



**United States
Department of
Agriculture**

Forest Service
and
Office of
International
Cooperation and
Development

Sponsored by the
United States
Agency for
International
Development

Progress Report of the Forestry Support Program (FSP) 1986



PROGRESS REPORT OF THE FORESTRY SUPPORT PROGRAM (FSP) 1986



**United States
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Forest Service



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Washington, DC

The Forestry Support Program (FSP) is managed jointly by the U.S. Department of Agriculture's Forest Service (FS) and Office of International Cooperation and Development (OICD), with funds provided by the Agency for International Development (AID) Bureau for Science and Technology (S&T) through its Office of Forestry, Environment, and Natural Resources (FENR).

Preface

This report examines the objectives, organization, and achievements of the Forestry Support Program (FSP) during fiscal year 1986 (October 1, 1985-September 30, 1986). Brief reviews of FSP activities were prepared in 1981 and 1982, followed by the comprehensive "Progress Report of the Forestry Support Program 1981-1985," which was prepared and distributed in December 1985. The latter reviewed, among other topics, the history of the U.S. Agency for International Development's (AID's) involvement in forestry, which led to the establishment of the FSP. It also provided general background information on various components of the FSP, and it may be consulted to supplement this review.

This document is, foremost, a report to AID about the FSP's accomplishments, in collaboration with the Department of Agriculture's Office of International Cooperation and Development, in helping to implement AID's Forestry Policy and Programs (1983) and its Forestry Sector Strategy (1984). The FSP significantly affects, and indeed helps shape, the Agency's forestry and related natural resources management portfolio. In a

broader sense, this report also provides the international forestry community with general information about the FSP and AID's worldwide forestry activities.

Chapters 2 through 9 of this report correspond to the objectives of the FSP: technical consultations, roster development and referrals, forestry program studies and technical reference services, forestry training, technical support to research, the Forestry Private Enterprise Initiative, the Forestry-Agriculture Initiative, and forestry-food and voluntary assistance activities. In addition to summaries of the current year's activities, each chapter includes an "outlook" section, which anticipates future directions.

The implementation of these objectives contributes directly to the "Blueprint for Development: Strategic Plan of the Agency for International Development" (1985), with four programmatic components: (1) policy dialog, (2) institutional development and training, (3) private sector development, and (4) technology research, development, and transfer.

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List of Acronyms

AFR	AID Bureau for Africa
AID	Agency for International Development
AIMA	Wood Products Manufacturers Association of Ecuador (translated)
ANE	AID Bureau for Asia and the Near East
ASEAN	Association of Southeast Asian Nations
BIA	USDI Bureau of Indian Affairs
CAPS	Central American Peace Scholarship Program
CATIE	Center for Tropical Agricultural Research and Training (translated)
CDSS	Country Development Strategy Statement
DASP	Disaster Assistance Support Program
DEFIL	Development Strategies for Fragile Lands Project
DIHF	AID Document Information and Handling Facility
FAA	Foreign Assistance Act
FAO	Food and Agricultural Organization of the United Nations
FAS	USDA Foreign Agricultural Service
FENR	AID Office of Forestry, Environment, and Natural Resources
FFP	Food for Peace
F/FRED	Forestry/Fuelwood Research and Development Project
FPEI	Forestry-Private Enterprise Initiative
FRM	Forest Resources Management Project (No. 936-5519)
FS	USDA Forest Service
FSN	Foreign Service National
FSP	Forestry Support Program
FVA	AID Bureau for Food for Peace and Voluntary Assistance
FY	Fiscal Year
ICRAF	International Council for Research in Agroforestry
IF	International Forestry Staff, FS
ILO	International Labor Organization
INFORDE	Forestry Initiative for Development (translated)
INSOTEC	Social and Technological Research Institute (translated)
IPA	Intergovernmental Personnel Act
ISEC	International Science and Education Council
ISTF	International Society of Tropical Foresters
ITF	FS Institute of Tropical Forestry
IUCN	International Union for Conservation of Nature and Natural Resources
IUFRO	International Union of Forestry Research Organizations
LAC	AID Bureau for Latin America and the Caribbean
LDC	Less developed country
LOP	Life of project
MPTS	Multipurpose tree species
NAPFSC	National Association of Professional Forestry Schools and Colleges
NCSU	North Carolina State University
NFPA	National Forest Products Association
NGO	Nongovernmental organization
NPS	USDI National Park Service
OFDA	AID Office of U.S. Foreign Disaster Assistance
OICD	USDA Office of International Cooperation and Development
OTS	Organization for Tropical Studies
PASA	Participating Agency Service Agreement
PPC	AID Bureau for Program and Policy Coordination
PRE	AID Bureau for Private Enterprise

PVO	Private voluntary organization
RD	AID Office of Rural and Institutional Development
REDSO	Regional Economic Development Services Office
ROCAP	Regional Office for Central America Programs (Guatemala)
RSSA	Resource Support Services Agreement
SCFER	Southeastern Center for Forest Economics Research
S&T	AID Bureau for Science and Technology
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
WFP	World Food Program

Chapter 1

Objectives, Organization, and Linkages of the Forestry Support Program

Context and Objectives of the FSP

By the late 1970's the Agency for International Development (AID) increasingly recognized forestry-related development assistance as a valid aspect of the broader U.S. foreign assistance program and began devoting modest development assistance funds and staff resources to forestry. In 1980, to provide technical information and professional advice to AID's increasing international forestry efforts, AID's Bureau for Science and Technology (S&T) developed the Forest Resources Management Project (FRM; No. 936-5519), which is now authorized through 1989 for \$19.8 million. To help implement the FRM, AID requested the U.S.

Department of Agriculture (USDA) to establish, within the Forest Service (FS), a small staff of international forestry advisers, now called the Forestry Support Program (FSP).

The FRM's anticipated life-of-project (LOP) distribution of resources from 1980 to 1989 is divided into four categories (FSP, Peace Corps, regional forestry advisers, and other), as shown in Figure 1-1. Although the bulk of funding is destined for the FSP, the FRM also has funded AID regional forestry advisers in Indonesia, Costa Rica, and Kenya, as well as Peace Corps forestry and natural resource activities.

The FSP, which began operations in March 1981, is financed through a Resources Support Services Agreement (RSSA) between USDA's Office of International Cooperation and Development (OICD) and AID's Office of Forestry, Environment, and Natural Resources (FENR), within S&T. The FSP is managed jointly by the FS and the OICD, both within the USDA, and in close coordination with AID S&T/FENR.

The objectives of the FSP as established in 1981 and revised in 1983 have been modified as work has been accomplished and in accordance with periodic project reviews and incremental funding amendments. The current objectives are as follows:

- Technical consultations. To provide AID's regional bureaus, regional offices, and field missions with advice on tropical forestry and natural resources, including advice on the design of projects.
- Roster development and referrals. To manage a roster of forestry and natural resources experts that is used to identify qualified personnel for long- and short-term AID assignments.
- Forestry program studies and technical reference services. To provide technical forestry information to AID and Peace Corps staff and to facilitate the exchange of technical information among personnel working in these areas--especially personnel working overseas.
- Forestry training. To organize forestry training courses, develop training mate-



One FSP objective is to promote links between agriculture and forestry in the tropics. (Photo by D. Johnson.)

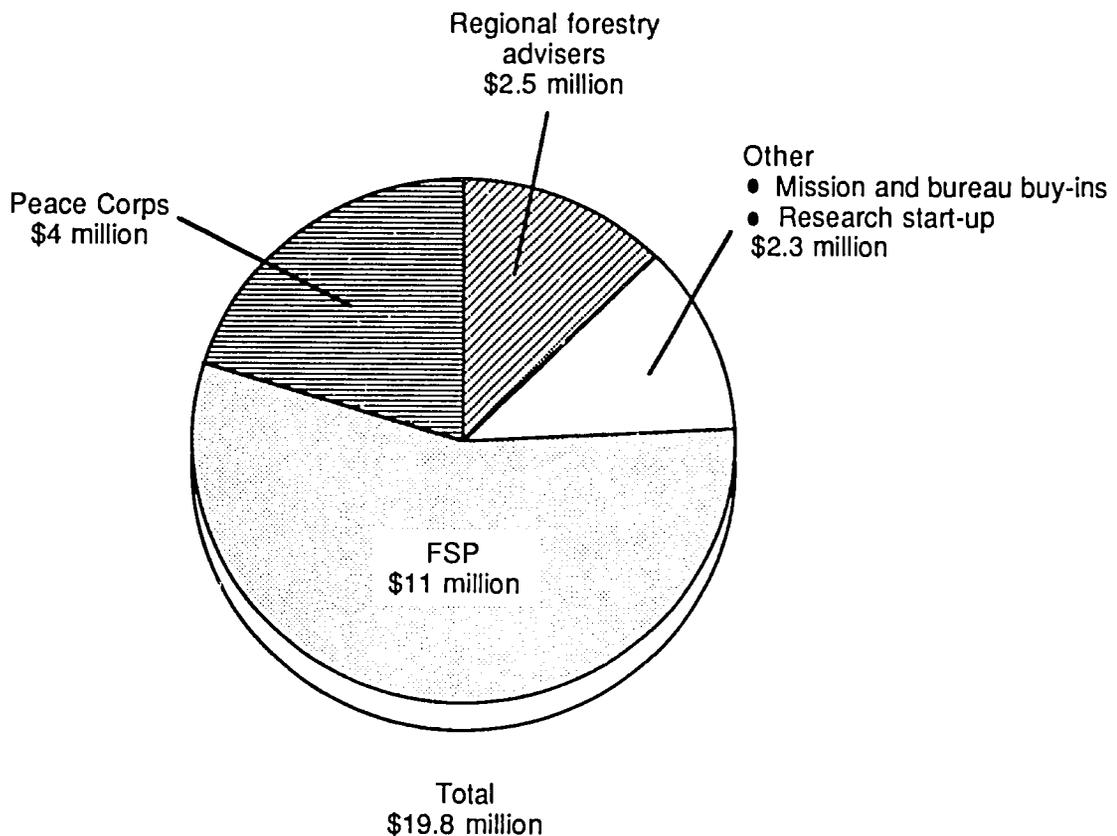


Figure 1-1: AID's FRM: Anticipated Distribution of Resources, 1980-89.

rials, provide advice to forestry schools and others on curriculum design, and help AID design forestry projects with ample provisions for training.

- Technical support to research. To provide AID with technical support in forestry research.
- Forestry-Private Enterprise Initiative (FPEI). To stimulate private forestry enterprise by identifying and developing markets for the forest products of AID-recipient countries.
- Forestry-Agriculture Initiative. To promote linkages between agriculture and forestry in the tropics as part of an effort to improve the effectiveness of AID's projects and land management practices.

- Forestry-food and voluntary activities. To provide systematic technical forestry oversight and guidance to food-related forestry activities carried out through the Agriculture Trade Development and Assistance Act (Public Law 480), and liaison with private voluntary organizations.

As compiled by the FSP, AID now has on record 153 authorized, planned, active, and recently completed forestry and natural resources projects in less developed countries (LDC's). The LOP funding for these activities is \$573.7 million in loans and \$982.8 million in grants, for a total of \$1.56 billion. The proportion of LOP funding allocated to natural resources (including forestry)

activities for these projects is \$780.5 million. The proportion of the total LOP allocated solely to forestry is \$491.4 million. Table 1-1 shows LOP funding for AID's forestry and natural resources portfolio as allocated by geographical region and for centrally funded projects. Additional information on the forestry portfolio is analyzed in Chapter 4. Clearly, as the lead agency for administering U.S. foreign aid, AID is currently supporting most U.S. international forestry development work.

FSP Structure

The FSP is organized along both geographical and functional lines. The current organization chart of the FSP is shown in Figure 1-2. The structure roughly corresponds to that of the AID Washington bureaus. The coordinators for forestry-agriculture, food and voluntary assistance, and social forestry have been grouped under the training coordinator because of anticipated training components implicit in each of their positions. In addition, the FSP

Table 1-1

AID's Forestry and Natural Resources Portfolio
LOP Funding
(millions of dollars as of FY 1986)

AID Bureau	Forestry	Natural Resources	Total LOP
Latin America and the Caribbean	116.6	194.8	453.8
Africa	88.2	190.1	404.1
Asia and the Near East	258.3	347.1	611.0
Centrally Funded	28.2	48.6	87.6
Total	491.4	780.5	1,556.5

Washington Office includes two secretaries and two clerk typists. As planned, the FSP international forestry seminar director at the University of Michigan was "spun off" and is now fully funded by the FS. Recruitment currently is under way for the FSP geographical coordinators for Africa and for Latin America and the Caribbean, as well as for a social forestry coordinator. Appendix A provides profiles of staff who served in FSP positions during fiscal year (FY) 1986.

Organizational Linkages

Although the FSP is under the overall responsibility of the director of the International Forestry Staff (IF) within the FS, the program is organized as a cooperative effort between the funding agency (S&T/FENR), the technical supporting agency (FS), and the administrative agency (OICD). This year, the AID S&T Regional and Rural Development Division of the Office of Rural and Institutional Development (RD) entered into an RSSA with OICD that will result in the addition of an FSP social forestry program coordinator. This individual will provide guidance on social forestry aspects of AID's Forestry/Fuelwood Research and Development Project (F/FRED) being carried out by S&T/FENR with AID's Bureau for Africa (AFR) and Bureau for Asia and the Near East (ANE) funding, participation, and cooperation. Figure 1-3 shows the FSP's principal organizational linkages.

AID Issues and FSP Accomplishments

During the latter part of 1986, AID sought to refine the global focus of its agricultural programs. After extensive consultations both within and outside the Agency, a new agenda was forming for its agriculture, rural development, and nutrition activities, focusing on improving the income of the rural poor and expanding the availability of food while maintaining and enhancing the natural resource base. This refinement portends

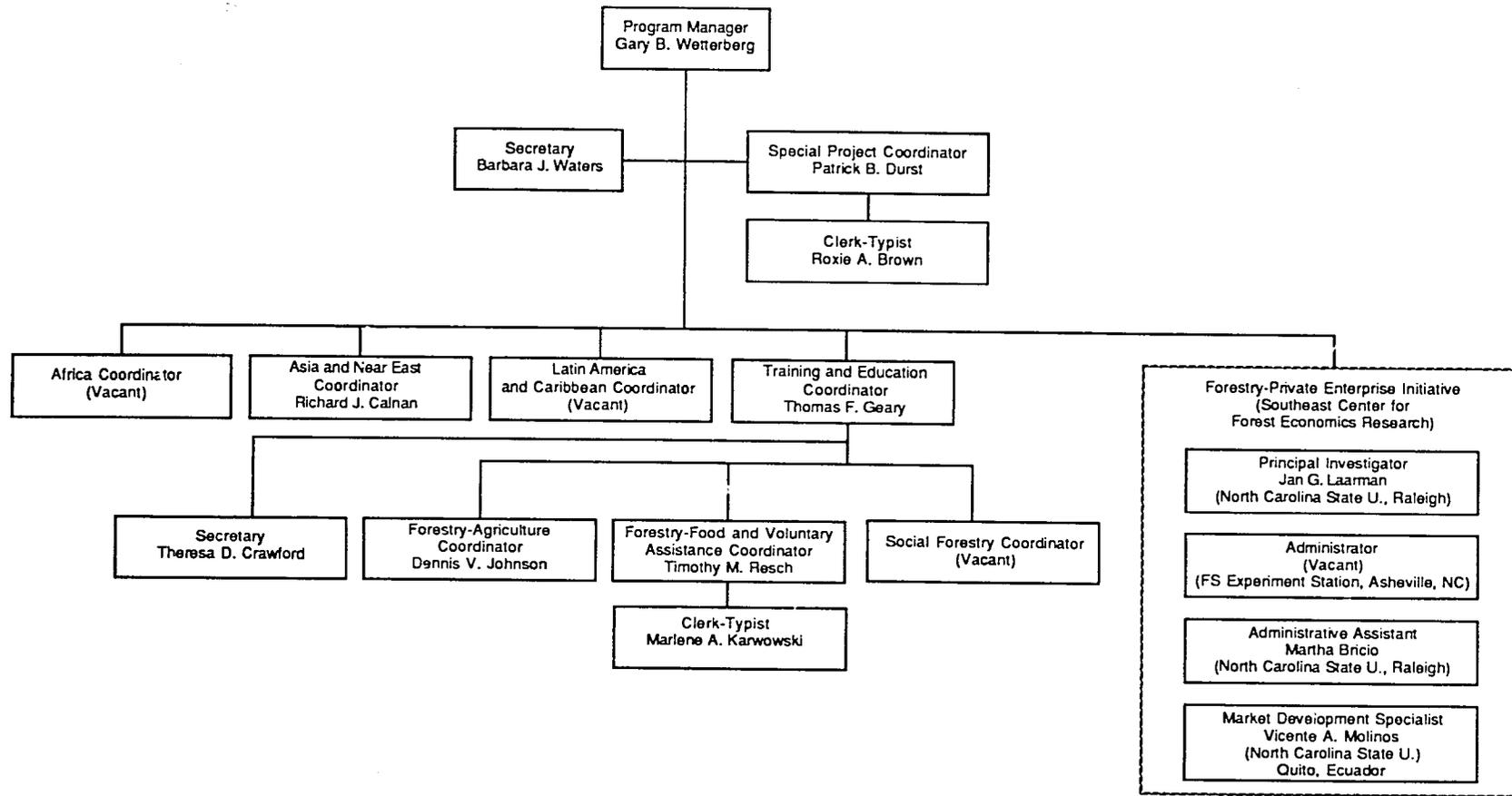


Figure 1-2: Organizational Chart of the FSP.

increased recognition in Agency programs for forestry and related natural resources management, for agroforestry, and for forest-based private enterprise with income and employment benefits. These are all receiving special emphasis within the FSP's current mix of activities.

New amendments to the Foreign Assistance Act (FAA) were drafted during 1986 by both houses of Congress and highlighted what are likely to be important future issues dealing with forestry and natural resources. Two of the amendments resulted in new mandates to protect tropical forests and biological diversity in developing countries under sections 118 and 119, respectively, of the FAA. The new legislation includes a requirement that Country Development Strategy Statements (CDSS's) and other AID country plans analyze actions necessary to achieve conservation and sustainable management of tropical forest resources, as well as those actions necessary to conserve biological diversity. Cooperation with private voluntary organizations (PVO's) and nongovernmental organizations (NGO's), as well as with other U.S. Government Agencies (specifically, the FS, the U.S. Department of the Interior's (USDI's) National Park Service (NPS) and Fish and Wildlife Service, and the Peace Corps), is anticipated to help achieve these goals.

The FSP has been pivotal in helping AID bureaus and missions to advance activities relevant to these evolving issues, and, in many cases, the FSP has anticipated them. Through its close working relationship with S&T/FENR, the FSP has constantly been alerted to key areas with high potential for impact on AID's overall program. FSP activities during the past year are detailed in relation to its own objectives and linkages in the remaining chapters of this report. An overview of recent FSP accomplishments and activities under way includes--

- Compiling the most comprehensive summaries ever prepared of AID's worldwide forestry portfolio and related staffing patterns, together with a special assess-

ment of private enterprise activities with forestry potential;

- Appointing a forestry and agriculture coordinator to assist missions and regional bureaus in emphasizing agroforestry and related improvements in food production and natural resource management;
- Advancing the frontier of knowledge in management of both natural and artificial tropical forests through cosponsorship of a major international conference in Puerto Rico on these topics;
- Working closely with the AID Bureau for Latin America and the Caribbean (LAC), the Pan American Development Foundation, and private enterprises to increase the emphasis of agroforestry in efforts to promote growing of cocoa by small farmers in the Latin American-Caribbean region;
- Exploration of new prospects for increased cost-effectiveness in contract reforestation in the Philippines;
- Sponsoring of market research to assist nature-oriented tourism as a nonextractive tropical-forest-based enterprise that may link biological diversity goals and indigenous private enterprise as an engine for development;
- Providing FSP staff expertise to lecture on agroforestry during AID's Agriculture/Rural Development Officers State-of-the-Art Training Course at AID/Washington;
- Arranging for an FS entomologist to study the psyllid insect attack on Leucaena in the Asia-Pacific region and assisting in development of a control action plan (Leucaena is widely used in agroforestry programs and is becoming an integral part of local economies in many places);
- Participating in the joint S&T/RD and LAC Technical Evaluation Committee of the Development Strategies for Fragile Lands Project (DESFIL) proposals and activity serving on the Fragile Lands Advisory Group;
- Assisting with the design, implementation, and evaluation of many of AID's forestry and natural resource projects, including evaluations of agroforestry efforts in Ecuador and Haiti, development of a

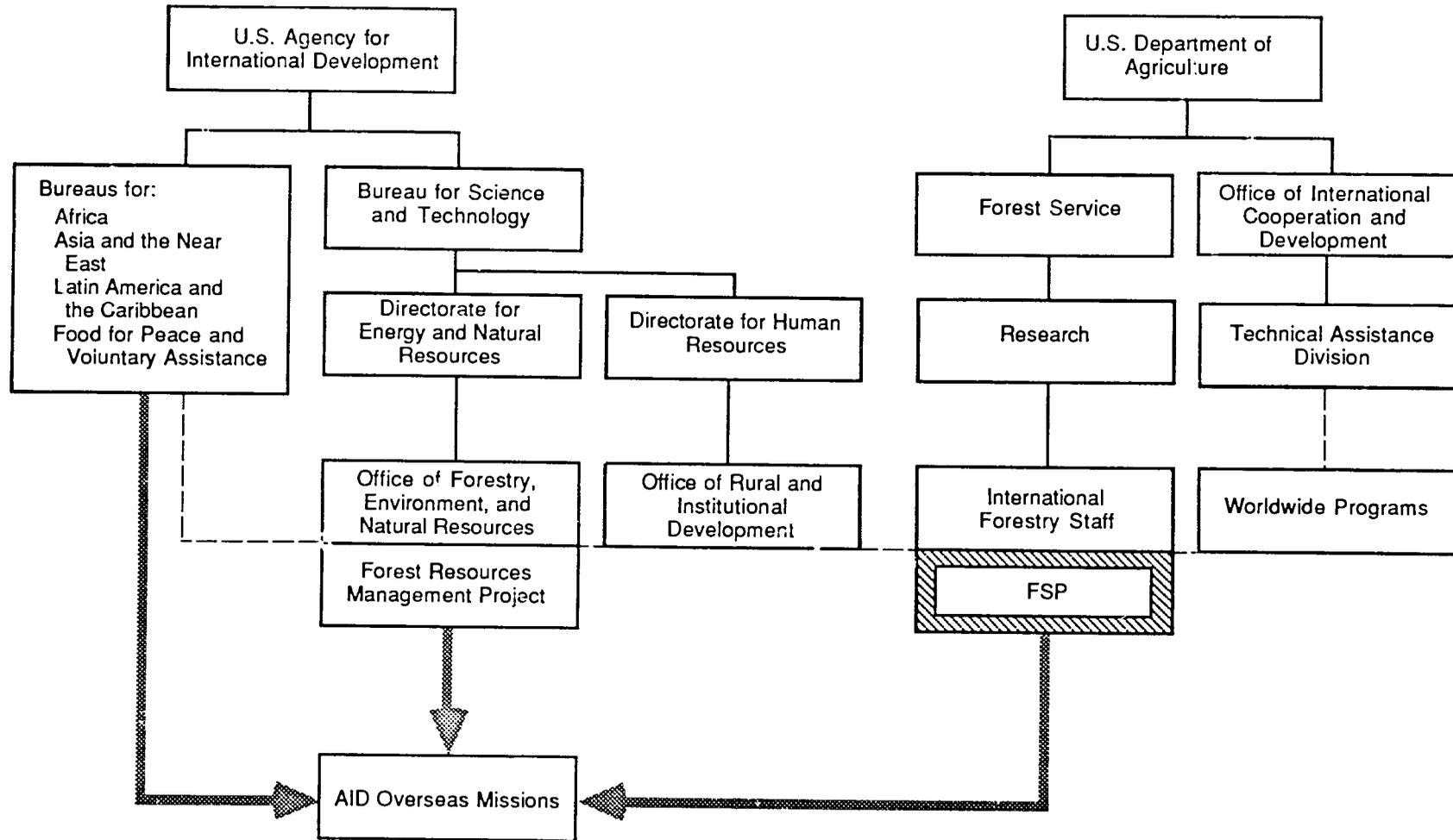


Figure 1-3: Organizational Linkages of the FSP. The FSP is managed jointly by the FS and OICD, with funds provided by S&T.

financial work plan for the Association of Southeast Asian Nations (ASEAN) Watershed Project, and close cooperation with DESFIL and F/FRED;

- Updating and expanding to more than 2,000 entries the FSP roster of technical natural resource expertise available to AID;
- Maintaining a market demonstration specialist in Ecuador, who helped organize an export marketing consortium, encouraged improved utilization through reduction of waste, continued to strengthen the Ecuadorian private forest products association role in assisting small business, and generally supported AID mission goals of increasing exports while providing assistance to small enterprises involved in domestic markets;
- Conceptualizing and overseeing the establishment within the FS of the Disaster Assistance Support Program (DASP), which

became operational and was staffed in cooperation with AID's Office of U.S. Foreign Disaster Assistance (OFDA) (initial operations have included training on hurricane disaster management in the Caribbean, evaluation of firefighting needs in South America, and assistance to various African countries to combat locust and grasshopper plagues);

- Preparing a Forestry Training Strategy, which focused on providing assistance to AID missions and regional offices, as well as on development of training materials and conferences and strengthening links with relevant institutions;
- Developing, scheduling, and implementing field forestry training in the United States for Honduran foresters under the LAC's Central American Peace Scholarship Program (CAPS);



The FSP will provide guidance on social forestry through AID's F/FRED. (Photo by F. Wadsworth, FS Collection, National Agricultural Library.)

- Providing a mechanism for channeling S&T support to the International Union of Forestry Research Organizations (IUFRO) to hold a regional workshop in Nairobi, Kenya, to identify forestry research priorities in Africa for direct application by AID in launching the Africa portion of F/FRED; and
- Hiring, under joint AID and FS funding, a food and voluntary assistance program coordinator to provide professional advice and guidance on forestry programs related to Public Law 480 worldwide, as well as on collaboration with Peace Corps, and PVO and NGO involvement.

Outlook

During FY 1987, FSP objectives are likely to be further refined as AID moves to implement recent amendments to the FAA concerning tropical forestry and biological diversity. This may result in modification of the FSP's organizational structure and linkages with other entities. The use of temporary details of individuals to fill vacant FSP staff positions is expected to increase. Linkages with S&T/RD will strengthen with the filling of the social forester position, and new linkages will be formed with the AID Bureau for Food and Voluntary Assistance (FVA).

Chapter 2 Technical Consultations

Analysis of Onsite Assistance

The first objective of the FSP is to provide AID's regional bureaus, regional offices, and field missions with technical advice on tropical forestry and natural resources, including the design of projects. Highlights and selected examples are discussed later in this chapter. Consistent with this objective, FSP staff and other technical experts assist AID recipient countries throughout the world, providing specialized technical advice. The FSP frequently receives requests for experienced foresters with fluency in a foreign language. The technical skills requested most often in FY 1986 were economics, agroforestry, and watershed management. There were also several requests for specialists in extension, sociology, and training. The mix of skills requested changes over time, reflecting the changing focus of AID's forestry portfolio; however, recurrent criteria are fluency in French or Spanish and prior overseas experience.

The FSP provides assistance directly and indirectly by referring technical experts to AID in a variety of ways: by making its own staff available for overseas duty, by securing contributions of staff time from the FS, by procuring the services of private consultants through OICD, by arranging for the assistance of personnel from other State and Federal agencies through OICD, and by identifying potential candidates to work directly with AID's contractors or AID missions overseas.

In most cases, the FSP is asked to identify expert personnel for AID missions, contractors, and cooperators, without directly funding the activity. To fill these requests quickly and to ensure that the best available candidates are selected for consultations, the FSP uses its roster (see Chapter 3) of forestry expertise.

When candidates are referred to missions or contractors, the FSP is not always able to maintain records on their activities, especially for short-term assignments filled within each country. Records are, however, carefully maintained on technical consultations funded by the FSP. Figures 2-1 through 2-3



The FSP participated in an evaluation of AID's Agroforestry Outreach Project in Haiti. (Photo by J. Palmer.)

display the FY 1986 technical assistance that was partially or fully funded by the FSP. Every AID request for services in forestry and natural resources is honored if full or shared funding is available. Appendix B contains a detailed list of assignments by region and country. In FY 1986, the FSP roster was used 131 times (Appendix C) to identify personnel for short- and long-term assignments with AID and its cooperators.

Technical assistance assignments are generally of short duration. For instance, the average consultation funded by the FSP in FY 1986 lasted 18 days, with some as short as 3 days and others as long as 2 months. Typically, consultations focus on the needs of one country, but occasionally visits to two or three countries are combined on one trip. Often, assistance is provided by individuals, but in some cases, such as AID project design teams, four or five team members may be needed.

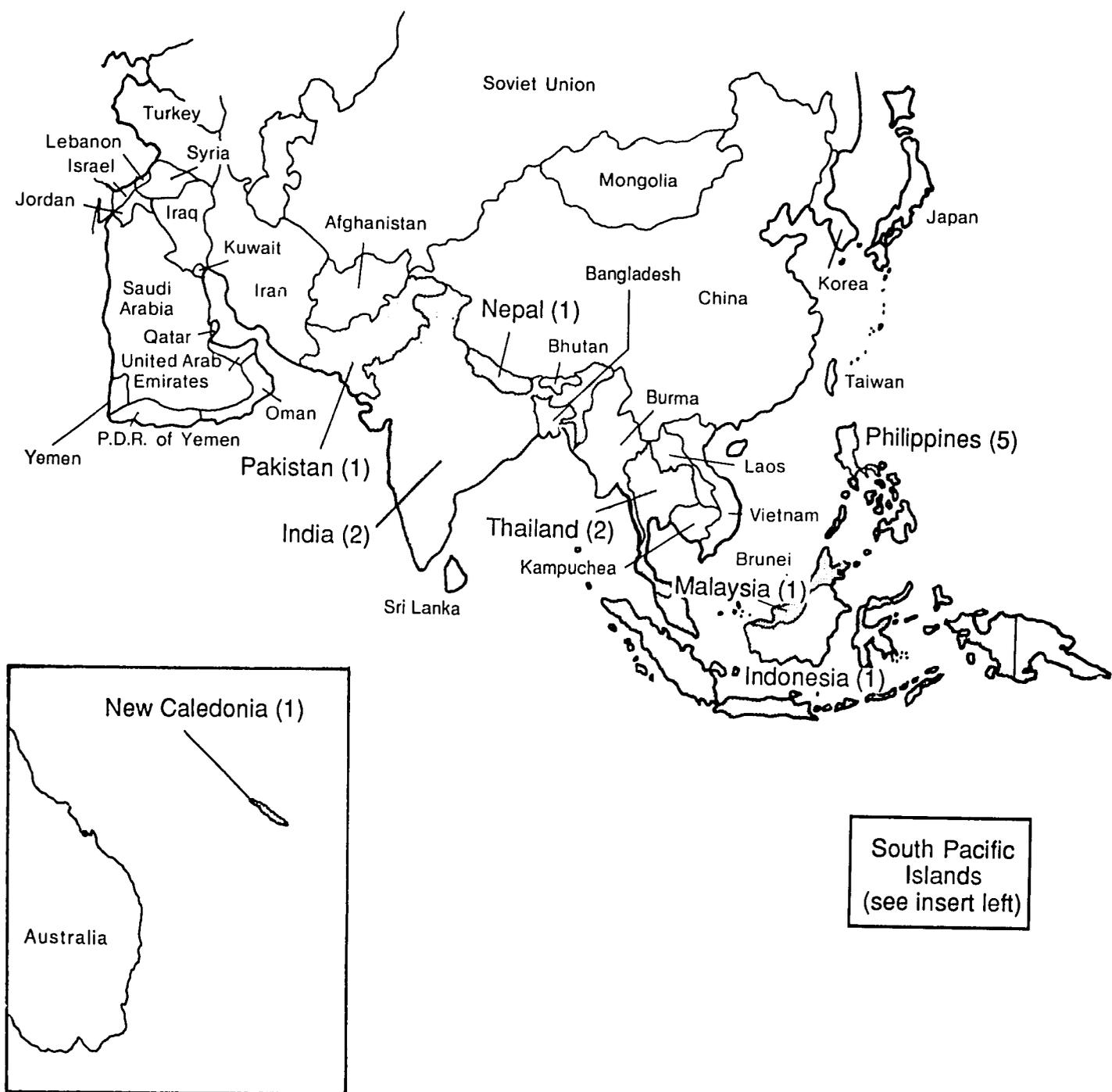


Figure 2-1: Asia and Near East Geographical Distribution of Technical Consultations Provided by the FSP, FY1986.



Figure 2-2: Africa Geographical Distribution of Technical Consultations Provided by the FSP, FY1986.



Figure 2-3: Latin America and Caribbean Geographical Distribution of Technical Consultations Provided by the FSP, FY1986.

Highlights

The figures and appendixes cited above show a predominance of activity in Central America and the Caribbean. Most of the FSP's activity in Africa in 1986 has been in conjunction with PVO's.

The following are selected examples that illustrate the types of technical consultations that FSP provides:

- The FSP program coordinator for Africa was the leader of a four-person team that conducted an evaluation of the Eastern Refugee Reforestation Project, a \$5.5 million, 4-year project managed by the CARE, in eastern Sudan. The mission reported that "evaluation was viewed as an excellent update on forestry activities in eastern Sudan with appropriate recommendations for changing of project." An additional \$750,000 mission commitment for expansion of extension activities in Sudan resulted.
- The FSP program coordinator for Asia and the Near East spent 2 weeks in Southeast Asia, assisting AID in developing a financial work plan for the ASEAN-U.S. Watershed Project.
- The FSP arranged for an FS entomologist to study the psyllid insect attack on Leucaena in the Asia-Pacific region, and to develop an action plan for control. The psyllid attack has had a serious financial impact on small farmers throughout the region, due to the importance of Leucaena in agroforestry schemes. The entomologist's report has been a key document for AID and other institutions planning to control the insect and prepare an effective research program. The FSP cooperated with S&T, the Nitrogen-Fixing Tree Association, F/FRED, and ANE in distributing timely and pertinent information to all interested parties in the region.

- The Asia and Near East coordinator reviewed Public Law 480 forestry research projects in India and Pakistan and participated in a workshop that set research priorities for the program for the next 5 years in Pakistan.
- The program coordinator for Latin America and the Caribbean participated in an evaluation of an AID agroforestry project in Haiti. As a result of the evaluation, this successful project has been extended. It is often singled out as an excellent example of both agroforestry development and cooperation between AID and NGO's.

Outlook

AID missions, bureaus, and cooperators are increasing their requests for FSP assistance, both in the form of direct staff consultations and in the form of referrals of experts. This is the result of the FSP's record of providing successful assistance, the growing importance of forestry and natural resources in AID's portfolio, and the budgetary restrictions of AID missions and bureaus.

Additional technical consultations are expected in the coming year, especially to help missions analyze potential actions within their CDSS's or project planning documents to conserve biological diversity and to sustainably manage tropical forests. Other anticipated areas of need include private sector development, small-scale wood industries, agroforestry, and food and voluntary assistance (see Chapter 3). Both the FSP staff (see Chapter 1) and the FSP roster are evolving to reflect these changes in focus. It is anticipated that the FSP will continue to play a major role in identifying qualified candidates for short- and long-term assignments for AID and its cooperators.

Chapter 3

Roster Development and Referrals

Overview

The FSP actively manages an automated roster that contains biographical summaries of more than 2,000 forestry and natural resource experts who have an interest in long- and short-term foreign assignments. During FY 1986, the roster was carefully maintained in compliance with current Federal procurement laws and the FSP has been especially vigilant to ensure that it complies with all aspects of the Privacy Act (Public Law 97-98). In an attempt to attract minority foresters, the FSP staff worked with the Bureau of Indian Affairs (BIA) of the USDI, which distributed the FSP roster packet with a simple one-page roster code sheet (Fig. 3-1) to BIA personnel nationwide. Advertisements were placed in several wood industry journals to attract individuals with private enterprise skills.

The roster continues to be used (Appendix C) primarily to identify potentially qualified candidates for AID consulting assignments, including the design, implementation, and evaluation of projects. Additionally, it is used to distribute announcements of vacancies with AID contractors and with AID cooperating organizations, such as the Food and Agriculture Organization (FAO) of the United Nations, the Inter-American Development Bank, the World Wildlife Fund, CARE, and the World Bank, as well as vacancies within the FSP staff. Private firms, universities, and other organizations that hold AID grants or contracts also can receive help in finding qualified experts when the FSP receives a request from the appropriate AID mission or one of the AID Washington bureaus.

The FSP works closely with OICD when invoking the roster for contracted services using FSP funds. This includes pooling candidates with the more general agricultural "ASIST" roster of OICD, ranking candidates by technical review panels, and referring potential candidates to AID missions where services are to be performed, for concurrence. OICD handles all procurement of such services.

Current Profile of Personnel on the Roster

The FSP electronic roster contains summaries of each applicant's professional background, technical specialities, overseas experience, language capabilities, education, and availability. It is complemented by personal resumes. In September 1986 the roster contained 2,228 names. The affiliations (consultants, government, universities, and other) of those currently entered in the roster are shown in Figure 3-2.

Highly experienced, senior-level professionals, equivalent to at least GS-13 or above government employee or full professor, constitute about 43 percent of the applicants. Figure 3-3 shows that more than two-thirds of the applicants have advanced degrees. Eighty-five percent of the applicants have overseas development experience, predominantly with the Peace Corps, AID, and the FAO (Fig. 3-4). About 25 percent have a combination of experience associated with the World Bank, consulting firms, PVO's, and others. Although nearly half have worked in Latin America, foreign experience is distributed globally (Fig. 3-5). Breakdowns of foreign experience are approximations at best, since categories are not mutually exclusive; the same applicants have often worked in more than one region and with more than one organization.

Outlook

Transfer of the roster from the list processing system on which it was originally established to a personal computer should be completed during 1987. The transfer will enable more rapid searches and increased search capability. Once the transfer has been completed, the FSP will provide every person on the roster with a printout of his or her biodata to ensure accuracy and continued interest. Reannouncements in the Commerce Business Daily, through the nationwide FS personnel network, with the BIA, in professional trade journals, and through the National Association of Professional Forestry Schools and Colleges (NAPFSC) network are

U.S. Department of Agriculture, Forest Service Form Approved OMB NO. 077 - 001

NAME _____

CITIZENSHIP _____

YEAR OF BIRTH _____ WORK ADDRESS _____ HOME ADDRESS _____

DAILY SALARY _____ DATE OF RESUME _____ WORK PHONE _____ HOME PHONE _____

A	B	C	EX LEVEL	EX AREA	E LANG	F DEVOR	G EDUC	H AVAIL	I PR JOB	J OVERSEAS EX			K EDUCATION				
					FRENCH <u>1/</u>												
					SPANISH <u>1/</u>												
					OTHER <u>2/</u>												
					OTHER <u>2/</u>												

COMMENTS: 1/ insert number
2/ spell out

PRIVACY ACT STATEMENT

Public Law 97-98, Section 145B to the U.S. Code authorizes collection of this information. The primary use of this information is by Management to facilitate consideration for Office of International Cooperation and Development assignments, both in the United States and overseas. Information may also be made available to other Federal agencies and international organizations involved with the recruitment of forestry and natural resources experts. Furnishing the information on this form is voluntary, but failure to provide the requested information may prevent an individual from being selected for assignments.

SIGNATURE (Sign the form in ink. A typed signature will NOT be accepted.) _____ DATE COMPLETED _____

Please send this form, with a resume or SF-171 to the following address:

Special Projects Coordinator, Forestry Support Program, P.O. Box 96090, Washington, D.C. 20013-6090

Figure 3-1: FSP Roster Code Sheet.

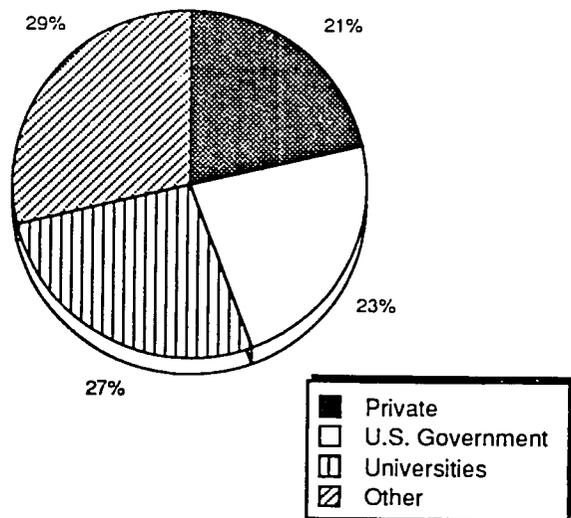


Figure 3-2: Affiliations of FSP Roster Personnel.

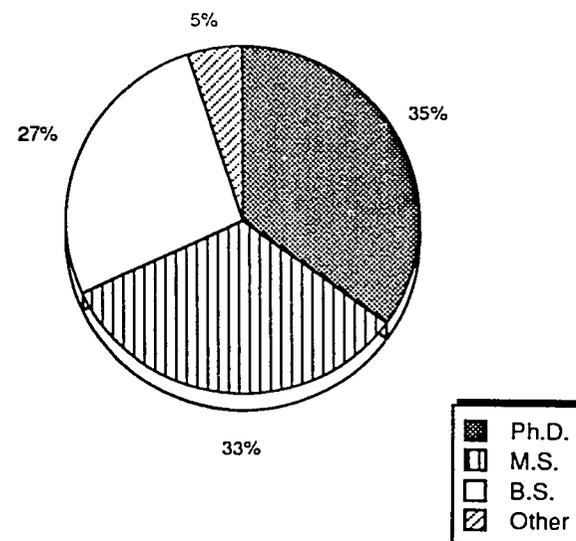


Figure 3-3: Educational Levels of FSP Roster Personnel.

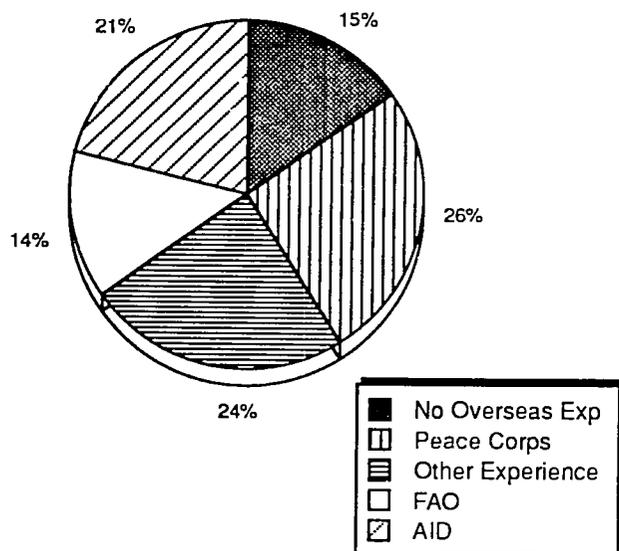


Figure 3-4: Overseas Experience of FSP Roster Personnel.

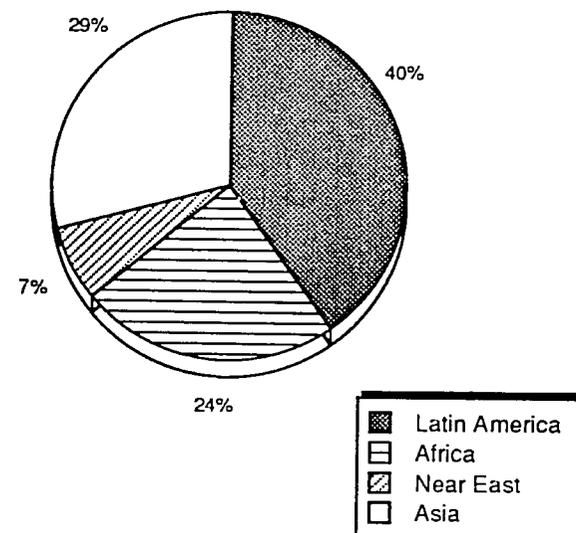


Figure 3-5: Geographical Distribution of FSP Roster Personnel.

expected to keep the roster widely publicized. A special mailing of the roster will be targeted to the Historically Black Schools and Colleges ("1890 Schools"), and it will be distributed in appropriate forums for women resource managers.

The FSP will further cooperate with the NPS to create a roster of NPS employees who are qualified and interested in overseas development work. The FSP will work with OFDA and the DASP to integrate their needs for expertise into the FSP roster or develop a compatible system.

At least one article is scheduled for publication, in the Journal of Forestry (J. Muench, "Making the Match-Up," under "My Chance"). The FSP roster packet, which contains the basic roster form and related information that is sent in response to hundreds of inquiries throughout the year, will be revised. Although the number of applicants appears to have leveled off at about 2,200 during 1986, the FSP will continue to bring the roster to the attention of new individuals potentially qualified for AID's international forestry and natural resources work and to maintain updated information on the individuals listed.

Chapter 4 Forestry Program Studies and Technical Reference Services

Forestry Program Studies

During FY 1986 the FSP, through OICD, contracted with the ARAWAK Consulting Corporation to gather and prepare computerized working data bases of information about AID projects and personnel. The data bases consist of information about AID's forestry and natural resource projects, private-sector projects with forestry potential, and direct-hire and contract personnel involved in AID's forestry work. Although gaps still exist and the dynamic nature of the material causes it to be dated quickly, the exercise has served to provide S&T/FENR, the AID Bureau for Program and Policy Coordination (PPC), and other donors and international organizations



Charcoal from pine plantation thinnings at test kilns in Madagascar. (Photo by R. Calnan.)

with useful, up-to-date information about the scope and content of AID's development work in forestry and natural resources.

Forestry and Natural Resources Projects Data Base

The data base on forestry and natural resource projects expanded and updated previous information compiled by the FSP (1983 report by P. A. Lundburg on AID-funded public-sector forestry projects) and was gathered from more than 30 sources, including AID geographical bureau reports and the 1986 environmental data base of PPC, among others (Table 4-1). An effort was made to include all forestry projects (except those funded through Public Law 480) as well as those natural resource projects that interact with the forestry sector (e.g., watershed management projects that include forest lands or reforestation areas, soil conservation projects that use trees for windbreaks or erosion control, and integrated land management projects with forestry components). The natural resource activities were a subset of the environmental categories defined by PPC; however, only those involving the forestry sector were incorporated. The data include the project number, title, and country; a descriptive paragraph; the project start date and the project activity completion date; obligations by fiscal year; the AID project officer; and contractors. The preliminary summary of this data base includes some 153 projects, of which 99 are active, 18 are planned, and 36 have been completed since 1981. A summary of the forestry and natural resource projects by project status and by AID bureau is shown in Table 4-2.

Numerically, the current project distribution is about equally split among AFR, ANE, and LAC with an average of 30 projects each. However, as shown previously (see Fig. 1-2), current LOP funding for ANE forestry projects is more than twice the level for LAC and about three times the level for AFR. Many of the presently active projects in Africa are nearing completion, with few new

TABLE 4-1

Sources Used To Compile the FSP Data Base and Project Summaries

Information	Source
Financial; Project Start and Completion	Project Accounting Information System (1/5/86) FY 1986 congressional presentation FY 1987 congressional presentation PPC data base (3/86) Interviews with regional bureau technical advisers, FSP foresters, Project Development Office staff, and desk officers
Contractors	Directory of Current Technical Service Contracts and Grants, Office of Contracts Management, FY 1985 edition Directory of Indefinite Quantity Contractors, 1/1/85 edition Contracts Online Reporting System data base Interviews with regional bureau technical advisers, FSP foresters, Project Development Office staff, and desk officers
Project Descriptions	DIHF-Development Information System (data base of project abstracts) Project papers FY 1987 congressional presentations "USAID Asia Forestry Projects with Forestry Components," prepared by B. Levenson, January 1985 "Public Sector Forestry Projects Funded by the U.S. Agency for International Development," compiled by USDA/AID FSP, based on the work of Paul A. Lundberg, September 1983 "Energy, Forestry, and Natural Resources Activities in the Africa Region," AFR Office of Technical Resources "Latin American/Caribbean Region Environmentally Related Projects Portfolio," prepared by Leslie R. Cooperband, 6/26/85 Quarterly implementation reports
AID Project Officers	Mission Staffing Pattern, March 1986 Quarterly implementation reports Interviews with regional bureau technical advisers, FSP foresters, Project Development Office staff, and desk officers
Forestry and Natural Resources Percentages	Project papers and abstracts Interviews with regional bureau technical advisers and FSP foresters and desk officers PPC data base

ones replacing them. The 51 largest current forestry projects (Table 4-3) are located in 25 countries. In addition, there are two large, centrally funded (S&T), global forestry projects: F/FRED and DESFIL.

Data Base on Private-Sector Projects with Forestry Potential

The development of the data base on private-sector projects with forestry potential also updated previous information com-

plied by the FSP and others. Hundreds of projects were screened to search for keywords suggesting forestry or potential forestry components. A total of 52 projects are included in this data base with LOP funding of \$578 million, of which \$223.5 million is loans and \$354.5 million is grants. Of these, 46 projects are active, 2 are planned, and 4 are completed. In a preliminary analysis, 6 projects were deemed to have high potential for forestry interventions, and 14 appeared to have moderate potential (about half in Latin America).

The following sources were used to compile the FSP data base on private-sector projects:

- "Forestry Related Implications of AID's Private Enterprise Initiative," Patrick Durst, March 1983
- "Assessment of USAID's Forestry Activities in Institutional Mechanism, Private Enterprise and Training, Education and Research," No. 40-319R-401017, Society of American Foresters, September 1984
- "Categorizing AID's Use of the Private Sector; Project Number 930-0092," Statistical Data Report, Keene, Mark and Associates, 1985
- "A Review of AID's Experience in Private Sector Development: AID Program Evaluation Report No. 14," by Jennifer Bremner et al., April 1985
- AID Document Information and Handling Facility (DIHF) information system keyword search
- PPC keyword search
- FSP data base of forestry projects developed earlier under this contract
- PPC data base of environmental projects

Table 4-2

Numbers of Forestry and Natural Resources Projects^a by Project Status

AID Bureau	Planned	Active	Completed
LAC	7	30	5
AFR	4	33	16
ANE	6	27	13
S&T	1	9	2
Total	18	99	36

^a Excludes subprojects for which the main project is counted.

Forestry Community Data Base

The data base developed on the AID forestry community consists of a list of all direct-hire and contract personnel working directly on forestry activities for AID. It includes American and expatriate staff, as

Table 4-3

Distribution by Country and Region of AID's Largest Existing and Planned Forestry Projects

AID Bureau	Country or Region	No. of Projects
AFR	Botswana	1
	Burundi	1
	Gambia	1
	Mali	1
	Niger	1
	Rwanda	1
	Senegal	1
	Somalia	1
	Sudan	1
	Regional Energy Initiatives for Africa Project	1
	Subtotal	10
ANE	Bangladesh	1
	India	5
	Indonesia	3
	Nepal	4
	Pakistan	1
	Philippines	3
	Sri Lanka	2
	Thailand	3
	ASEAN Regional Project	1
Subtotal	23	
LAC	Dominican Republic	3
	Ecuador	1
	Guatemala	1
	Haiti	3
	Honduras	2
	Jamaica	1
	Panama	2
	Peru	2
	ROCAP Regional Projects	3
Subtotal	18	
Total	51	

well as contractors and host country nationals employed in an AID staff capacity. It does not include nationals employed by host governments to implement AID-funded projects, but it does include all expatriate foresters.

Two categories of personnel are listed: direct-hire and contractors. Foreign Service National (FSN) staff are categorized as direct hire; and Intergovernmental Personnel Act (IPA) and FSP personnel are counted as contractors. Table 4-4 depicts the number of staff classified in each.

Preliminary estimates indicate that about 250 direct-hire and contract personnel are working in the forestry area for AID: 148 direct-hire personnel (including 8 FSN staff), 89 contract personnel (including 8 Washington-based FSP staff and 1 NPS employee), and 13 for which information about employee classification is not available without further mission input. Of the total, 223 are overseas and 27 are located in Washington, D.C.

Table 4-4

Numbers of AID Forestry Community Staff and Contractors

Category	Overseas	Washington, D.C.
Direct Hire		
FSN's	8	0
U.S. Citizens	126	14
Subtotal	134	14
Contractors		
IPA	0	1
FSP Staff	0	8
Personal Services		
Contractors	15	0
Firms and Organizations ^a	21	1
PASA or RSSA	7 ^b	3
Type of Contract		
Unknown	33	0
Type of Personnel		
Unknown	13	0
Subtotal	89	13
Total	223	27

^a Does not include FS.

^b Includes FS personnel (except the FSP).

Among the contract staff and project technical assistance contractors, a variety of contractual mechanisms are represented, including 15 personal services contracts, 1 IPA contract, 22 contracts with firms and organizations, 10 Participating Agency Service Agreements (PASA's) or RSSA's, and 33 contractual agreements about which information was unavailable without further mission inquiries.

In a summary of AID forestry staffing prepared by S&T/FENR that complements this data base, D. Deely determined that the 53 largest forestry projects are currently managed by 47 direct-hire AID foreign service employees (7 of whom are foresters), who are supported by 15 contracted staff foresters in field mission staff roles and the 12 FSP and Peace Corps staff members in Washington, D.C. The fact that AID forestry projects are predominantly managed by nonforesters reinforces the necessity of good technical backstopping in Washington.

Technical Reference Services

During 1986 the FSP continued to provide a variety of technical reference services in support of AID and Peace Corps activities worldwide. These included publications, reports, and reprints generally unavailable elsewhere through traditional library sources; informal, limited translations; bibliographies; and literature searches on specific problems or tree species. For instance, AID/Madagascar, which was looking for ways to use plantation thinnings, requested information on densified charcoal. An FSP staff member contacted the National Agriculture Library, which found a number of suitable articles on the subject. The FSP carefully evaluated the articles then sent them to the Madagascar mission. In response to mission requests, information on two promising tree genera (*Gliricidia* and *Paulownia*) was sent to Asia missions. With experience in meeting AID mission requests for technical information, the FSP has found that broad generic requests are best met by supplying a good, annotated bibliography, which can then be used by the mission to



FSP stimulated information exchange between AID missions on use of draft animals to skid logs. (Photo by P. Durst.)

request additional information on more focused and specific subjects.

The FSP does not specifically maintain figures on the numerous requests staff members receive for technical information. The time spent in dealing with these varies widely, ranging from a few moments to several hours. The FSP staff estimates that the number of requests averages about 30 per month. Of these, about half are filled with materials available in the FSP office. About a quarter of them are filled through such institutions as the National Agricultural Library or the FS Institute of Tropical Forestry (ITF) Library in Puerto Rico. The remainder are filled by individual FSP staff searches. The FSP maintains a distribution file of materials that address the most common requests.

Other Related Communications

FSP Periodic Reports

FSP periodic reports, 8 to 10 pages long, summarize current activities of the FSP Washington-based staff in the following areas: bureau support, mission support, general Agency support, upcoming events and visitors, and new publications. In a review of past periodic reports, the FSP determined that

summaries tended to be too repetitious when issued weekly, and the reports are now being issued at 4- to 5-week intervals. Distribution has been increased (now about 85 recipients) to include all AID direct-hire and contract staff forestry and natural resource field people, AID bureaus, and a variety of AID and Peace Corps collaborators. The periodic reports often have numerous enclosures, e.g., copies of new legislation, a USDA press release on solar box cookers, or a summary description of AID's Fragile Lands Initiative. Numerous cable responses to the FSP from missions are evidence of the benefit of these reports. The reports also have stimulated cable exchanges between missions, such as the recent exchange between Thailand and Peru on the technology of using draft animals, rather than machines, to skid logs.

Quarterly Memo

The FSP has continued to advance the objective of maintaining a viable communications network among those involved in carrying out AID's forestry and related natural resources development programs through the 50- to 60-page Quarterly Memo, which updates about 450 AID direct-hire and contract staff on new developments in forestry and natural resources. These memos contain information on the FSP, AID, and other donor organizations, as well as details on upcoming forestry meetings, short courses, current publications, and pertinent news items. Four editions were distributed by FSP during 1986.

FSP "Brown Bag" Seminars

FSP "brown bag" seminars provide a no-cost forum for the Washington-based forestry and development community to discuss international forestry issues. Organized as time permits and as speakers are available, they typically are held at noon in Rosslyn, Virginia, with those in attendance bringing their own lunches. In 1986, 14 seminars (see box on p. 24) were held, with participation ranging from 10 to 50 people. The seminars

have helped establish contact between field personnel and others with common interests in Washington. As such, they constitute a continuing education program for the Washington-based forestry and development community.

Outlook

During 1987, the FSP expects to update and maintain the electronic data bases developed on AID forestry and natural resource projects, private-sector projects with forestry potential, and AID's forestry community. The data will be used to generate "hard

copy" summary status reports on AID activities by geographical region and AID bureau for general distribution and to help guide project planning and implementation efforts. The information will be expanded to include AID and related PVO forestry work associated with the Agriculture Trade Development and Assistance Act (Public Law 480), and possibly to include a broader range of environmental and natural resource activities of the Agency. The FSP expects to generate a data base on AID-financed small activities (science adviser grants, project management and review studies, and PPC studies and grants). The FSP also hopes to launch a review of AID forestry project evaluations of

Speakers and Subjects at FSP-Sponsored Brown-Bag Seminars

- Mike McGahuey, Chemonics, "Agroforestry in Africa--with Emphasis on Chad and Acacia albida," January 30, 1986.
- Steve Berwick, International Institute for Environment and Development, and Joe Berry, Yale School of Forestry, "Integrated Systems Analysis of River Basin Projects," February 7, 1986.
- Chuck Hodges and Tom Geary, "FSP Supported Technical Assistance Visit to Senegal to Diagnose the Cause of Mortality of Casuarina Trees," February 27, 1986.
- CARE staff, including the regional technical advisory team, "CARE Forestry Program Worldwide and the Conclusions of Its Research in the Majjia Valley in Niger," March 6, 1986.
- Paul Dulin, chief of party of Chemonic's contract, "USAID's Natural Resource Management Project and Agroforestry Systems in Honduras," March 7, 1986.
- P. K. Nair, International Council for Research in Agroforestry (ICRAF), "Inventory and Classification of Agroforestry Systems," March 25, 1986.
- Hal Salwasser, deputy director of Wildlife and Fisheries, FS, "Wildlife Management and Forestry in India," April 23, 1986.
- Jack Ranney, Oak Ridge National Laboratory, "The Relevancy to AID's Forestry Projects of the Oak Ridge National Laboratory Program on Short-Rotation Woody Crops," April 29, 1986.
- Max McFadden, FS senior staff entomologist in Washington, D.C., "Evaluation of the Leucaena/Heteropsylla Problem in Hawaii, the Philippines, and New Caledonia," June 2, 1986.
- Cynthia Mackie, ANE Office of Technical Resources, "Applied Ecological Research in Upland Tropical Rainforests of Borneo," June 17, 1986.
- Henry Tschinkel, Regional Office for Central America Programs (ROCAP) regional forestry adviser in Costa Rica, "Tree Crop Production in Central America," August 7, 1986.
- Asif Sheik, Energy Development International, "Forestry Resources Analysis and Planning Model (FRAP)," August 20, 1986.
- Len Newell, FS Pacific Islands forester, "Forestry in the Pacific," September 17, 1986.
- Chuck Schnell, Organization for Tropical Studies (OTS) in Costa Rica, "OTS's Role in Fragile Land Management," October 1, 1986.

the past decade to determine if patterns exist that should be considered in planning future projects.

The FSP will continue to provide technical reference services to all AID bureau and mission personnel involved in forestry development projects and programs, including contractors, as well as to Peace Corps forestry volunteers worldwide. The technical refer-

ence collection will continue to emphasize those documents not readily available in more traditional forestry libraries, such as limited-edition consultant reports, FAO documents, and various types of so-called fugitive literature. New documents will be noted in FSP periodic reports as well as the FSP Quarterly Memo. The FSP brown-bag seminars will continue in Washington.

Chapter 5 Training

Forestry Training Strategy

In FY 1986 the FSP training and education coordinator prepared a training strategy following consultations with all primary AID bureau contacts and FSP geographical coordinators. The strategy focused on providing assistance to AID missions and regional offices to design, implement, and evaluate their forestry and training activities. It anticipated involvement by the FSP in developing training materials, conferences, and courses, as well as strengthening linkages with relevant institutions as discussed below.

Forestry Training Assistance to AID Missions

In implementing its 1986 training strategy, the FSP made various technical assistance visits to AID missions to develop plans, sent advisers to teach specific courses in AID countries, coordinated placement of participants in courses, funded attendance of participants at training activities, and provided missions with announcements on courses and other training information.

The FSP training and education coordinator visited St. Vincent in November 1985 and developed "A Training and Education Action Plan for St. Vincent and the Grenadines: Emphasising Forestry, Watershed Management, and Soil Conservation." Plan implementation began with the Workshop on Soil Conservation and Watershed Management in St. Vincent in April, and the FSP provided an instructor for the workshop. In the spring the coordinator visited India to help plan training for AID-assisted social forestry projects. This resulted in the report "Planning International Training for USAID-Assisted Social Forestry Projects in India."

In June 1986, the coordinator and an OICD training officer visited Honduras, where a plan for short-term, hands-on field forestry training of Honduran foresters in the United States was written. After the visit, a 9-week training program for the first 10 Honduran trainees was developed, scheduled, and implemented in the United States through a cooperative effort of the FSP and OICD.



OICD-FSP cooperative forestry training course for Hondurans sponsored by LAC. (Photo by University of Idaho.)

This practical hands-on training in Spanish was designed to meet the Hondurans' needs and included fieldwork in montane coniferous forests of the United States. The training, which was carried out partially in anticipation of a large planned Honduran forestry project, was funded by CAPS.

The FS contributed to FSP training activities by providing individuals to instruct or develop courses. Scientists from the Southern Forest Experiment Station conducted short-term training in forest tree seed handling and agroforestry research design in the Philippines. The regional hydrologist for the Southern Region taught forest hydrology in St. Vincent, and a Southeastern Forest Experiment Station employee helped design the training for the Honduran foresters.

In 1986, 18 faculty members from Indian state agricultural universities began yearlong assignments as visiting faculty at U.S. forestry schools as part of a program to institute forestry education and research in their universities. The FSP, on behalf of AID/India's Applied Agricultural Research Project and in cooperation with S&T/FENR and Winrock International (contractor for the Applied Agricultural Research Project), solicited initial interest from U.S. forestry schools for hosting visiting Indian faculty.

The FSP supported the attendance of four participants (from Indonesia, Barbados, Sri Lanka, and the Philippines) at the Training Workshop on Nitrogen-Fixing Trees for Agro-

forestry in the Humid Tropics, which was held in the Philippines, and supported a Tunisian's participation in the International Symposium on Windbreak Technology in Nebraska. In FY 1986, 11 participants at the Second International Seminar on Forest Resource Administration and Management were sponsored by the FSP. Throughout the year the FSP (usually working in coordination with OICD) assisted individuals and missions in placement at courses, in logistics and travel, as a communications link, and with other backstopping activities.

Training Materials, Conferences, and Courses

The FSP actively supported two major training activities in FY 1986. In October 1985, 26 participants from 23 countries attended the monthlong Second International Seminar on Forest Resource Administration and Management, which is a joint activity of the University of Michigan, the FS, and the FSP (for the first two "startup" years). The seminar is an intensive, interactive training program for senior natural resource managers from the developing world. It focuses on strategies and methods to develop, manage, and conserve forest resources for the sustained delivery of goods and services to meet the full range of human needs, and it travels to a series of locations in the eastern United States.

In September 1986, about 180 forestry scientists and leaders from 28 countries participated in the weeklong Conference on Management of the Forests of Tropical America: Prospects and Technologies, which was funded by AID's FRM, through the FSP and OICD, and organized by the FS's Institute of Tropical Forestry in Puerto Rico. The Puerto Rico Department of Natural Resources and the International Society of Tropical Foresters were also cosponsors.

Distinguished international foresters presented papers and held discussions on a broad spectrum of topics that consolidated experiences in the management of natural and

artificial forests in the American tropics, as highlighted below:

- Forest management outlook--environmental, social, and economic
- Current management scene--government and private
- Natural forest management--hydrology, wildlife, recreation, wood production, harvesting, economics
- Forest planting--site and species, tree improvement, planting stock, site preparation, planting, silviculture, insect and disease control, site maintenance, and research
- Future wood markets--prospective markets and new products and processes
- Communications and social forestry--outreach, community forestry, agroforestry, and fuelwood forestry

In midconference, a break was taken to visit the Caribbean National Forest, where the ITF and cooperators conduct much of their research. The conference was followed by specialized study tours of forestry activities in Puerto Rico. Proceedings of the conference will be published by the FS with FSP funding, and the FSP will assist with distribution.

Besides direct technical assistance to missions, the FSP conducts centralized training activities to serve a broad spectrum of AID needs. A Spanish-language training manual on agroforestry was developed in cooperation with the OTS and the Center for Tropical Agricultural Research and Training (CATIE), both in Costa Rica. The finished manuscript is in press.

Institutional Linkage and Liaison

An FSP function is to keep the university forestry community informed about AID's forestry portfolio and other forestry development issues. This is accomplished mainly by periodic memorandums to the deans of the NAPFSC. A special effort is made to keep the deans informed of employment opportunities for U.S. professionals. The FSP roster

also represents a key link to universities. Through the roster, the FSP identifies university personnel who are potentially qualified and available for overseas and other assignments.

The FSP initiated a modest research studies program to encourage expanded cooperation between LDC institutions and U.S. universities. In 1985 support was given to five graduate research studies to begin these ties. Two studies have been completed and the reports have been delivered to the FSP, to involved missions, and to host country institutions (noted in Chapter 6).

To promote institutional liaison, the training and education coordinator served as panel chairman for the discussion on special needs and consideration for international programs at the Meeting of the American Institute of Hydrology. The meeting theme was "Education and Professional Development in Hydrology and Hydrogeology: Needs and Opportunities."

OICD coordinates activities of the International Science and Education Council (ISEC), which includes several subcommittees with a wide range of members from the public and private sectors. FSP staff members formally represent the FS on both the Education Subcommittee and the Technical Assistance Subcommittee.

Outlook

In cooperation with AID regional bureaus and the FSP geographic coordinators, the FSP training and education coordinator will update the FSP training strategy to reflect current needs. The FSP will continue to help missions by keeping them informed of training opportunities, providing technical assistance to develop training plans, arranging specialized training for mission-sponsored participants, and coordinating participant activities in the United States. The FSP will fund some individual participant training in support of Agency goals and to facilitate a critical mission training need. U.S. universities and other training institutions will be informed by the FSP of AID forestry training needs, and their programs and proposals for interna-

tional forestry training will be targeted for AID-sponsored participants. Priority in developing and sponsoring training materials and activities will be given to those that link forestry with agriculture and that target PVO and Public Law 480 food-for-work projects. The supply of the popular FSP publication "Profiles of U.S.A. Forestry Schools and Consortia" has been exhausted, and a revised edition will be published.

Printing, distributing, and promoting the Spanish-language agroforestry manual in the LAC region is high on the agenda, as is developing training materials to support PVO tree-planting and agroforestry activities in sub-Saharan Africa, as an adjunct to AID's emerging "greening of Africa" concept and AFR's Natural Resource Plan for Africa. The FSP staff expects to be involved with an effort initiated by the Caribbean regional forestry adviser in Puerto Rico and the Pacific Islands forester in Hawaii, to hold, in collaboration with CATIE, a joint Pacific-Caribbean islanders agroforestry workshop in Costa Rica in May 1988. The FSP also expects to identify AID-sponsored forestry and natural resource students throughout U.S. forestry schools and create a technical support network tailored specifically to their needs.



The International Forestry Seminar is an intensive training program for senior natural resource managers from the developing world. (Photo by J. Burchfield.)

Chapter 6

Technical Support to Research

Overview

The FSP's objective of supporting forestry research as part of AID's program reflects S&T/FENR's focus on research and is consistent with AID's identification of "technology: research, development and transfer" as one of four basic programmatic components to its long-range development strategy "Blueprint for Development."

AID forestry projects usually address difficult social needs of rural people, integrate forestry and agricultural practices, and require the use of multipurpose tree species for marginal lands. To provide new technical information for the projects and direction for AID research, the FSP continues to encourage or undertake technical studies and initiatives, such as those highlighted in this chapter. Evidence of the influence of some of these technical studies on AID's programs is noted.

The FSP also provides technical assistance for forestry-related research efforts, as well as expert referrals for research expertise to the AID bureaus, missions, and regional offices. In Latin America and the Pacific, the FSP's emphasis has been on watershed management, whereas in Africa it has been on strengthening research institutions' agroforestry practices and on building links with agricultural research activities. The



Selection and genetic improvement of MPTS was a major discussion topic at the IUFRO Research Planning Workshop in Africa. (Photo by T. Resch.)

FSP helps develop and advertise research workshops and related technical training opportunities.

Applied Research

Two applied research studies financed in previous fiscal years were completed during FY 1986. The first dealt with the nutritional content of leaf meal made from Leucaena (ipilipil) in Indonesia and was done by the Nitrogen-Fixing Forage Species Project of the Indonesian Animal Productivity Research Laboratory at Bogor.

The second study lasted 28 months and dealt with the effectiveness of windbreaks established in the Majjia Valley of Niger. It was funded jointly by S&T/FENR through FSP, AID's Food for Peace (FFP) and Voluntary Assistance Bureau (FVA), and CARE. The study analyzed sociological factors, the effects of windbreaks on crop yield, fertilizer and stolon management trials, soil and meteorological conditions, tree harvests and regeneration, effects of silvicultural practices on crop yields, and economic impacts. More than 30 research papers were written, and a regional seminar with 55 participants was held. A summary report of the entire activity is now in draft and is scheduled for completion in 1987.

Additionally in 1986, the FSP evaluated a project that had been managed by CARE/Chad from 1975 to 1979 that established Acacia albida trees in farmers' fields. The evaluation identified reasons for tree mortality, reported on growth and farmer acceptance, and gave midcourse guidance to a similar project that had been initiated in 1985.

IUFRO Research Planning Workshop for Africa

The S&T/FENR-funded FSP provided a major portion of the resources necessary to hold a regional workshop in Nairobi, Kenya, during January 1986, sponsored by the International Union of Forestry Research



Erosion control and reforestation of degraded fragile lands have been focal points of FSP-supported research. (Photo by R. Calnan.)

Organizations (IUFRO). The FSP has provided the mechanism for channeling AID support to IUFRO for setting forestry research priorities in each region. This was done as part of the initial efforts of the F/FRED project. The Kenya workshop, which had the theme "Increasing Productivity of Multipurpose Lands," focused on those countries in the Sahelian and North Sudanian Zone, where rainfall does not normally exceed 800 mm/year and the dry season lasts no less than 6 months. Representatives from 14 African countries and 25 donor and international organizations participated in the meeting.

Five major topics were vetted at the workshop, covering major forestry research concerns in the Sahelian-Sudanian climatic zone:

- Selection and genetic improvement of multipurpose tree species (MPTS) and provenances, including the strengthening of facilities for seed collection, processing, storage, and exchange;
- Management of natural stands and natural regeneration techniques for silvopastoral land use systems;
- Nursery practices and techniques for the establishment and management of MPTS plantations;

- Agroforestry practices to mitigate wood, fodder, and food shortages; and
- Development of techniques for the maintenance and enhancement of soil productivity, with special reference to nitrogen-fixing trees, tissue culture, and biotechnology.

S&T/FENR and AFR developed a new agreement for multipurpose tree research networking with ICRAF.

The FSP had earlier provided support to IUFRO for its workshop on forestry research priorities in Sri Lanka (1984) and is again providing support for an IUFRO-sponsored regional workshop in Latin America that is anticipated in 1987.

Graduate Research Studies

Support was given, on a trial basis, for five graduate research studies to foster expanded cooperation between LDC institutions and U.S. universities. Two studies were completed during 1986, and the reports were delivered to the FSP: "Fuelwood Policies for Swaziland's Rural Development Areas Programme: A Comparison of Individual Farm and Community Approaches," by James A. Allen of Cornell University, and "A Method of Land Evaluation for Watershed Land Use Planning in the Tropics: A Case Study of Riam Kanan, Indonesia," by James Schweithelm of the East-West Environment and Policy Institute.

Studies are still in progress on the effect of light exposure level on recruitment and growth of five tropical tree species in Panama (Yale University), reforestation of degraded lands and the impact on water quality in the western zone of Sri Lanka (University of Georgia), and a strategy for the implementation of erosion control practices to enhance watershed development in Ecuador (University of Tennessee). At the request of AID, future research support of this nature will be very limited, and only as an adjunct to other FSP activities.

Influence on AID Programs

The technical studies described in this chapter, which have been undertaken or



FSP provides technical assistance for forestry-related research. (Photo by P. Durst.)

influenced by the FSP, continue to influence AID's forestry and agriculture program directions. Tree windbreaks in Niger and *A. albida* plantings in Chad (reported with assistance of the FSP), for example, provide documentation of concrete success stories in agroforestry that are encouraging or influencing similar activities elsewhere in the region. The experiences are cited frequently as socially appropriate low-input agricultural technologies that work.

Outlook

The FSP will continue to provide expert referrals for forestry-related research in AID bureaus, missions, and regional offices. S&T/FENR's F/FRED project is now active and is forming research networks that will increasingly handle forestry research needs. The FSP will complete its assigned forestry research network startup role during 1987, with the final IUFRO workshop in the LAC region. The FSP does, however, expect to recruit a social forestry coordinator, to be financed by S&T/RD, whose duties will be to provide technical advice to AID on social forestry and related natural resource research strategies. The new coordinator will assist AID in developing an easily accessible information system and resource network, particularly as it relates to F/FRED activities. The FSP's largest continuing role in applied research is in association with the FPEI as described in Chapter 7.

Chapter 7

Forestry-Private Enterprise Initiative

The FSP activity directed toward the private sector's role in forest-based economic development is the FPEI. AID's "Forestry Sector Strategy" stresses private-sector involvement in forest-based economic development and enhanced income and employment opportunities, consistent with broader Agency goals. Primary attention is focused on indigenous private enterprise, and the private sector in general, as an engine for development. Consistent with this policy thrust, AID amended the FSP objectives in 1983 to include the FPEI. Implementation was begun with a 1984 agreement between OICD, the FS, and the Southeastern Center for Forest Economics Research (SCFER; a consortium consisting of the FS's Southeastern Forest Experiment Station at Asheville, North Carolina, Duke University, North Carolina State University (NCSU), Clemson University, East Carolina University, the University of Florida, the Georgia Institute of Technology, the University of Georgia, the University of Kentucky, and Virginia Polytechnic Institute and State University) to perform cooperative research on the economic potential of the private forestry sector in developing countries and to develop related demonstration activities.

During FY 1986 the FPEI consisted of three technical components: (1) the market development component (INFORDE, a Spanish acronym for the Forestry Initiative for Development), based in Quito, Ecuador;

(2) the research component, with the principal investigator based in Raleigh, North Carolina; and (3) the forest enterprise coordinator, operating from the FSP office in Washington, D.C. Additionally, an FPEI administrative assistant is based at Raleigh (see Fig. 1-2). Responsibility for project management was assigned to NCSU, the employer of the FPEI personnel.

A four-person FPEI Advisory Panel, whose members represent both private and public sectors, convenes once each year to review activities and provide guidance for future work under the initiative.

Market Development Demonstration Component

Building upon ties made earlier by the AID mission through AID/Quito's Nontraditional Agricultural Exports Project, the market development specialist quickly established an affiliation with Ecuador's Wood Products Manufacturers Association (AIMA). By November 1985 AIMA, with INFORDE assistance, conducted a workshop on how to export wood products to U.S. markets. This was done in conjunction with AID/Quito's project on export promotion and used the talents of six American experts brought to Quito for this purpose. As a result of the exporting workshop, six Ecuadorean furniture manufacturing companies joined to form an export marketing consortium called Andean Industries, retained U.S. designers and a U.S. sales agent, leased warehouse space in Jersey City, New Jersey, and planned to ship their first full container in late 1986.

The role of the INFORDE project in Ecuador is to demonstrate the economic and social benefits that can result from directing special attention to the forest-based private enterprise sector. Its goal of sustainable development for the industry will be achieved only if the forest resources can be maintained. INFORDE is forging links with Ecuador's environmental community, as represented by the Fundacion Natura (Nature Foundation), and is cognizant of the fact that forests must be managed for sustained pro-



The FPEI encourages efficient utilization and reduction of wastes. (Photo by P. Durst.)

duction. INFORDE is encouraging improved utilization through reduction of waste and finding uses for presently noncommercial tropical hardwood species.

The demonstration also is intended to show how an AID mission can blend public-sector forestry and private enterprise into an integrated whole that supports mission objectives. The November workshop, which stimulated industry cooperation for developing new markets, is just one of many INFORDE efforts. The various INFORDE activities are broadly grouped into seven categories:

1. Identification of additional domestic and export market opportunities,
2. Strengthening of wood products marketing at AIMA,
3. Improvement of product quality,
4. Applied economic and research studies,
5. Feasibility and marketing of wood-based housing construction prototypes,
6. Technical and training assistance to small-scale woodworking industry, and
7. Training and technical support to private wood producers.

Several of these activities are notable for their ingenuity and potential for stimulating the entire spectrum of forestry enterprises from seedling to market:

- Marketing: A folio with color plates describing 15 important Ecuadorean tropical hardwood timber species was printed in English. Copies of the folio are being sold by AIMA to its members, who in turn will distribute them to their present and potential customers. AIMA will then repay INFORDE, which assembled the technical information, gathered the wood samples for photographing, and financed the printing.
- Small enterprise assistance: Joint activities have been conducted between INFORDE and the Social and Technological Research Institute (INSOTEC), a private, nonprofit Ecuadorean institution that provides research and technical support to small manufacturing industries,

many of which are wood processors. For example, the two organizations conducted the marketing and feasibility studies for a lumber dry kiln operation to be built and managed by a group of four small wood producers located in the rural province of Pastaza. In addition to a variety of direct in-plant assistance projects, both INFORDE and INSOTEC have organized workshops that give small companies and regional associations of small wood producers a chance to be exposed to the programs of AIMA, whose past activities have tended to focus on larger wood products companies. Support for further efforts is likely to come from the mission's new small enterprise project which is being implemented by INSOTEC.

- Privatization of wood products laboratory: With support provided by INFORDE, the Ministry of Agriculture invited an experienced international forest products specialist to review the research, training, and extension situation in Ecuador and to recommend a strategy for improvements. One recommendation was that the Ministry's wood products research laboratory at Conocoto, which has been underfinanced and understaffed, be developed into a professionally and privately managed technical center primarily oriented to problem areas in the private wood industry. This recommendation has led to a policy dialog now being completed on the privatization of the laboratory. While the privatization progresses, four young professionals who show high potential are being trained for positions in the new laboratory, and discussions are under way with the Inter-American Development Bank for additional financing.
- Housing market: In many tropical developing countries, construction of houses and other buildings has traditionally used nonwood materials despite an abundance of timber. By demonstrating the proper manufacturing and marketing of building products made with the softer, less preferred, and less known species, better use will be made of trees that are



The FPEI assists developing countries to produce higher quality forest products. (Photo by J. Palmer.)

now cut and burned or left to rot in the forest. A major market appears to exist in Ecuador for building material used in the expansion of existing houses, and the construction of prototype expansions using Ecuadorean lumber, plywood, and millwork has been initiated. After market research in the country's three largest cities, the units are being designed and built in close cooperation with several private firms located in those cities. The potential for better housing at lower costs, and with other income and employment benefits, is judged to be excellent.

- Industry institution building: Recognizing the potential role of trade associations as vehicles for providing technical assistance to industries, INFORDE arranged for the executive director of AIMA to travel to the United States for 2 weeks in April to observe the operations of American wood products associations and related organizations. The itinerary in the United States was arranged by the FSP and included visits to 20 wood industry trade associations, product grading agencies, testing laboratories, and commercial contacts. Establishing market grading systems will accelerate the growth of the wood products industry in Ecuador, as it will in many other countries. Helping AIMA improve its effectiveness as a focal point for the industry's technical and promotional activities is typical of the

steps that AID can take to strengthen private-sector institutions.

INFORDE is linking natural resource management, the forest industry, small enterprise development, research, education, and housing in its coordinated effort to target technical assistance to a key sector of the Ecuadorean economy. Although situations elsewhere would certainly be different, the FSP expects the demonstration effect of the INFORDE project in Ecuador to provide a stimulus where similar potential exists in other countries.

Private Enterprise Research Component

The FPEI research component has been actively involved in a variety of activities during the past year. Its budget is modest, and its products are intended to have early application. Studies in progress include the following:

- Research on financial analysis of plantation investments (Ecuador)
- Development of a guide to investment and trade in the forest products sector in Southeast Asia
- A reevaluation of reforestation incentives (Brazil)
- Development of an import substitution model for softwood lumber (Jamaica)
- Production of an "Annotated Bibliography on Income and Employment in Forest-Based Industries of Developing Countries"
- Numerous other studies linked to INFORDE in Ecuador, including a "Study of Small Sawmilling Enterprises in the Province of Pichincha"

The research is closely coordinated with, and supportive of, the market development activities in Ecuador. For example, the study on plantation investments in Ecuador was made available to its prime audience of private landowners and was also used by the principal investigator for a special session on forestry economics techniques conducted at the Forestry School at Loja National Univer-

sity. This has led to an offer by INFORDE to provide modest stipends to forestry students at Loja who choose topics for their senior theses from a list of research problems important to the wood products industry.

Likewise, the survey of small sawmill enterprises in Ecuador has given rise to a more comprehensive series of studies directed at improving the sawmill industry. An NCSU graduate student is reviewing the economics of sawmill operations in different regions of Ecuador as a starting point to focus technical assistance and policy dialog.

Forest Enterprise Component

The FSP maintained a Washington, D.C.-based forest enterprise coordinator from November 1984 until September 1986. The

coordinator's function was to serve as an information broker and technical assistance advisor, linking the U.S. forest industry and overseas development projects. His task was to serve as a focal point of information and technical support services worldwide to AID missions, bureaus, contractors, and other organizations. Specifically, during this year the following were accomplished as AID missions increasingly took advantage of opportunities afforded to integrate forest-based private enterprise work in mission project agendas:

- Worldwide announcement: A cable was sent to all missions describing the FPEI and the availability of technical support for private-sector activities.
- Brochure: An information brochure on the initiative was developed and distributed to



Private enterprise research includes studies of market potential for nature-oriented tourism in Thailand and the Philippines. (Photo by P. Durst.)

all AID missions, AID personnel attending various training courses for rural development, private-enterprise officers, and numerous industry contacts and organizations in the United States.

- Senegal: A consultant was sent to Senegal to serve on a team preparing the project paper for a reforestation project. Recommendations were made to promote private-sector involvement and forest products marketing within a massive popular campaign for private tree planting.
- Far East: The forest enterprise coordinator met with mission staff in Indonesia and Thailand to discuss the FPEI following his participation in an FAO expert consultation on the forest industry in Indonesia.
- Philippines: A consultant was sent to the Philippines at the request of the AID mission to prepare studies of contract reforestation and nature-related tourism. The latter study was replicated in Thailand.
- Nepal: Two consultants were identified for the AID mission in Nepal to study and prepare recommendations on the privatization of state-owned forest enterprises and ways of improving in the forest-based private enterprise sector.
- Gambia: Assistance was provided to AFR in locating a consultant to prepare a feasibility study on the privatization of the state-owned sawmill in the Gambia.
- Honduras: Arrangements were made for three Honduran foresters to attend the 1986 Forest Industries Management Development Program at the University of Tennessee after a cable announcing the program was sent to all AID missions.
- Bolivia: A consultant was sent to Bolivia to investigate how AID might assist private forest enterprise in that country.

The forest enterprise coordinator also responded to numerous other requests to provide information to missions or to private or other development organizations. In cooperation with the Ecuador market development activity, the coordinator helped to arrange the U.S. study tour for AIMA's executive director and for the printing of the folio on Ecuadorian woods mentioned earlier.

Outlook

The FPEI will be modified in the coming months. Budget reductions late in the year resulted in a restructuring of the FPEI and the elimination of the Washington-based forest enterprise coordinator position. Future requests from missions and others for technical support on forestry private enterprise activities will be handled, to the extent possible, by the FSP's geographic coordinators, in the same way all other requests to the FSP are handled.

At the close of the year, the FPEI 1987 Work Plan and Annual Budget were provided by SCFER to OICD for internal review. They were also circulated to other appropriate Washington offices (including S&T and the geographical bureaus) for comment. It is anticipated that the FS Southeastern Station will have an increasing role both in handling the administrative functions of the FPEI and in using the station's considerable research expertise to review and monitor FPEI studies, in cooperation with the other SCFER principals at NCSU and Duke University. Both the SCFER Executive Committee and the FPEI Advisory Panel are expected to directly evaluate work plans, budgets, and products next year.

The research component of the FPEI will concentrate on four general areas during 1987:

1. Completion and publication of studies in progress for distribution to AID missions, AID contractors, and others with an interest in forest-based private enterprise.
2. Investigation of the comparative economics of posts and poles made of treated wood versus concrete and steel in Ecuador.
3. Synthesis of forestry sector case studies of experiences by AID, the World Bank, regional development banks, FAO, and others attempting to privatize forest-based industries and change forest policies in a market-oriented direction.
4. Implementation of marketing research to assist alternative enterprise opportunities on tropical wildlands (nonextractive uses). This will be a major focus, forging a link

between private enterprise and forest conservation goals, with work concentrated in Costa Rica and Ecuador. This effort responds directly to elements of AID's "Forestry Sector Strategy" (1984) and its "Policy Paper on Private Enterprise Development" (1985), as well as new (1986) legislative amendments to the Foreign Assistance Act, dealing with tropical forests and biological diversity. The FPEI will concentrate these efforts on the following marketing and promotion studies:

- Competitive positions of developing countries as markets for wildlands visitation,
- Markets for nature travel to developing countries by U.S. conservation organizations and university groups,
- Examination of the contributions of the OTS, a U.S. tropical ecological training and research organization, to the economy of Costa Rica, and

- Identification and assessment of market segments for wildlands visitation in Costa Rica and Ecuador.

The focus of the FPEI on "deliverable" products of an applied nature will be reinforced during 1987 by a review meeting with representatives of SCFER, OICD, AID (S&T/FENR and others), and FSP to prioritize the following year's research agenda.

The market development demonstration component of the FPEI will continue in Ecuador with current projects. New efforts will focus on training wood specialists (jointly through AIMA and INSOTEC) and development of the proposed Technical Center in cooperation with INSOTEC. A formal review of this component is anticipated by S&T/FENR during 1987. The FSP will help identify potential participants in the review team through its roster. A manuscript on this component is being forwarded by the FSP to S&T/FENR for possible publication in AID's Horizons or Front Lines.

Chapter 8

Forestry-Agriculture Initiative

Overview

The FSP forestry-agriculture initiative became operational at the midpoint of FY 1986, with the appointment of a coordinator. Activities have been focused on three major areas:

1. Direct involvement in mission and centrally funded, planned, and ongoing agriculture, forestry, energy, and natural resource projects to encourage greater emphasis on agroforestry;
2. Development of courses and materials for in-country agroforestry training; and
3. Establishment of linkages with national and international professional agrofor-



Cocoa potential as an agroforestry crop in Central America and the Caribbean will be the focus of a major conference. (Photo by D. Johnson.)

esters as well as with institutions supporting agroforestry, in order to take advantage of the latest technologies developed in the field.

The coordinator visited eastern and southern Africa to discuss closer coordination of training activities with ICRAF in Kenya and visited AID missions in Burundi and Lesotho to review agroforestry-related projects. He also worked closely with LAC and the Pan American Development Foundation to increase the emphasis on agroforestry in their efforts to promote the growing of cocoa by small farmers in the Latin America-Caribbean region. This particular activity consisted of gathering data on the agroforestry potential of cocoa in Central America and the Caribbean, for presentation at an Inter-American Cocoa Forum to be held in Costa Rica in January 1987.

Other activities included participation in the joint S&T/RD and LAC Technical Evaluation Committee for the DESFIL proposals, lecturing on agroforestry in AID's Agriculture/Rural Development State-of-the-Art Course held in Washington in June 1986 and reviewing proposals for the National Research Council's Tropical Trees Program.

Outlook

Considerable activity in the coming year is expected to be focused on Africa. Initial communications have been made relative to an assessment of agroforestry potential in the Mauritania Agriculture Research Project II (Senegal River Basin) and design of a possible agroforestry component of the Burundi Small Farming Systems Research Project. In addition, the coordinator will participate in the organization of the agroforestry training workshop for PVO's in East Africa and the ANE agricultural development officers' annual work session in Thailand. Early in the fiscal year, an FSP report entitled "An Abstract Bibliography of Agroforestry Articles from Agroforestry Systems and the International Tree Crops Journal 1980-1986" will be issued. Also

planned is a pantropic state-of-the-art study on the potential role of buffer-zone agroforestry as a means of assisting small farmers at the same time as conserving biological diversity and contributing to the integrity of protected areas.



The agroforestry initiative became operational in mid-1986. (Photo by T. Resch.)

Chapter 9

Forestry-Food and Voluntary Assistance Activities

In both FY 1985 and FY 1986, discussions were held among staff representatives of AID S&T/FENR and the FS concerning prospects for a joint initiative on forestry links with food aid and voluntary assistance activities, with primary emphasis focused on the Agricultural Trade and Development Assistance Act (Public Law 480). More than half of the annual funding by AID for development activities in the forestry sector is derived from Public Law 480 projects under titles I, II, and III. In fact, much of the actual tree planting accomplished by AID is carried out through Public Law 480 forestry and food projects. Both AID and USDA have joint responsibility for execution of the Public Law 480 program with other government agencies. No systematic technical forestry oversight has been provided in a planned manner for Public Law 480 forestry and food projects by either agency.

During FY 1986 the S&T/FENR-funded FRM provided resources to both the FSP and the Peace Corps to contract individuals to work in this endeavor. The FS is matching AID's contribution toward salary and benefits of the FSP food and voluntary assistance coordinator, who works in close cooperation with a Peace Corps staff counterpart in the Office of Training and Program Support.

Food and Voluntary Assistance Coordinator

The FSP food and voluntary assistance coordinator has responsibility for providing professional advice and guidance on forestry programs related to Public Law 480 worldwide, as well as on PVO and NGO involvement. Technical advice is provided for Public Law 480 projects under titles I, II, and III, which deal with forestry, windbreaks, dune stabilization, reforestation, agroforestry, soil conservation, and watershed management. The FSP food and voluntary assistance coordinator is expected to accomplish the following:

- Gather, maintain, and monitor worldwide information on Public Law 480 forestry projects and activities. This includes establishment of a system for identifying

and tracking Public Law 480-supported forestry activities, targets, and accomplishments, with special attention to estimates of areas planted to trees, numbers of tree seedlings produced, survival rates, and other measures of activity level and success.

- Increase Public Law 480-supported forestry development impact over the long term. This entails such measures as encouraging greater attention to economic and marketing aspects and benefit distribution in title II food-for-work projects and greater effort in the area of proper species selection and use of superior plant materials and seed sources in all reforestation under-



Much of tree planting accomplished by AID is carried out through Public Law 480 forestry and food projects in Africa. (Photo by T. Resch.)

taken through title II food-for-work and title I-title III local currency projects. It also entails efforts to increase AID mission integration and mutual reinforcement among Public Law 480 title I-title III, Public Law 480 title II, and AID bilateral assistance projects and programs, as well as Peace Corps forestry programs.

- Provide increased technical backstopping for Public Law 480-supported forestry activities. This includes--

identification of needs and opportunities for technical assistance to Public Law 480-funded projects under titles I, II, and III;

provision of direct personal technical advice;

identification of technical experts and organizations to provide the needed services;

expansion of the existing FSP roster capabilities for referral services to AID of individual experts and organizations with competence to respond to Public Law 480-related forestry technical assistance needs;

arrangement for delivery of technical support services through OICD, including USDA personnel;

guiding efforts to increase AID mission commitments to provision of technical assistance for Public Law 480 forestry project formulation, design, implementation, monitoring, and evaluation; and

assisting AID missions and U.S. Embassies to identify needs and opportunities for providing technical inputs into formulation, monitoring, and execution of self-help measure provisions in agreements under Public Law 480 titles I and III.

- Coordinate closely with AID regional bureaus, FVA, AID mission-U.S. Embassy FFP officers, and related Government agencies and individuals. This includes--

establishment of a regular communications network with overseas-based FFP officers in AID missions and U.S. Embassy



The FSP provides technical assistance to Peace Corps volunteers on Public Law 480-supported forestry projects. (Photo by P. Durst.)

offices, and with LDC and other host governments;

coordination with the USDA Foreign Agricultural Service (FAS), the USDA Working Group on Food Aid, and other involved administrative groups, including the State Department (Bureau of Economic and Business Affairs), the Treasury Department, the Commerce Department, and the Office of Management and Budget; and

cooperative and collaborative work with Peace Corps headquarters staff, country offices, and forestry volunteers to improve, expand, and increase the effectiveness of Peace Corps participation in Public Law 480-supported forestry projects.

- Cooperate closely with other related executing institutions and PVO's. This includes working closely with PVO's at the headquarters level and with local field affiliates and offices, especially with Catholic Relief Services and to a lesser extent with CARE, the Adventist Development and Relief Agency, Church World Services, Lutheran World Relief, Save the Children, Africare, and others with an interest and involvement in Public Law 480-supported forestry project activities, with special emphasis on title II food-for-work projects, as well as close interaction with World Food Program (WFP)

headquarters in Rome and assistance to AID missions with formulation of recommendations concerning WFP forestry project activities.

- Assist AID and Peace Corps country missions with project identification, formulation, execution, and evaluation and with preparation of project documents for forestry and natural resource development activities.

Outlook

The FSP food and voluntary assistance coordinator is expected initially to become

closely linked with FVA, the OICD Public Law 480 program officer, and relevant USDA programs and officials. Contacts will be nurtured with the wide range of forestry- and natural resources-related PVO's and NGO's. The coordinator will participate in an AID mission-related evaluation of Public Law 480 title III activities in Senegal, a Peace Corps Public Law 480 program workshop in Kenya, and pertinent FVA meetings and conferences on this topic. Advice and information will be provided to the FAS for preparation of its annual report to Congress. The 1986 report will emphasize Public Law 480 forestry efforts.

Appendix A

Profiles of FSP Professional Forestry Staff

Gary B. Wetterberg, the FSP program manager since February 1985, has worked nearly a decade in Latin America in various capacities, including a 2-year (1967-69) forestry assignment with the Peace Corps in Chile and various FAO legislation and teaching assignments in Colombia, Peru, Paraguay, and Ecuador. As a senior FAO adviser to the Brazilian Forestry Development Institute from 1974 to 1978, he initiated preparation of Brazil's Park System Plan. Wetterberg later served for 6 years as the Western Hemisphere program coordinator for the NPS, which he represented on assignments in Latin America, Portugal, India, Japan, Pakistan, Indonesia, and Spain. Previous FS work in the United States has included 2 years with the Pacific Northwest Forest and Range Experiment Station and seasonal positions on three National forests. A native of Colorado, Wetterberg holds B.S. and M.S. degrees in forestry from Colorado State University, as well as M.F.R. and Ph.D. degrees in forestry from the University of Washington. Languages: Conversationally fluent in Spanish and Portuguese.

Thomas F. Geary, the FSP training and education coordinator, has 23 years of experience in research, development, and administration in tropical and subtropical forestry in addition to short-term assignments as a physiologist and 6 years at the ITF. In Puerto Rico he led an ITF research project on the silviculture of tropical trees and trained foreign students in research techniques. He has also taught forest pathology at the State University College of Forestry in Syracuse, New York. Dr. Geary received a B.S. degree in botany from the University of Rhode Island and a Ph.D. degree in forest pathology from the University of Wisconsin. He was the FSP Asia and Near East program coordinator for three years. Languages: Good Spanish, as well as some French, Portuguese, and German.

Timothy M. Resch, the FSP regional coordinator for Africa, has 16 years of forestry experience, including 9 years of international

work. In addition to the last 5 years in his present position and 3-1/2 years in Morocco with the Peace Corps as a research forester, Mr. Resch has worked for 7 years with the FS and the South Dakota State Forestry Division. This has included various forestry research and management positions, with work in such areas as shelterbelt management, community forestry, silviculture, pest management, and timber harvesting. Mr. Resch holds an M.S. degree in forestry from Colorado State University, with an emphasis on arid and semiarid zones and artificial regeneration, and also holds a B.S. degree in forestry from the University of Minnesota. Languages: Good French and fair to good Arabic, depending on the dialect.

John E. Palmer, the FSP regional coordinator for Latin America and the Caribbean, has 10 years of professional forestry experience, including more than 3 years of international work. He has broad experience with the Peace Corps and the FS, as well as with private industry, in such areas as timber management planning, silviculture, and communications. Mr. Palmer has a B.S. degree in forestry from Humboldt State University. Languages: Good Spanish. Mr. Palmer vacated his FSP position September 1, 1986, to accept an appointment with AID in Panama.

Richard J. Calnan, the FSP regional coordinator for Asia and the Near East, has 11 years of professional forestry experience, including 3 years of international work in nurseries, plantations, and erosion control in Nepal and Colombia. Before joining the FSP, he spent 5 years with the FS at both the district and forest levels in California and Kentucky in land management planning and program analysis. Mr. Calnan has a B.S.F. degree in forestry from the University of New Hampshire and has 1 year of graduate training in forest economics at the University of California at Berkeley. He served previously as the FSP special projects coordinator for 2 years. Languages: Good Nepali, fair French.

Dennis V. Johnson, the FSP forestry and agriculture coordinator, has 14 years of professional experience in agroforestry, geography, rural land use planning, agroclimatic zonation, and perennial and annual crop development, nearly all international in nature. He served for 2 years with the Peace Corps in Brazil and has worked elsewhere in Latin America, as well as in Africa and Asia. Before joining the FSP, Dr. Johnson worked as a consultant for 4 years, specializing in tropical agricultural development. He has a Ph.D. degree in geography from the University of California at Los Angeles. Languages: Excellent Portuguese, good Spanish, fair French.

Patrick B. Durst, the FSP special projects coordinator, has 9 years of professional forestry experience, including 4 years of international work. Before joining the FSP, Mr. Durst served as an agroforestry extensionist with the Peace Corps in the Philippines, and as a Fulbright grantee he analyzed the economics of Philippine wood energy and agroforestry projects. He has also worked as an assistant mensurationist with the FS in Georgia, and he has conducted research on alternative enterprise opportunities for tropical wildlands, forest products trade statistics, tree farm economics, and contract reforestation while working at the FS Southeastern Forest Experiment Station. Mr. Durst has a B.S. degree in forest management from the University of Wisconsin-Stevens Point and an M.S. degree in forest economics from North Carolina State University. Languages: Good Cebuano, some Tagalog (both Philippine languages). Mr. Durst entered on duty with the FSP on August 31, 1986.

Employees Associated with NCSU Under the FPEI

John Muench, Jr., the forest enterprise coordinator, has extensive experience in the private sector, having worked for 19 years with the National Forest Products Association (NFPA) in Washington, D.C., where until

recently he served as assistant vice president and director of economics. With NFPA, Dr. Muench prepared material on proposed legislation and industry economic issues for congressional hearings, journals, newspapers, radio, and television. In addition, he provided periodic forecasts of wood products, helped develop NFPA's International Trade Department, and served as a member of the 1983 U.S. delegation to the Timber Committee of the Economic Commission for Europe. Dr. Muench received his undergraduate and master's degrees in forestry from Pennsylvania State University, where he later served, from 1957 to 1965, as an assistant professor. His doctorate is in forestry economics from Duke University. The forest enterprise coordinator position within the FSP was terminated in September 1986 due to an expected reduction in funding in FY 1987.

Vicente A. Molinos, the market development specialist, whose areas of competence include forestry planning, engineering, and marketing, has spent most of his 15-year career in the private sector. He has worked as a planner with the Container Corporation of America and the International Paper Company, as well as with the Jari Project in Brazil and a wood products company in Chile. Mr. Molinos has extensive market development experience, having initiated and managed programs to export forest products from both the southern and the western United States, as well as from Chile, Brazil, and Colombia. Mr. Molinos' undergraduate forestry education is from the University of Santiago (Chile), and he holds an M.S. degree from the University of California, where he studied under a Fulbright Scholarship and specialized in wood technology and business. Languages: Native speaker in English and Spanish, with translational abilities in French and Portuguese.

Jan A. Laarman, the principal investigator, is also an associate professor of forestry at NCSU, where he teaches and conducts research in forestry economics. Dr. Laarman previously served as a forest economist for

the International Labor Organization (ILO) duty stationed in the Philippines. He conducted his doctoral research in Brazil, with funding from the Ford Foundation. While in Brazil, he prepared and taught a course in forest economics for master's students. Dr. Laarman was also once a student in the OTS course in tropical forestry in Costa Rica. Consulting activities include past assignments with the U.S. Environmental Protection Agency, the Asian Development Bank, AID, and a forestry consulting firm in Brazil. He assisted the secretariat of the ILO in its Third Tripartite Technical Meeting for the Timber Industry, in Geneva, Switzerland. He also serves on an advisory panel of the U.S. Congress' Office of Technology Assessment. That panel is charged with recommending technologies to sustain the productivity of tropical forest resources. He holds a Ph.D. and two M.S. degrees from the University of California at Berkeley. He obtained his B.S. degree in forestry from the University of Michigan, Ann Arbor. Languages: Fluent in Spanish and Portuguese.

Associated AID Regional Forestry Advisers

James R. Seyler, the AID regional forestry adviser for the Regional Economic Development Services Office for East Africa, was stationed in Nairobi, Kenya. He was associate director for the Peace Corps in Upper Volta (now Burkina Faso), and he previously spent 5 years in Upper Volta and the Central African Republic with the Peace Corps staff. Mr. Seyler served as a forester in French Guiana and as a Peace Corps volunteer in Cameroon. In addition, he has U.S. forestry experience, having worked as a forester in Pennsylvania after completing his B.S. degree in forestry at Pennsylvania State University. Mr. Seyler also has taken additional specialized courses in tropical silviculture in Puerto Rico. Languages: Very

good French, good knowledge of some West African languages. Mr. Seyler left this position in July 1986 to pursue graduate studies at Michigan State University.

Heinrich M. Tschinkel, stationed in San Jose, Costa Rica, and now funded by ROCAP as the regional forestry adviser for Central America, spent 5 years as the FAO project manager for the Integrated Watershed Management Project in Honduras. Earlier, with FAO, he spent 15 years working on assignments in Tunisia, Costa Rica, and Colombia. Dr. Tschinkel also taught forestry with the Interamerican Institute of Agricultural Sciences in Costa Rica. He has a B.S. degree in botany from Duke University and an M.S. degree in forestry from the University of California at Berkeley. Dr. Tschinkel studied forest soil science as a Fulbright Scholar at Ludwig Maximilian University in Munich, West Germany, and he completed his doctorate (cum laude) in forest soil science at the University of Hamburg in West Germany. Languages: Fluent German, good French, very good Spanish, fair Swedish.

Loren Ford is the regional forestry adviser for the Caribbean, stationed in San Juan, Puerto Rico. His position is cofunded by LAC, the FS, and S&T/FENR through the FSP. Before joining the FS staff in January 1986, Dr. Ford was a research and teaching assistant at the University of Washington. Through previous work assignments with consulting firms, the Peace Corps, and AID, he has more than 5 years of professional experience, teaching and doing research in Costa Rica, including a 2-year assignment with CATIE as a Peace Corps volunteer. Ford has authored numerous publications dealing with agroforestry, silviculture, and entomology. He holds a B.S. degree in forestry and an M.S. degree and a Ph.D. degree in entomology, all from the University of Washington. Languages: Fluent Spanish, some French and Portuguese.

Appendix B Overseas Travel Funded by the FSP, FY 1986

Region	Country	Dates	Names	Affiliation	Purpose
Africa	Burundi	7/2-7/4	Dennis Johnson	FSP	Review the Bururi Forest Project
	Kenya	6/24-7/1	Dennis Johnson	FSP	Analyze agroforestry training needs with CARE and ICRAF
	Kenya, Mali	1/7-2/2	Timothy Resch	FSP	Participate in IUFFO Research Planning Workshop and Africa Forestry Commission of FAO
	Lesotho	7/5-7/12	Dennis Johnson	FSP	Advise AID on CARE's Agroforestry Project
	Madagascar	6/5-6/30	Richard Calnan	FSP	Feasibility study on carbonization of pine thinnings
	Rwanda	8/2-8/30	Geoffrey Chandler	FS	Advise AID on land management planning techniques for Ruhengeri Resource Project
	Senegal	5/8-6/30	Ernst Pfeiffer	Contractor	Explore private-sector opportunities in forestry
	Sudan	10/14-11/8	Diana De Treville	Contractor	Evaluation of CARE Eastern Refugee Reforestation Project
	Sudan	10/17-11/7	Timothy Resch	FSP	Evaluation of CARE Eastern Refugee Reforestation Project
	Asia and Near East	India	3/21-4/12	Thomas Geary	FSP
India, Pakistan		12/2-12/18	Thomas Geary	FSP	Develop Public Law 480 research priorities
Indonesia		9/27-10/12	Jack Muench	SCFER	FAO expert consultation and FPEI
Malaysia, Philippines		10/21-11/6	Thomas Geary	FSP	Prepare annual work plan for ASEAN Watershed Project
Nepal		3/12-3/30	Cynthia Mackie	American Association for the Advancement of Science	Investigate potential for agroforestry projects in Nepal
New Caledonia		4/13-4/18	Max McFadden	FS	Investigate and develop action plan for insect defoliation of <u>Leucaena</u>
Philippines		11/8-11/28	Franklin Bonner	FS	Advise Philippine National Forest Tree Seed Certification Center
Philippines		4/3-4/12	Max McFadden	FS	Investigate and develop action plan for insect defoliation of <u>Leucaena</u>
Philippines		5/3-5/26	Paul Van Deusen	FS	Instruct the Forest Research Institute in biometrics and microcomputer applications
Philippines		9/13-10/20	Patrick Durst	FSP	Economic analysis of contract reforestation
Thailand	10/10-10/12	Jack Muench	SCFER	Investigate potential for FPEI in Thailand	
Thailand	9/4-9/13	Patrick Durst	FSP	Survey on economics of nature-related tourism	
Tunisia	6/23-6/27	M. Mecherqui	Tunisia	Present a paper at International Windbreak Technology Symposium at Nebraska	
Latin America and the Caribbean	Argentina, Chile	3/5-3/21	Gary Wetterberg	FSP	Review IUCN and FAO regional resource management activities
	Barbados	7/27-8/3	Loren Ford	FS	Participate in AID meeting on tropical forestry
	Barbados, St. Vincent	11/17-11/22	Mervin Stevens	FSP	Develop forestry training plan
	Bolivia	3/1-3/12	Vicente Molinos	SCFER	Preliminary investigation of wood products industry for FPEI
	Bolivia, Ecuador	5/7-6/15	Janis Petriceks	Contractor	Explore private-sector opportunities in forest industry
	Brazil	7/7-7/14	Loren Ford	FS	Discuss coordination of tropical forestry research with the National Research Institute
	Costa Rica	2/6-2/12	Thomas Geary	FSP	Technical review of Agroforestry Training Manual
Costa Rica	2/6-2/12	Gregory Garbinsky	USDA	Technical review of Agroforestry Training Manual	

Appendix B
Overseas Travel Funded by the FSP (continued)

Region	Country	Dates	Names	Affiliation	Purpose
Latin America and the Caribbean (continued)	Costa Rica	7/12-8/10	Jan Laarman	SCFER	Identify researchers and set schedule for nature-related tourism research
	Costa Rica	9/28-10/7	Dennis Johnson	FSP	Investigate use of cocoa in agroforestry
	Costa Rica	8/17-8/21	Loren Ford	FS	Investigate potential for cooperative research with Forest Products Department
	Costa Rica	7/17-7/20	Loren Ford	FS	Discuss forest products research needs with ROCAP officials
	Dominican Republic	12/1-12/10	John Palmer	FSP	Participate in AID Regional Soil Conservation Conference
	Ecuador	1/15-9/30	Ian McCormick	SCFER	Collect and analyze data on forest plantation investments
	Ecuador	10/27-11/8	John Palmer	FSP	Evaluation of agroforestry component of Forest Sector Development Project
	Ecuador	11/10-11/15	Jimmerson, Seeburger, Blanchat, Chapin, Clarke, Banz	Contractors	Participate in Wood Products Seminar
	Ecuador	11/9-11/18	Martha Briccio	SCFER	Prepare Wood Products Research Seminar; install INFORDE computer system
	Ecuador	5/2-5/17	H. Van Der Slooten	Contractor	Evaluate wood products industry
	Ecuador	5/20-7/10	Vicente Molinos	SCFER	Accompany group of ecuadorean wood producers on tour of U.S. industrial facilities
	Ecuador	5/31-10/30	Michael Mussack	SCFER	Research on supply and demand for eucalyptus poles and posts
	Ecuador	8/15-2/15	Mistie Ann Wilson	Contractor	Research on wildlands tourism
	Ecuador	7/15-7/16	Loren Ford	FS	Explore potential for cooperation between Forest Products Laboratory and FPEI
	Ecuador, Bolivia	2/25-3/8	Jack Muench	FSP	Review market development component of FPEI
	Guadeloupe	5/18-5/24	Loren Ford	FS	Participate in 3rd Congress of Caribbean Area Foresters
	Guatemala	8/22-8/27	Loren Ford	FS	Review forest products plants and plan future forest products research and technology transfer
	Guatemala	4/6-4/12	Loren Ford	FS	Participate in Tree Crop Production Project Trimestral Planning meeting and assist in design of pine rust control activities
	Haiti	1/15-2/4	John Palmer	FSP	Evaluation of Agroforestry Outreach Project
	Haiti	7/8-7/18	Loren Ford	FS	Evaluate need for technical assistance in forestry
Haiti	6/10-6/20	Loren Ford	FS	Investigate insect infestation on <i>Leucaena</i>	
Honduras	6/22-6/28	Thomas Geary	FSP	Develop training plan in forestry for AID project personnel	
Honduras	8/21-8/22	Loren Ford	FS	Explore potential for technology transfer and cooperative research in forest products	
Panama	6/28-6/31	John Palmer	FSP	Review Natural Resources Management Plan	
Peru	10/13-12/22	Raoul Gagne	FS	Ince Province Watershed Management Plan	
St. Lucia	9/30-10/12	Carl Johnson	NC Dept. of Forestry	Design interpretive program in natural resources	
St. Vincent	4/5-4/12	George Dissmeyer	FS	Develop Watershed Management Plan	

NOTE: This table does not include any temporary duty assignments or technical assistance trips by personnel identified by the FSP but funded by other sources (e.g., AID missions or the FS).

Appendix C

FSP Roster Use, FY 1986

Region ^a	Location	Request Date	Requester	Project		Speciality
				Duration (years, weeks)	Starting Date	
LAC	Ecuador	10/1/85	AID	0, 4	1/86	Silviculture
AFR	Somalia	10/1/85	Africare	1, 0	11/85	Arid Zone
AFR	Ghana	10/1/85	FAO	3, 0	1/86	Forestry
AFR	Niger	10/1/85	Peace Corps	0, 7	10/85	Forestry, Africa
AFR	West-Central Africa	10/1/85	REDSO/WCA	2, 0	10/85	Harvest
LAC	Honduras	10/1/85	Peace Corps	2, 0	2/86	Training
LAC	Panama	10/1/85	World Wildlife Fund	2, 0	3/86	Policy
LAC	Honduras	10/7/85	Peace Corps/Washington	2, 0	1/86	Business
Global	Washington	10/15/85	FS	3, 0	12/85	Training
LAC	Honduras	10/15/85	Peace Corps/Washington	2, 0	1/86	Education
LAC	Panama	10/20/85	World Wildlife Fund	2, 0	11/85	Policy
AFR	Rwanda	11/1/85	PVO	0, 12	1/86	Sociology
LAC	Dominican Republic	11/1/85	AID	0, 4	1/86	Forest management
LAC	Dominican Republic	11/1/85	Intl. Inst. for Environment and Development	0, 4	1/86	Economics
ANE	Pakistan	11/1/85	AID	0, 13	1/86	Economics
ANE	Pakistan	11/1/85	AID	0, 13	1/86	Agroforestry
LAC	Ecuador	11/1/85	AID	0, 3	12/85	Harvesting
LAC	Costa Rica	11/5/85	CATIE	2, 0	1/86	Miscellaneous
LAC	Caribbean Islands	11/5/85	AID	0, 3	1/86	Political science
Global	Washington	11/8/85	Intl. Inst. for Environment and Development	2, 0	1/86	Agriculture
LAC	Costa Rica	11/19/85	AID/ROCAP	2, 0	12/85	Silviculture
ANE	Pakistan	11/30/85	Winrock	2, 0	1/86	Agroforestry
ANE	Pakistan	11/30/85	Winrock	2, 0	1/86	Economics
AFR	Benin	12/1/85	Peace Corps	0, 4	2/86	Forestry
ANE	Philippines	12/1/85	AID	0, 2	12/85	Seed
AFR	Sudan	12/1/85	AID	0, 3	2/86	Genetics
AFR	Sudan	12/1/85	AID	0, 5	1/86	Policy
LAC	Dominican Republic	12/5/85	AID	0, 6	1/86	Sociology
LAC	Dominican Republic	12/5/85	AID	0, 6	1/86	Communications
LAC	Haiti	12/12/85	AID	0, 3	1/86	Parks
ANE	Pakistan	12/20/85	Intl. Inst. for Environment and Development	0, 8	2/86	Environment
LAC	Peru	1/1/86	AID	2, 0	4/86	Silviculture
LAC	Mexico	1/1/86	AID	0, 4	3/86	Plantations
AFR	Senegal	1/1/86	AID	0, 2	2/86	Wood products
ANE	Yemen	1/1/86	OICD	2, 0	3/86	Forestry, Italian
AFR	Washington	1/1/86	AID	0, 8	3/86	Forestry, Africa
ANE	Philippines	1/1/86	AID	0, 2	3/86	Entomology
ANE	Pakistan	1/1/86	Intl. Inst. for Environment and Development	1, 0	1986	Environment

Appendix C

FSP Roster Use, FY 1986 (continued)

Region ^a	Location	Request Date	Requester	Project		Speciality
				Duration (years, weeks)	Starting Date	
ANE	Philippines	1/1/86	AID	0, 3	5/86	Biometrics
ANE	Philippines	1/1/86	AID	0, 3	3/86	Entomology
AFR	Somalia	1/1/86	Africare	0, 12	2/86	Arid Zone
ANE	Malaysia	2/1/86	Smithsonian Inst.	0, 1	6/86	Economics
LAC	Haiti	2/1/86	AID	0, 6	4/86	Sociology
LAC	Haiti	2/1/86	AID	0, 6	4/86	Agriculture
LAC	Haiti	2/1/86	AID	0, 6	4/86	Extension
Global	Washington	2/1/86	Intl. Forestry, FS	2, 0	4/86	Fire
ANE	Washington	2/1/86	FSP	2, 0	4/86	Forestry, Asia
AFR	Somalia	2/1/86	PVO	2, 0	3/86	Arid Zone
AFR	Chad	2/1/86	PVO	2, 0	3/86	Forestry, Africa
Global	Global	2/1/86	CARE	2, 0	3/86	Forestry
LAC	Grenada	2/1/86	FAO	0, 12	4/86	Roads
LAC	Grenada	2/1/86	FAO	0, 12	4/86	Harvesting
ANE	Pakistan	2/1/86	AID	0, 6	3/86	Forestry
LAC	Bolivia	2/1/86	AID	0, 7	4/1/86	Wood products
ANE	Philippines	3/1/86	BOSTID	0, 2	6/86	Research
AFR	Zaire	3/1/86	AID	2, 0	6/86	Engineering
AFR	Sudan	3/1/86	AID	2, 0	6/86	Roads
ANE	Philippines	3/1/86	AID	0, 2	4/86	Entomology
ANE	South Pacific Islands	3/1/86	AID	0, 1	4/86	Entomology
LAC	St. Vincent	3/1/86	AID	0, 1	4/86	Watershed
ANE	India	3/1/86	AID	0, 3	3/86	Training
LAC	Puerto Rico	3/1/86	FS	2, 0	5/86	Administration
AFR	Ghana	3/1/86	AID/OPIC	0, 4		Sawmill
LAC	Ecuador	3/1/86	AID	0, 2	7/86	Genetics
AFR	Madagascar	3/1/86	AID	0, 4	6/86	Economics
AFR	Cameroon	3/1/86	United Nations Development Program	1, 0	4/86	Forestry, Africa
LAC	Dominican Republic	3/1/86	AID	0, 4	5/86	Business
ANE	Philippines	3/1/86	USDA/BOSTID	0, 4	4/86	Silviculture
LAC	Ecuador	3/1/86	AID	0, 4	6/1/86	Silviculture
AFR	Sahel	4/1/86	FAO-AID	0, 6	5/86	Economics
AFR	Washington, D.C.	4/1/86	Peace Corps/Washington	2, 0	8/1/86	Forestry, Africa
ANE	Philippines	4/1/86	Peace Corps	0, 12	6/1/86	Agroforestry
LAC	Chile	4/4/86	FAO	2, 0	6/86	Parks
LAC	Panama	5/1/86	AID	2, 0	8/86	Forestry, Latin America and the Caribbean
LAC	Dominican Republic	5/1/86	AID	0, 4	6/86	Wood Products
LAC	Caribbean Islands	5/8/86	DASP AID	0, 3	7/86	Fire
LAC	Caribbean Islands	5/9/86	DASP AID	0, 3	7/86	Fire
AFR	Mali	6/1/86	AID	4, 0	7/86	Agroforestry
AFR	Regional	6/1/86	World Wildlife Fund	2, 0	7/86	Wildlife
AFR	Regional	6/1/86	Peace Corps	0, 4	7/86	Forestry

LAC	Costa Rica	6/1/86	AID	1, 0	?	Economics
LAC	Ecuador	6/1/86	AID	1, 0	6/86	Nurseries
ANE	Nepal	6/1/86	AID	0, 9	9/86	Economics
ANE	Burma	6/1/86	FAO	2, 0	1/87	Watershed
ANE	Burma	6/30/86	FAO	2, 0	10/86	Watershed
ANE	India	7/1/86	AID	0, 4	11/85	Training
Global	Washington	7/1/86	World Resources Institute	0, 8	7/86	Writer
LAC	Haiti	7/1/86	Pan American Development Foundation	2, 0	10/86	Agroforestry
LAC	Haiti	7/1/86	Pan American Development Foundation	2, 0	10/86	Genetics
LAC	Haiti	7/1/86	Pan American Development Foundation	2, 0	10/86	Extension
LAC	Haiti	7/1/86	Pan American Development Foundation	2, 0	10/86	Forestry, Creole
ANE	ASEAN	7/1/86	AID	0, 3	8/86	Watershed
World	World	7/1/86	FS	2, 0	10/86	Administration
World	World	7/1/86	FSP	2, 0	10/86	Forestry, Latin America and the Caribbean
World	World	7/1/86	FSP	2, 0	11/86	Plantations
World	World	7/1/86	FSP/AID	2, 0	11/86	Sociology
LAC	Guatemala	7/1/86	AID	0, 4	9/86	Management
LAC	Puerto Rico	7/1/86	ITF	2, 0	9/86	Hydrology
LAC	Costa Rica	7/1/86	CATIE	2, 0	10/86	Biometrics
ANE	Philippines	7/8/86	ASEAN	0, 4	8/86	Watershed
LAC	Guatemala	7/31/86	AID	2, 0	9/86	Management
LAC	Puerto Rico	7/31/86	ITF	3, 0	8/86	Research
LAC	Costa Rica	7/31/86	CATIE	2, 0	10/86	Extension
LAC	Costa Rica	8/1/86	CATIE	2, 0	10/86	Biometrics
LAC	Costa Rica	8/1/86	CATIE	2, 0	10/86	Ecology
AFR	Rwanda	8/1/86	PVO	0, 2	9/86	Agroforestry
AFR	Niger	8/1/86	PVO	0, 12	8/86	Forestry, Africa
AFR	Somalia	8/1/86	AID	3, 0	11/86	Arid Zone
ANE	Bhutan	8/1/86	FAO	1, 0	10/86	Wood products
ANE	Bhutan	8/1/86	FAO	0, 4	10/86	Entomology
ANE	Bhutan	8/1/86	FAO	0, 4	10/86	Harvesting
LAC	Costa Rica	8/1/86	World Wildlife Fund	2, 0	1/87	Forestry, Latin America and the Caribbean
AFR	Niger	8/1/86	CARE	2, 0	12/86	Forestry, Africa
Global	Washington	8/1/86	World Wildlife Fund	2, 0	9/1/86	Forestry
LAC	Ecuador	8/1/86	AID	2, 0	10/1/86	Nursery
AFR	Gambia	8/8/86	AID	0, 3	9/86	Sawmill
AFR	Ivory Coast	9/1/86	AID	0, 4	10/86	Charcoal
ANE	Indonesia	9/1/86	AID	4, 0	12/86	Watershed
ANE	Indonesia	9/1/86	AID	2, 0	12/1/86	Forestry, Asia
ANE	Bhutan	9/1/86	FAO	0, 5	10/15/86	Economics
ANE	Bhutan	9/1/86	FAO	0, 4	10/15/86	Harvesting

^a LAC, Latin America and the Caribbean; AFR, Africa; ANE, Asia and the Near East.

Appendix D

Reports Produced or Directly Influenced by the FSP During FY 1986

- AID/Dakar. 1986. Senegal Reforestation Project Paper (685-0283). 52 pp., plus annexes.
- Alexander, Earl B. 1986. Soil Conservation Practices To Reduce Soil Loss and Sedimentation in Ecuadorean Watersheds. AID/Quito. 35 pp.
- Allen, James Andrew. 1986. Fuelwood Policies for Swazi Nation Land: Farm and Community Approaches for Fuelwood Production. Master's thesis, Cornell University. 155 pp.
- Armstrong, George R. 1985. A Guide to Washington Area Library Collections Addressing International Development, with Special Reference to Forests and Related Natural Resources of the Tropics. Society of American Foresters. 61 pp.
- Burchfield, James. 1986. Report on the 1985 International Seminar on Forest Resource Administration and Management. 20 pp.
- Catterson, T. M., F. A. Gulick, and T. Resch. 1985. Desertification--Rethinking Forestry Strategy in Africa: Experience Drawn from USAID Activities. Paper presented at the FAO expert consultation on the role of forestry in combating desertification. 15 pp.
- Catterson, Thomas M., and Timothy M. Resch. 1985. Comment on "The Role of Forestry in Dry Africa." *Journal of Forestry* 83(4):207-209.
- Cintron, Gilberto. 1985. Mangrove Area Management in Panama. FSP. 44 pp.
- Dennison, Steve. 1986. The Majia Valley Windbreak Evaluation Study. CARE. 37 pp.
- Durst, Patrick B. 1986. Energy Plantations in the Republic of the Philippines. SCFER Working Paper No. 24. SCFER, Research Triangle Park, NC. 34 pp.
- Ford, L. 1986. St. Vincent Forestry Assessment. Prepared for Forestry Department, St. Vincent and the Grenadines, and AID Regional Development Office/Caribbean, Georgetown, Barbados. Technical Assistance to Cumberland Watershed Management Project. 7 pp.
- Ford, L. 1986. Forest Protection in Guatemala. Prepared for AID/Guatemala for use in preparation of Pine Forest Management amendment to Highlands Agriculture Project. 8 pp.
- Ford, L. 1986. Multi-Purpose Tree Seed Sources. Prepared for AID/Haiti for Agroforestry Outreach Project. 44 pp.
- Ford, L. 1986. Recommendations for Seed, Nurseries, Outplanting, Tree Management, Research and Project Coordination for Agroforestry Outreach Project. AID/Haiti. 10 pp.
- Ford L. 1986. Scopes of Work of Requests for Proposals for 1) Research and 2) Tree Improvement Components of Agroforestry Outreach Project Extension. AID/Haiti. 8 pp.
- Ford, L. 1986. Honduras Forestry Field Training Course--Course Evaluation. Evaluation of University of Idaho short course for AID/Honduras-sponsored foresters. 4 pp.
- FSP. 1986. Progress Report of the Forestry Support Program (FSP) 1981-1985. FSP. 71 pp.
- Geary, T. F. 1986. Planning International Training for USAID-Assisted Social Forestry Projects in India. FSP. 30 pp., plus appendix.
- Harcharik, D. A., and T. F. Geary. 1985. P.L. 480 Forestry Research in Pakistan: Overview of Current Program and Future Research Priorities. FS. 25 pp.

- Hodges, Charles S., Jr., and Thomas F. Geary. 1985. Technical Assistance on Mortality of Casuarina equisetifolia Planted on Coastal Sand Dunes in Senegal. FSP. 10 pp.
- INFORDE. 1986. From the Forest of Ecuador: Today, Tomorrow. 17 pp.
- INFORDE. 1986. Domestic Price Bulletin.
- Ingram, C. Denise, Jan G. Laarman, and Michel C. Contezac. 1986. The International Clientele Served by the Forest Products Laboratory. SCFER Working Paper No. 18. SCFER, Research Triangle Park, NC. 18 pp.
- Laarman, Jan G. 1986. A Perspective on Private Enterprise and Development Aid for Forestry. SCFER Working Paper No. 16. SCFER, Research Triangle Park, NC. 13 pp.
- Laarman, Jan G. 1986. Nature-Oriented Tourism in Costa Rica and Ecuador: Diagnosis of Research Needs and Project Opportunities. SCFER. 18 pp.
- Laarman, Jan G., and George F. Dutrow. 1986. A Private Enterprise Strategy for Forestry Development: Principles, Mechanism, and Challenges. SCFER Working Paper No. 19. SCFER, Research Triangle Park, NC. 8 pp.
- Laarman, Jan G., and John Muench, Jr. 1985. "The Caribbean Basin Initiative: What Does It Mean for Forestry?" pp. 21-22 in Symposium on Sustainable Development of Natural Resources in the Third World. Ohio State University.
- Laarman, Jan G., J. Michael Vasievich, and Patrick B. Durst. 1986. Technologies to Harvest Fast-Growing Energy Plantations in Hawaii and the Philippines. SCFER Working Paper No. 17. SCFER, Research Triangle Park, NC. 12 pp.
- Laarman, Jan G. 1986. The Economic Outlook for Forestry in Tropical America: A Hazardous Period for Crystal Balls. SCFER Working Paper No. 21. SCFER, Research Triangle Park, NC. 23 pp.
- McDill, Marc. 1986. "Reforestation Incentives and the Economic Structure of the Charcoal Market in Minas Gerais, Brazil." M.S. thesis, North Carolina State University. 57 pp.
- McFadden, Max W. 1986. Evaluation of the Leucaena/Heteropsylla Problem in Hawaii, the Philippines, and New Caledonia. FSP. 100 pp., plus appendixes.
- McGahuey, Michael. 1985. Assessment of the Acacia albida Extension Projects in Chad. Chemonics. 21 pp.
- McKean, Cressida. 1986. The Context and Strategy for Growth of Small Furniture Enterprises: The Province of Guayas. SCFER.
- McKean, Cressida. 1986. Sawmills in Ecuador: A Study of Small Sawmilling Enterprises in the Province of Pichincha. SCFER. 94 pp.
- Miranda, Marie Lynn. 1985. Forest Management in the Third World. SCFER Working Paper No. 27. SCFER, Research Triangle Park, NC. 50 pp.
- Palmer, John E. 1986. Evaluation of Technical Performance: Agroforestry Outreach Project (521-0122). AID/Haiti. 21 pp., plus annexes.
- Petriceks, Janis. 1986. Bolivian Forest Resource and Forest Industry Profile. SCFER. 49 pp.
- Pfeiffer, Ernst. 1986. Private Sector Economic Potential. Senegal Reforestation Project. SCFER. 35 pp.

- Resch, T. M. 1985. Mid-Term Evaluation Eastern Refugee Reforestation Project CARE and Government of Sudan Central Forest Administration with Financial Support from United States Agency for International Development. FSP. 40 pp.
- Resch, T. 1986. Final Evaluation of Gambia Forestry Project (635-0205). USAID/Banjul. Unpaginated.
- Resch, T., F. A. Gulick, and T. Catterson. 1986. Analysis of PVO Activities in Africa in the Area of Natural Resources/Environment/Agriculture: A Review of the Current Situation. Congressional Research Service. 5 pp.
- Schweithelm, James. 1986. A Method of Land Evaluation for Watershed Land Use Planning in the Tropics: A Case Study of Riam, Kanan, Indonesia. Report to FSP by East-West Environment and Policy Institute, Honolulu. 37 pp.
- Tangendjaja, B., J. B. Lowry, E. Basuno, and M. Boer. 1986. Potential for Leaf Meal Production from Tree Legumes in SE-Asia. FSP. 68 pp.
- Van der Slooten, Harry J. 1986. Research and Technical Assistance Needs of the Woodworking Industry in Ecuador. INFORDE. 19 pp.
- Wetterberg, Gary B. 1986. The Forestry Support Program, Peace Corps, and Changing Development Needs. Paper presented at National Conference on Future Directions of the Peace Corps, Fort Collins, CO. 6 pp.
- Reports in Progress During FY 1986 and FY 1987**
- Conway, Frederick J. 1986. Proceedings of the Workshop on Planting Trees with Small Farmers, Port-au-Prince, 1985. Pan American Development Foundation.
- Davis, Robert. 1987. A Strategy for the Implementation of Erosion Control Practices to Enhance Watershed Development in Ecuador. University of Tennessee.
- Devoc, Nora N. 1987. The Effect of Light Exposure Level on Recruitment and Growth of Five Tropical Tree Species. Yale University.
- Durst, Patrick B. 1986. Financial Aspects of Contract Reforestation in the Philippines. FSP. 92 pp.
- Durst, Patrick B. 1986. Natural History and Nature-Oriented Adventure Travel for Rural Development and Wildlands Management: Diagnosis of Research Needs and Project Opportunities for the Philippines. FSP. 31 pp.
- Durst, Patrick B. 1986. Natural History and Nature-Oriented Adventure Travel for Rural Development and Wildlands Management: Diagnosis of Research Needs and Project Opportunities for Thailand. FSP. 27 pp.
- Durst, Patrick B., and C. Denise Ingram. 1987. How Well Do Developing Countries Promote Nature-Oriented Tourism by Mail? Submitted to Tourism Management.
- Ford, L. Draft Technical Analysis, Hillside Agriculture Project. For inclusion in project paper. AID/Jamaica. 17 pp.
- INFORDE. 1986. Financial Reforestation Profiles. (Ecuador.) (Spanish.)
- Ingram, C. Denise, and Patrick B. Durst. 1986. Marketing Nature-Oriented Tourism for Rural Development and Wildlands Management in Developing Countries: A Bibliography. FS.
- Johnson, Dennis. 1986. An Abstract Bibliography of Agroforestry: Articles from Agroforestry Systems and the International Tree Crops Journal. FSP. 69 pp.

- Johnson, Thomas, and William Leuschner. 1987. Annotated Bibliography on Income and Employment in Forest-Based Industries of Developing Countries. SCFER.
- Krutilla, Kerry. 1987. A Businessman's Guide to Investment and Trade in the Forest Products Sectors of Southeast Asia: Indonesia, Malaysia, and the Philippines. SCFER. 58 pp., plus tables.
- Laarman, J. 1987. A Reevaluation of Reforestation Incentives (Brazil). SCFER.
- McKean, Cressida Sargent. 1987. Small-Scale Manufacturing: The Potential and Limitations for Growth--the Case of Wood Products in Ecuador. Master of philosophy in development studies thesis. University of Sussex. 210 pp.
- Mercer, J. R., C. H. Petrich, R. J. Calnan, R. A. Cantor, and J. M. LeJeune. 1987. Fanalamanga Smallwood Carbonization Feasibility Study. World Bank. 32 pp., plus appendixes.
- Montagnine, F., L. Prevetti, and L. A. Trupp. 1986. Agroforestry Systems: Principles and Applications in the Tropics. (Spanish). OTS and CATIE. 818 pp.
- Sinyle, James W. 1987. Reforestation of Degraded Lands and the Impact on Water Quality in the West Zone of Sri Lanka. University of Georgia.
- Wadsworth, F., Editor. 1987. Proceedings of the Conference on Management of the Forests of Tropical America: Prospects and Technologies. FS Southern Station.
- Welker, John. 1987. An Import Substitution Model for Softwood Lumber in Jamaica. SCFER.