolina State University, SCFER, FSP, and AID will evaluate applicants on the basis of the criteria proposed above. Leading candidates will be interviewed.

#### Application

Submit a detailed resume, preferably accompanied by a letter which helps explain how your qualifications fit the proposed position, to:

Dr. Jan G. Laarman  
Search Committee Chairman  
Department of Forestry  
Box 8002  
North Carolina State University  
Raleigh, NC 27695-8002

Applications should be received no later than June 30, 1984.

North Carolina State University is an Affirmative Action/Equal Opportunity employer. Applicants will be considered without discrimination because of race, religion, sex, or national origin.



# North Carolina State University

Department of Forestry

School of Forest Resources  
Box 8002, Raleigh 27695-8002

## "Forestry Enterprises Coordinator"—Position Description

The Forestry Enterprises Coordinator will be an off-campus employee of North Carolina State University working in association with SCFER (Southeastern Center for Forest Economics Research). The appointment (non-tenure track) will be for a five-year term. The position will be located in the Washington, D.C. offices of the USDA Forestry Support Program (FSP). This office provides technical assistance in forestry and related natural resources matters to the U.S. Agency for International Development (AID).

### Responsibilities

The central task of the Forestry Enterprises Coordinator will be to strengthen communications and working relations between forestry enterprises in selected developing countries and counterpart enterprises in the U.S. To this end, he/she establishes close communication and effective liaison with U.S. agencies and firms--both public and private--which are oriented towards forest industry, trade, and market development (OPIC, TDP, AID's Bureau for Private Enterprise, IESC, Export/Import Bank, National Forest Products Association, Association of Consulting Foresters, etc.). He/she facilitates information flows to encourage U.S. private enterprise to take an interest in trade, investment, and other opportunities in the forest-based sectors of the developing countries in which AID has a mission. He/she coordinates similar interests of forest-based enterprises in the developing countries which seek contacts in the U.S.

In support of this role, the Forestry Enterprises Coordinator also undertakes the following activities:

- arranges for the preparation of commercial forestry profiles and market outlook studies for selected AID client countries;
- uses the media to describe the opportunities for expanded U.S. forest products trade with those developing countries;
- makes direct contact with U.S. firms seeking overseas participation in forestry and forestry-related businesses;

- provides professional support for FSP/AID and for the Market Development Specialist on all matters related to private enterprise and forestry development; and

- interacts with SCFER personnel in North Carolina on issues of SCFER economics research supported by this project.

### Qualifications

Applicants should have: (1) acquaintance with U.S. forestry-oriented public and private organizations and enterprises, particularly those active in international trade and market development; (2) knowledge of the commercial aspects of overseas forestry development; (3) ability to effectively communicate with key persons in government and business; (4) demonstrated international interests by reason of professional background, training, or practical experience. Applicants ideally will have at least a master's degree in forestry economics, business administration, or related field. Also desirable are Spanish language ability, writing skills, and consulting experience.

### Method of Evaluation

A panel of professionals from North Carolina State University, SCFER, FSP, and AID will evaluate applicants on the basis of the criteria proposed above. Leading candidates will be interviewed.

### Application

Submit a detailed resume, preferably accompanied by a letter which helps explain how your qualifications fit the proposed position, to:

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On-going and Recently Terminated USAID Projects with Private Sector Impacts and an Opportunity for Forest Sector Participation

Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI 1/	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and % Sd.	Potential for Forest Sector		Data Source
										Mod. to High	No. Specifics Available	
EUROPEAN FOR AFRICA												
1/ IFI: Intermediate Financial Institution 2/ * = Indeterminant dollar amounts  A7-1	Botswana 633-0228	452 82-	Small Enterprise Development (PVO)						452	*	PRE, PPC	
	Cameroon 631-0044	1,600 80-83	Credit Union Development (PVO)		1,600					*	Durst, Pre, PPC	
	Cameroon 631-0023	13,690 82-87	North Cameroon Seed Multiplication		3,000					*	Durts, PRE, PPC	
	Ghana 641-0108	1,368 82-	Opportunities Industrial Center/Ghana (PVO)							*	Durst, PPC	
	Guinea 675-0212	800 84-	Agribusiness Preparation					800		*	PRE, PPC	
	Kenya 615-0220	36,000 83-84	Rural Private Enterprise	24,000					12,000 *	*	Durst, PRE, DIS, PPC	
	Kenya 615-0208	500 82-	Small Business Development (OPG)							*	Durst, PPC	
	Kenya 940-0002.03	2,700 83-85	Kenya Commercial Bank	2,700						*	PRE	
	Lesotho 632-0217	1,100 79-82	Opportunities Industrial Center (PVO)							*	Durst, PPC	
	Liberia 669-0163	4,270 80-84	Nimba County Rural Technology (PVO)							*	Durst, PPC	
	Liberia 669-0201	2,550 84-87	Small & Medium Enterprise Devel. (PVO)	2,800						*	PRE, PPC	
	Liberia 669-0168	3,654 79-	Opportunities Industrial Center (PVO)							*	Durst, PPC	
	Malawi 612-0214	5,100 84-86	Rural Enterprise & Agribusiness Devel.	5,100						*	PRE, PPC	
	Malawi 612-0219	2,828	Mgmt. Assistance to Rural Traders (PVO)						2,828	*	PRE, PPC	
	Niger 683-0240	13,582 81-86	Niamey Department Development II	1/								Lundberg, AFR, PPC
	Rwanda 696-0119	897 81-86	Cooperative Training Center (PVO)									PP, PPC
	Rwanda 696-0121	4,000 84-86	Private Enterprise Development (PVO)								*	Durst, PPC

Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI $\frac{1}{2}$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector	Data Source
										Mod. to High	
Senegal		Small Scale Enterprise	2,500								* PRE
Sierra Leone 636-0168	1,128 79-	OICI Vocational Training I (PVO)							#		* Durst, PVC
Sierra Leone 636-0169	679 82-	OICI Vocational Training II (PVO)							#		* Durst, PPC
Togo 643-0224	2,150 83-88	Credit Union Development (PVO)									* Durst, PPC
Uganda 617-0104	22,600 84-86	Rehab of Productive Enterprises	6,000								* PRE, PPC
Uganda	20,500 83-85	Production of Agriculture Inputs									* Durst
Upper Volta 686-0249	2,300 81-	Small Economic Activity Development II (PVO)									* Durst, PPC
Zaire	6,000	Rehab of Productive Enterprises	6,000								* PRE
Zimbabwe	40	Export Promotion Coop									* PRE
Zimbabwe 613-0209	70,200 82-85	Agric Sector Assistance				45,000					* PRE, PPC
Africa Region 698-0438	5,000 83-87	Private Enterprise Promotion			13,300					*	* Durst, PPC
Africa Region		West Africa Entrepreneurial Fund	2,700								* PRE
Cent. & W. Africa 625-0717	1,880 74-84	Entente African Enterprises II	1,880							*	* DIS, PPC

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Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI $\frac{1}{2}$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector		Data Source
										Mod. to High	No. Specifics Available	
NEAR EAST BUREAU												
Egypt 263-0090	39,000 80-87	Industrial Productivity					#		#	*		NE,DIS,PPC
Egypt 263-0097	33,000 79-84	Private Investment Encouragement Fund	#							*		NE,DIS,PPC
Egypt 263-0101	165,000 78-88	Industrial Production			#					*		NE,PPC
Egypt 263-0147	273,000 82-85	Production Credit	#							*		NE,DIS,PPC
Egypt 263-0159	9,100 83-86	Business Support & Investment	#							*		DIS,PPC
Lebanon 268-0317	10,260 81-85	Credit Cooperatives	#							*		NE,PPC
Morocco	2,500	Small Private Export Financing									*	PRE
Tunisia 664-0328	8,050 82-86	Private Sector Development & Tech. Transfer					#	#	#	*		NE,DIS,PPC
NE Region 298-0050	2,800 84-89	Regional Private Enterprise Activities									*	Durst

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Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI $\checkmark$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Mod. to High	Potential for Forest Sector	Data Source
											No. Specifics Available	
<b>ASIA BUREAU</b>												
Bangladesh 388-0037	7,500 83-85	Rural Finance			75,000						*	Durst,PRE,PPC
Bangladesh 388-0042	3,300 81-86	Rural Industries						#	#		*	Durst,PPC
Indonesia 497-0329	9,600 82-86	Private Sector Development			3,500			#	#		*	Durst,PRE, DIS,PPC
Indonesia 497-0331	8,500 84-85	Central Java Enterprise Development										Durst,PPC
Indonesia 497-0340	4,000 83-87	Development Studies										DIS,PPC
Indonesia 497-0341	18,500 84-86	Local Credit Institution Development	11,500									Durst, PRE, PPC
Indonesia 497-0345	4,000 84-86	Private Sector Management Development										Durst
Indonesia		Capital Market Analysis			200						*	PRE
Pakistan 391-0482	50,000 84-87	Private Sector Mobilization			50,000						*	PRE,PPC
Pakistan		National Development Leasing		2,100							*	PRE
Pakistan		Private Development Bank									*	PRE
Philippines 492-0359	23,800 83-85	Small & Medium Scale Enterprise Developm			15,000						*	PRE,PPC
Philippines 492-0377	17,000 84-85	Private Enterprise Promotion									*	Durst
Sri Lanka 383-0082	4,000 83-88	Private Enterprise Promotion						1,000			*	Durst,PRE, DIS,PPC
Thailand 493-0329	3,000 83-87	Private Sector in Development									*	Durst,DIS, PPC
Thailand		Siam Commercial Bank	2,150								*	PRE
Asia Region 498-0275	3,600 83-86	Non-farm Enterprise Program Development									*	Durst,DIS,PPC
Asia Region 498-0277	3,350 84-86	ASEAN Small & Medium Scale Industry									*	Durst,PPC
Asia Region		Saevic Venture Capital	2,500								*	PRE

Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI 1/	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector		Data Source
										Mod. to High	No. Specifics Available	
<u>LATAM/CARIB BUREAU</u>												
Belize 505-0005	5,000 83-85	Commercial Bank Discount Fund	5,000							*		PRE,DIS,CBI,PPC
Belize	150	Int'l. Center for Entrepreneurship						150		*		PRE
Bolivia 511-0472	17,400 77-84	Agribusiness & Artisanry	16,600							*		PRE,PPC
Bolivia 511-0543	14,400 83-88	Chapare Regional Development								*		PRE,PP,PPC
Bolivia 511-0572	8,300 84-86	Agroindustry Development	8,000							*		Durst,PPC
Costa Rica 515-0176	2,200	Private Sector Productivity	10,000							*		PRE,CBI,PPC
Costa Rica 515-0187	2,000 82-83	Private Sector Export Credit	10,000							*		Durst,PRE,PPC
Costa Rica 515-0193	5,000 84-85	Private Investment Corporation	10,000							*		Durst,PPC
Costa Rica 515-0204	21,000 84-86	Private Investment Corporation	21,000							*		PRE,PP
Costa Rica		Export	5,000							*		PRE
Dominican Republic 517-0150	4,095 82-85	Small Industry Development	4,095							*		Durst,PP,PPC
Dominican Republic 517-0154	498 81-83	Small Business Promotion - OPG								*		Durst,PPC
Dominican Republic 517-0171	405,000	Private Enterprise Development								*		PRE,CBI
Dominican Republic		FINADE Invest/Development Bank	2,000							*		Durst
Ecuador 518-0019	5,7000 83-85	Non-traditional Agricultural Exports								*		Durst,PPC
Ecuador		Small Business Lending	2,500							*		PRE
El Salvador 519-0286	3,250	Rural Small Enterprise DEV-OPG								*		Durst,PPC
El Salvador 519-0220	7,750 80-84	Small Enterprise Development								*		Durst,PPC

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Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI $\downarrow$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Mod. to High	Potential for Forest Sector No. Specifics Available	Data Source
El Salvador		Agricultural Coop Development - OPG										
Guatemala 520-0245	6,850 79-85	Rural Enterprise Development	#							*		Durst
Guatemala 520-0294	850 82-85	Private Sector Development Initiatives								*		Durst, CBI, PPC
Guatemala 520-0294	850 82-85	Private Sector Development Initiatives								*		PP
Haiti 521-0144	495 84-	Haitian Development Foundation III-OPG	500					#		*		Durst, PRE, PPC, CBI,
Haiti 521-0154	10,000 82-85	Development Finance Corporation	5,000							*		Durst, PRE, DIS, CBI, PPC
Haiti 521-0164	1,500	Trade Investment Promotion				1,500				*		CBI, PRE
Haiti 515-0176	10,000	Private Sector Productivity	9,700				300			*		CBI
Honduras 522-0205	4,000 83-84	Small Business Development		600						*		Durst, PRE
Honduras 522-0207	1,200 84-86	Export Promotion & Services		17,650						*		PRE, PPC
Honduras 722-0219	2,000 84-	Private Sector Employment-Related Training								*		Durst
Honduras		FIA Lending FINSA	15,000							*		PRE
Honduras		Private Sector Development Fund-OPG								*		Durst
Jamaica 532-0079	6,000 81-87	Technical Consultation & Training						#		*		Durst, CBI, PPC
Jamaica 532-0081	10,500 82-84	Agroindustrial Development	10,500							*		Durst, CBI, PPC
Jamaica 532-0033	16,400 82-87	Basic Skill training						16,400		*		PRE, PP, PPC
Jamaica 532-0088	15,000 83-84	Small Scale Mfg. Assistance								*		Durst
Jamaica 532-0091	20,000 83-86	Private Sector Technology Transfer								*		Durst
Jamaica 532-0103	6,000 84-86	Jamaica Nat'l. Investment Promotion						6,000		*		PRE
Jamaica		Ag. Credit Bank Loans	10,500							*		PRE
Jamaica		Life of Jamaica Loans	2,600							*		PRE

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Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI 1/	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector	Data Source
									Mod. to High	No. Specifics Available	
Nicaragua 524-0189	5,100 80-84	Training for Leadership							5,100	*	DIS
Panama 525-0214	4,500 83-85								#	*	Durst, PPC
Panama 525-0225	795 80-	Small Entrepreneurial Development-OPG								*	Durst, PPC
Panama 525-0239	3973 83-85	CBI-National Investment Council							#	*	Durst, CBI, PPC
Panama 525-0240	11,500 84-86	Small Business Development	#				7,000			*	Durst, PRE, CBI, PPC
Panama	2,500	Latin Carib. Investment	2,500							*	PRE
Panama	500	Ministry of Commerce Export Promotion		500						*	PRE, CBI
Panama	3,000	INCAE								*	PRE
Panama	2,200	Private Enterprise Training							3,000	*	PRE
Peru 527-0241	10,000 82-83	Urban Small Enterprise Development	10,000						2,220	*	PRE, CBI
Peru 527-0265	10,000 82-	Private Sector Agriculture Invest. Promotion	10,000							*	Durst, PPC
Carib Region 538-0010	6,500	Regional Agribusiness Development	#							*	CBI, PPC
Carib Region 538-0018	11,400	Employment Investment Promotion	11,400							*	PRE, CBI, PPC
Carib Region 538-0035	1,486 80-83	Credit Union Development - OPG								*	Durst, PPC
Carib Region 538-0042	5,800	Project Development Assistance Program						5,800		*	PRE, CBI, PPC
Carib Region 538-0071	14,000 83-	Inter-Island Shipping & Marketing								*	Durst
Carib Region 538-0080	4,225 82-	Caribbean Ag. Trading Co.		4,225						*	Durst, CBI, PPC
Carib Region	12,400	Carib Financial Services Corp.	12,400							*	Durst, CBI, PPC

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Country Project No.	USAID LOP 5000 Project Period	Project Title	IFI $\downarrow$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector	Data Source
										Mod. to High	
Carib Region 538-0036	10,000 84-88	Agribusiness Expansion							*		Durst
Carib 538-0037	6,500	Regional Development Training II					5,000		*		PRE,CBI,PPC
Carib Region 538-0038	18,500	Private Sector Industrial Infrastructure #								*	CBI,PPC
Carib Region 538-0106	5,500	Inter-Island Shipping & Marketing								*	PPC
Carib Region 596-0097	12,500	Agribusiness Expansion & Agribusiness Employment Promotion	12,500						*		PRE,CBI
Carib Region 596-9998	25,000	Export Promotion Fund-BLADEX	25,000							*	PRE,CBI
Carib Region	84-	Agricultural Enterprise Development								*	Durst
Carib Region	750	Chicago Assn. of Commerce & Industry/CBI- DR/Costa Rica		750						*	PRE,CBI
Carib Region	480	C/CCA-Twin Chamber Program		480					*		PRE,CBI
Carib Region	2,000	Carib Assn. of Industry/Commerce		2,000					*		PRE
Carib Region	750	International Executive Development Program					750		*		PRE,CBI
Carib Region	230	FMME Workshops					230		*		PRE,CBI
Carib Region	1,000	Carib Proj. Dev. Facility					1,000		*		PRE,CBI
LAC Region 598-0619	2,560 82-85	Private Sector Initiatives							*		Durst,DIS,PPC
ROCAP 596-0097	6,000 81-84	Agribusiness Employment/Investment Promotion							*		DIS,PPC
ROCAP 596-0109	8,000 82-84	Export Promotion Fund-BLADEX							*		DIS,PPC
ROCAP 596-0112	4,000 82-84	INCAE Management Development							*		Durst

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Country Project No.	USAID LOP \$000 Project Period	Project Title	IFI $\downarrow$	Enterprise Direct Investment	Major Policy Dialogue and Analysis	Private Sector Component	Technology Transfer	Investment Promotion	Mgmt., Develop. and Vo. Ed.	Potential for Forest Sector		Data Source
										Mod. to High	No. Specifics Available	
<b>CENTRALLY FUNDED</b>												
S&T/MD 931-1090	6,211 58-84	Small Enterprise Approaches to Employment								*		Durst,PPC
S&T 931-1121	1,845 79-84	Agroindustrial Development								*		DIS,PPC
S&T/MD 931-1190	3,700 77-83	Alternative Rural Development Strategies									*	Durst,PPC
S&T/MD 936-4053	2,375 83-87	Market & Technology Access								*		Durst,PPC
S&T/MD 936-5315	1,950 82-85	Rural Savings and Credit									*	Durst,PPC
S&T 936-5426	1,250 84-88	Employment & Enterprise Policy Analysis								*		DIS,PPC
S&T 936-5428	35,000 83-86	Appropriate Technology International II								*		DIS,PPC
6-2V PRE 940-0002	15,350 82-C	Investment Packaging									*	Durst
PRE 940-0004	70-725 83-87	International Executive Service Corps (IESC)								*		PRE,CBI,PPC
PRE 940-0005	1,600 82-85	Joint Agricultural Consultive Corp (JAC Corp)								*		PRE,CBI,PPC
S&T 960-4035	2,375 82-87	Market & Technology Access								*		PP
FFP&VA 80-82	993	Opportunities Industrial Center Int'l. (OICI)									*	Durst
FFP&VA 79-82	910	Volunteers in Technical Assistance (VITA)									*	Durst
FFP&VA 79-82	1,716	Agriculture Cooperative Development Int'l. (ACDI)									*	Durst

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## ANNEX 8

### CURRENT USAID FORESTRY PROJECTS (47 projects)

1. Country 2. Project # 3. Project Period	4. Project Title	5. Total USAID Funds \$000	Forestry Components \$1,000				10. Total Forestry Component	11. Cooperating institutions
			6. Research	7. Training	8. Technical Assistance	9. Other		
<b>AFRICA</b>								
Burundi 695-0103 '80-'85	Burundi Alternative Energy - Peat II	\$8,000	No funding for forestry					EEC Finland World Bank
Burundi 695-0105 '81-'84	Bururi Forest	1,144 grant loan		61	215	814	1,090	Min. of Agriculture Dept. of Water & Forests
Cape Verde 655-0006 '80-'84	Watershed Manage- ment	5,000	No forestry component fund					
Gambia 635-0205 '77-'84	Gambia Forestry	1,575 grant loan		398	26	914	1,575	FAO BADEA FRG
Gambia 635-0202 '78-'87	Soil & Water Manage- ment	2,517 grant loan	60	100	300		460	Government of the Gambia Institutions only
Gambia 635-0203 '79-'84	Mixed Farming and Resource Management	9,000 grant loan	1,000	500	300		1,800	IBRD
Guinea Bisson 657-0005 '82-'86	Guinea Bisson Forestry Project for Zone I	500 grant loan				500	500	Min. of Rural Develop- ment, Canadian Univ. Service Overseas, Min. of Nat. Resources
Kenya 615-0205 '80-'84	Renewable Energy De- velopment	4,800 grant loan		260	2,336	67	2,663	Min. of Energy Bejer-Clark Institute SUNY Stonybrook Inst. of Energy Research
Kenya 615-0172 '79-'84	Kenya Arid & Semi- Arid Lands Develop- ment Project	13,000 grant loan	60		75		135	Min. of Agriculture Better Living Inst. Environmental Remote Sensing Inst. of Mich.
Mali 625-0937 '80-'85	Village Reforestation	495	No breakdown of forestry component					
Morocco 608-0160 '80-'85	Agronomy Institute	27,000	No breakdown of forestry component					
Niger 683-0230 '81-'86	Forestry and Land Use Planning	3,839 grant loan	1,759	627	1,453		5,839	Peace Corps
Niger 683-0240 '81-'86	Niamey Dept. of Development	13,582 grant loan		410			410	Pan-African Inst. of Development
Niger 683-0226 '79-'84	Rural Sector Human Resources Dept.	5,030 grant loan			124		124	Institut Pratique de Developpement Rural
Somalia 649-0123	Refugee Self- Reliance	6,000	No breakdown of forestry component					Inter-Church Response for the Horn of Africa, Save the Children Federation, World Con- cern International
<b>TOTAL</b>		<b>101,482</b>	<b>2,879</b>	<b>2,356</b>	<b>5,066</b>	<b>2,295</b>	<b>12,596</b>	

1. Country 2. Project # 3. Project Period	4. Project Title	5. Total USAID Funds \$000	Forestry Components \$000				10. Total Forestry Component	11. Cooperating Institutions
			6. Research	7. Training	8. Technical	9. Other		
<b>ASIA</b>								
Asian Countries 498-0258.03 '83-'89	Asian Watershed Project	3,000 grant loan	763	951	985	271	2,970	
India 386-0475 '81-'87	Madhya Pradesh Social Forestry	25,000 grant loan	2,040	520	22,440		520 24,480	Forest Research Institute (FRI) Social Forestry Directorate, Forestry Dept. Panchnyct
India 386-0478 '82-'90	Maharushton Social Forestry	30,000 grant loan	240	1,660 5,504	19,436	3,100	5,000 24,940	Institutional & Technology Unit
India 386-0474 '82-'86	Alternative Energy Development	5,000 grant loan	1,358		133	809	2,300	CASE - Comm. for Additional Sources of Energy, Jyoti Solar Energy Inst. BHEL- Bhant Heavy Electrical Ltd.
Indonesia 497-0281 '80-'86	Citandy II	27,000 grant loan		257	2,243		2,500	CRIA (research institute)
Nepal 367-0132 '80-'85	Resource Conservation & Util- ization	27,498 grant loan		153	1,085	952	2,190	Duke Univ., VPI & State Univ., Western Carolina Univ., Peace Corps
Nepal 367-0129 '79-'85	Rural Area Develop- ment Rept Zone	11,300 grant loan		246	3,204		3,450	Canadian International Dev. Agency
Pakistan 391-0481 '83-91	Forestry Planning & Development	31,177 grant loan	1,692	8,301 2,000	7,677 2,000	7,507 2,000	25,177 6,000	Joint Career Corps. International Monetary Fund
Philippines 492-0352 '80-'84	Reforestation Rural Energy	2,000 grant loan		80 60	920 440	500	1,000 1,000	National Electrification Administration
Philippines 492-0375 '82-'90	Rural Energy De- velopment	25,000 grant loan				24,747	24,747	
Philippines 492-0289 '79-'85	Bicol Integrated Area Development III	5,000 grant loan.			339	143	482	
Sri Lanka 383-0055 '80-'85	Reforestation & Watershed Manage- ment	4,350 grant loan	868	1,098	545 950	876	3,387 950	U.S. Universities a consulting firms will assist the GSL
Sri Lanka 383-0056 '80-'86	Mahaveli Basin Development Phase I	10,000 grant loan			1,270		1,270	
Sri Lanka 383-0057 '79-'84	Water Management	9,800	No mention of forestry					
Thailand 493-0294 '80-'87	Mae Chaem Water- Watershed Develop- ment	10,000 grant loan			371		371	Highland Area Dev. Committee, Northern Agricultural Dev. Office, Rural Forestry Project
Thailand 493-0308 '91-'88	Northeast Rainfed Agriculture Develop- ment	10,000 grant loan		22	290		312	NIDA, NOAC Northeast Rainfed Agri. Development
Thailand 493-0304 '79-'84	Renewable Noncon- ventional Energy	5,000 grant loan		154	425	112	691	Asian Inst. of Technology, Applied Scientific Research Corp., King Monykut's Institute of Tech.
<b>TOTAL</b>		<b>241,125</b>	<b>6,961</b>	<b>21,006</b>	<b>64,753</b>	<b>41,017</b>	<b>133,737</b>	

1. Country 2. Project # 3. Project Period	4. Project Title	5. Total USAID Funds \$000	Forestry Components \$000				10. Total Forestry Component	11. Cooperating Institutions
			6. Research	7. Training	8. Technical Assistance	9. Other		
<b>LATIN AMERICAN &amp; CARIBBEAN COUNTRIES</b>								
Bolivia 511-0543 '83-'88	Chappare Regional Development	14,400 grant loan (\$1500 for private incentive)			1,362 1,305	1,500	1,362 2,806	
Caribbean 538-0032 '79-'84	Alternative Energy Systems	7,600 grant loan	61		144	282	487	Caribbean Community Secretariat (CARICM) Caribbean Develop- ment Bank (CDB)
Costa Rica 515-0145 '79-'84	Natural Resource Conservation	9,800 grant loan	123	1,326 165	5,573	1,533	1,326 7,394	CATIE
Costa Rica 515-0138 '79-'84	Science & Tech- nology	4,500 grant loan	41				41	
Dominican Rep. 517-0126 '81-'86	Natural Resource Management	11,000 grant loan	33	102	218		353	
Ecuador 518-0012 '80-'84	Integrated Rural Development	11,800	No funding for forestry shown					Ecuadorean H2O In- stitute (INGRHI) Ecuadorean Inst. for Agri. & Live- stock Research (INTAP), Ecuadorean Land Reform & Colonization Agency (IERAC)
Ecuador 513-0023 '83-'87	Wildlands & Wild- life Components							Conocoto, CATIE, Ecuadorean Univ., World Wildlife Fund, Nature Conservancy
Ecuador 513-0023 '82-'88	Forestry Sector Development	8,100 grant loan		650	1,600 635	5,215	1,600 6,500	
Ecuador 518-0032 '80-'85	Rural Technology Transfer Systems	5,300 grant loan		382	112	122	616	Title XII Univs.
Haiti 521-0122 '81-'85	Agro-Forestry Outreach	8,000 grant loan	468	304	2,438	4,790	8,000	Interdevelopment Bank United Nations, FAO, UNOP, Private Volun- tary organizations & community groups, Pan-American Founda- tion (PADF), CARE/ HACHO, Operational Double Harvest (ODH)
Honduras 522-0168 '80-'85	Natural Resource Management	14,995 grant loan	41		5,762		5,803	United Nations, Cana- dian International Development Agency, Gov't. of Honduras, World Bank, United Kingdom, Inter- American Development Bank
Jamaica 532-0061 '79-'80	Agriculture Planning	2,328	No evidence of forestry activity in this paper					
Peru 527-0240 '82-'87	Central Selva Resource Manage- ment	22,000 grant loan			5,805		5,805	
SCAP 56-0089 '79-'84	Fuelwood & Alter- native Energy Sources	9,503 grant loan	5,740				5,470	Volunteers in Techni- cal Assistance VITA
SCAP 56-0106 '79-'83	Regional Tropical Watershed Manage- ment	6,000 grant loan		3,000	3,000		6,000	
<b>TOTAL</b>		<b>135,326</b>	<b>6,237</b>	<b>5,929</b>	<b>27,955</b>	<b>13,442</b>	<b>53,563</b>	



# Professional Forestry Degree Programs Accredited By The Society of American Foresters

The Society of American Foresters grants accreditation only to programs leading to a first professional degree in forestry and for which accreditation has been requested. The institutions named below offer programs which have met SAF minimum standards.

Several institutions have certified that they have forestry programs that are building toward accreditation. They are listed here as candidate institutions.

The forestry degrees offered at each institution are shown by code: B (bachelor), M (master), and D (doctor). The first year shown indicates the first accreditation or candidate action by the Society; the second year indicates the last on-site reexamination. The Society reexamines programs at intervals of one to ten years.

## ACCREDITED INSTITUTIONS (44)

*The following institutions offer SAF-accredited programs of professional forestry education:*

### Alabama

Auburn University, Department of Forestry, Auburn University 36849. B, M, D. 1950. 1983.

### Arizona

Northern Arizona University, School of Forestry, Flagstaff 86011. B, M. 1968. 1982.  
University of Arizona, School of Renewable Natural Resources, Tucson 85721. B, M, D. 1972. 1978.

### California

University of California, Department of Forestry and Resource Management, Berkeley 94720. B, M, D. 1935. 1981.  
Humboldt State University, College of Natural Resources, Arcata 95521. B, M. 1979. 1979.

### Colorado

Colorado State University, College of Forestry and Natural Resources, Fort Collins 80523. B, M, D. 1939. 1980.

### Connecticut

Yale University, School of Forestry and Environmental Studies, New Haven 06511. M, D. 1935. 1983.

### Florida

University of Florida, School of Forest Resources and Conservation, Gainesville 32611. B, M, D. 1942. 1983.

### Georgia

University of Georgia, School of Forest Resources, Athens 30602. B, M, D. 1938. 1981.

### Idaho

University of Idaho, College of Forestry, Wildlife and Range Sciences, Moscow 83843. B, M, D. 1935. 1974.

### Illinois

University of Illinois, Department of Forestry, Urbana 61801. B, M. 1963. 1983.  
Southern Illinois University, Department of Forestry, Carbondale 62901. B, M. 1975. 1980.

### Indiana

Purdue University, Department of Forestry and Natural Resources, West Lafayette 47907. B, M, D. 1942. 1980.

### Iowa

Iowa State University, Department of Forestry, Ames 50011. B, M, D. 1935. 1981.

### Kentucky

University of Kentucky, Department of Forestry, Lexington 40546. B, M. 1974. 1979.

### Louisiana

Louisiana State University, School of Forestry and Wildlife Management, Baton Rouge 70803. B, M, D. 1937. 1973.

### Maine

University of Maine, College of Forest Resources, Orono 04469. B, M, D. 1937. 1982.

### Massachusetts

University of Massachusetts, Department of Forestry and Wildlife Management, Amherst 01003. B, M, D. 1950. 1979.

### Michigan

Michigan State University, Department of Forestry, East Lansing 48824. B, M, D. 1935. 1973.

Michigan Technological University, School of Forestry and Wood Products, Houghton 49931. B, M. 1968. 1973.

University of Michigan, School of Natural Resources, Ann Arbor 48109. B, M, D. 1935. 1973.

### Minnesota

University of Minnesota, College of Forestry, St. Paul 55108. B, M, D. 1935. 1973.

### Mississippi

Mississippi State University, School of Forest Resources, Mississippi State 39762. B, M, D. 1960. 1977.

### Missouri

University of Missouri, School of Forestry, Fisheries and Wildlife, Columbia 65211. B, M, D. 1950. 1981.

### Montana

University of Montana, School of Forestry, Missoula 59812. B, M, D. 1935. 1982.

### New Hampshire

University of New Hampshire, Department of Forest Resources, Durham 03824. B, M. 1959. 1983.

### New York

SUNY College of Environmental Science and Forestry, School of Forestry, Syracuse 13210. B, M, D. 1935. 1982.

### North Carolina

Duke University, School of Forestry and Environmental Studies, Durham 27706. M, D. 1939. 1976.

North Carolina State University, School of Forest Resources, Raleigh 27650. B, M, D. 1947. 1973.

### Oklahoma

Oklahoma State University, Department of Forestry, Stillwater 74078. B, M. 1971. 1976.

### Oregon

Oregon State University, College of Forestry, Corvallis 97331. B, M, D. 1935. 1969.

### Pennsylvania

Pennsylvania State University, School of Forest Resources, University Park 16802. B, M, D. 1935. 1982.

### South Carolina

Clemson University, College of Forest and Recreation Resources, Clemson 29631. B, M, D. 1962. 1982.

### Tennessee

University of Tennessee, Department of Forestry, Wildlife and Fisheries, Knoxville 37901. B, M. 1969. 1975.

### Texas

Stephen F. Austin State University, School of Forestry, Nacogdoches 75962. B, M, D. 1965. 1980.

Texas A&M University, Department of Forest Science, College Station 77843. B, M, D. 1975. 1981.

### Utah

Utah State University, College of Natural Resources, Logan 84322. B, M, D. 1937. 1978.

### Vermont

University of Vermont, School of Natural Resources, Burlington 05405. B, M. 1971. 1981.

### Virginia

Virginia Polytechnic Institute and State University, School of Forestry and Wildlife Resources, Blacksburg 24061. B, M, D. 1965. 1973.

### Washington

Washington State University, Department of Forestry and Range Management, Pullman 99164. B, M. 1965. 1982.

University of Washington, College of Forest Resources, Seattle 98195. B, M, D. 1935. 1975.

### West Virginia

West Virginia University, Division of Forestry, P.O. Box 6125, Morgantown 26506. B, M, D. 1947. 1979.

### Wisconsin

University of Wisconsin, Madison, Department of Forestry, Madison 53706. B, M, D. 1971. 1976.  
University of Wisconsin, Stevens Point, College of Natural Resources, Stevens Point 54481. B. 1976. 1981.

## CANDIDATE INSTITUTIONS (7)

*The following institutions offer professional forestry education and have certified they meet the standards for SAF Candidate Institutions:*

### Arkansas

University of Arkansas at Monticello, Department of Forest Resources, Monticello 71635. B. 1969.

### California

California Polytechnic State University, School of Agriculture and Natural Resources, San Luis Obispo 93407. B. 1977.

### Louisiana

Louisiana Tech University, School of Forestry, Ruston 71272. B. 1969.  
McNeese State University, Department of Agriculture, Lake Charles 70609. B. 1969.

### Nevada

University of Nevada, Department of Range, Wildlife and Forestry, Reno 89512. B, M. 1969.

### New Jersey

Rutgers University, Forestry and Wildlife Section, Cook College, New Brunswick 08903. B. 1969.

### Ohio

Ohio State University, School of Natural Resources, Columbus 43210. B, M. 1977.

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## ANNEX 10

### References

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## ANNEX 11

### Abbreviations and Acronyms

AA	Agricultural Assistant
ACEP	Agricultural Commodities and Equipment Program
AFR	Bureau for Africa
AID	Agency for International Development
BIFAD	Board for International Food and Agriculture Department
CAM	Collaborative Assistance Method
CARE	Cooperative for American Relief Everywhere
CATIE	Tropical Center for Agricultural Research and Training (Costa Rica)
CBI	Caribbean Basin Initiative
CFED	Center for Forestry Education Development (Univ. of the Philippines)
CIAP	Commission on International Agriculture Programs
CID	Consortium for International Development
CONADEPI	National Corporation for Development of Small Industries
CP	Congressional Presentation
CRSP	Collaborative Research Support Programs
DIS	Development Information System (AID)
DH	Direct Hire
DR	Dominica, Republic
EP&D	Energy Planning and Development Project
ESNACIFOR	Honduran Natural Forestry Sciences School
FAO	Food and Agriculture Organization (United Nations)
FNR	Office of Forestry, Environment and Natural Resources
FS	Forest Service
FSP	Forestry Support Program
GEMS	Global Environmental Monitoring System
GOH	Government of Haiti
GOP	Government of Pakistan
H	Haiti
IATRA	International Assignments for Technical and Research Assistance
ICRAF	International Council for Research in Agroforestry
IDCA	International Development Cooperation Agency
IESC	International Executive Service Corps
IFI	Intermediate Financial Institution
IPA	Intergovernmental Personnel Act
IQC	Indefinite Quantity Contract
ISEC	International Science and Educational Council
JACC	Joint Agriculture Consultive Corporation
JCC	Joint Career Corps
JEM	Joint Enterprise Contracting Mode
LAC	Bureau for Latin American and Caribbean
LDC	Less Developed Countries
LOP	Life of Project
MIAC	Mid-America International Agricultural Consortium
MOU	Memorandum of Understanding Midwest Universities Consortium for International Activities, Inc.

NAPFSC	National Association of Professional Forestry Schools and Colleges
NASULGC	National Association of State Universities and Land Grant Colleges
NCSU	North Carolina State University
NE	Bureau for Near East
NECID	Northeast Council for International Development
NGO	Non Governmental Organization
NPSC	Non-Personal Services Contract
ODH	Operation Double Harvest
OICD	Office of International Cooperation and Development
O/IGF	Office of Inspector General of Forestry (Pakistan)
OTS	Organization for Tropical Studies, Inc.
PADF	Pan American Development Foundation
PASA	Participating Agency Support Agreements
PD	Policy Determination
PD-7	Policy Determination 7 (AID)
PEI	Pakistan Forest Institute
PID	Project Identification Document
PO	Purchase Order
PP	Project Paper
PPC	Bureau for Program and Policy Coordination
PRE	Bureau for Private Enterprise
PSC	Personal Services Contract
PVO	Private Volunteer Organization
REDSO	Regional Economic Development Service
ROCAP	Regional Office for Central American Programs
RSSA	Resources Support Services Agreement
SCFER	Southeastern Center for Forest Economics Research
SDP	Sahel Development Program
SECID	South-East Consortium for International Development
SEFESf	Southeastern Forest Experiment Station
S & T	Bureau of Science and Technology
TAICH	Technical Assistance Information Clearing House
TSM	Technical Support to Missions
UM	University of Michigan
UN	United Nations
UNIFOR	Universities for International Development
USAID	United States Agency for International Development
USFS	United States Forest Service
USOTA	United States Office of Technology Assessment

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