PAKISTAN FORESTRY PLANNING AND DEVELOPMENT PROJECT (391-0481) -- MIDTERM EVALUATION

Prepared for:

U.S. Agency for International Development
Islamabad
Pakistan

Prepared by:

Thomas M. Catterson, team leader; Hameed Ahmad; Kerry J. Byrnes, Ph.D.; Joseph Hoffman, Ph.D.
Associates in Rural Development, Inc.
110 Main Street, Fourth Floor
P.O. Box 1397
Burlington, VT 05402
Under contract number PDC-0000-I-13-4104-00.

Date: 20 September 1987

CONTENTS

ACRONYMS

ACE	Agricultural Commodities and Equipment
ADP	annual development plan
AED	Academy for Educational Development
AID	U.S. Agency for International Development
AIGF	Additional Inspector-General of Forests
APAC	Asia Project Action Committee
ARD	Office of Agriculture and Rural Development
CCF	Chief Conservator of Forests
COP	Chief of Party
DFO	District Farm Energy Forestry Officer
DIGF	Deputy Inspector-General of Forests
ESF	economic support funds
FAR	fixed amount reimbursement
FM	Office of Financial Management
FPD	Pakistan Forestry Planning and Development
F/FRED	Forestry/Fuelwood Research and Development Project
FSN	foreign service national
FY	fiscal year
GOP	Government of Pakistan
HRT	Human Resources and Training
IADS	International Agricultural Development Service
ICRAF	International Council for Research in Agroforestry
IGF	Inspector-General of Forests
IQC	indefinite quantity contract
JCC	Joint Career Corps
LOP	life-of-project
MACS	Management Accounting System
NWFP	Northwest Frontier Province
O/IGF	Office of the Inspector-General of Forests
O/PCCF	Office of the Provincial Chief Conservator of Forests
PACD	project assistance completion date
PDM	project development and monitoring
PFD	Provincial Forest Department
PFI	Pakistan Forest Institute
PILS	project implementation letters
PIR	project implementation review
PLA	personal ledger account
POL	petroleum, oil and lubrications
PP	Project Paper
ProAG	Project Grant Agreement
PROMIS	Project Management Information System
RFO	Range Forest Officer
RFP	request for proposals
SOW	scope of work
SCA	socio-cultural analysis
TAT	technical assistance team
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture

ACKNOWLEDGMENTS

The evaluation team has had the benefit of inputs and assistance from a great many people in carrying out its work. The team would like to take this opportunity to extend a heartfelt word of appreciation to all those who have so courteously and hospitably received us--at the level of the GOP Federal Government, in the Provinces, at USAID/Pakistan, among the technical assistance team, and on the farms, fields and forests of the country.

The Inspector-General of Forests, Mr. Abeedullah Jan, set the tone for this evaluation with his frank, open and professional discussions of the Forestry Planning and Development project and the forestry sector in Pakistan. His forestry colleagues, the Chief Conservators of Forests and their staffs in the four Provinces--Punjab, Baluchistan, Sind and Northwest Frontier--have followed suit and provided the team with thoughtful insights, collegial debate and full assistance wherever it was needed. The evaluation team is convinced that they have done so out of their conviction that the real implementation of this project rests on their shoulders. The team requests that the Inspector-General pass on their thanks to these many individuals, too numerous to name, who have given yet another demonstration of Pakistan's traditional hospitality.

The team must also recognized the fundamental role played by Mr. Albert Merkel and Mr. K. Hameedullah, the USAID/Pakistan staff members responsible for management of the FPD project. They gave most generously of their time and energies, without which the evaluation clearly would not have been possible. Their dedication to their tasks and the needs and opportunities of forestry sector development in Pakistan has been manifest throughout this evaluation exercise.

The technical assistance team led by Mr. Gene Ostmark has repeatedly gone out of its way to respond to the numerous requests for information, documentation and assistance despite their own busy schedules.

The evaluation team is also grateful to Dr. Mohammad Afzal, the official GOP-designated observer who took time out from his important duties as monitoring and evaluation officer on the Punjab Provincial team assigned to the FPD project. His company and good cheer was only exceeded by his contribution of useful insights and information.

The evaluation team sincerely hopes that its efforts will help to facilitate the continued implementation and improvement of the Forestry Planning and Development project and prove useful

to the numerous individuals who have already contributed greatly to it.

PROJECT IDENTIFICATION DATA SHEET

1. Country: Pakistan

2. Project Title: Forestry Planning & Development

3. Project Number: 391-0481

4. Project Dates:

   a) First Project Agreement: 28 August 1983
   b) Final Obligation Date: FY 88 - planned
   c) PACD: 30 August 1991

5. Project Funding: (obligations to-date)

   a) Aid Bilateral Funding(grant): US $ 18 million
   b) Other Major Donors: ------
   c) Host Country Counterpart Funds: US $ 14.3 million
   TOTAL US $ 32.3 million

6. Mode of Implementation: AID direct contracts: Winrock International (TAT); Techno - Consult (A & E); Ahmad Ali Construction Co. (PFI Hostel Contractor)

7. Project Designers: Government of Pakistan, USAID/Pakistan, AID/W/ANE/TR, AID/W - ST/FNR, PSCs

8. Responsible Mission Officials:

   a) Mission Directors: Donor Lion, Eugene Staples
   b) Project Officers: A. C. Hankins, A. Merkel

9. Previous Evaluations: None

I. EXECUTIVE SUMMARY

Introduction

This is the report of the first evaluation of the U.S. Agency for International Development (USAID)/Government of Pakistan (GOP) Forestry Planning and Development (FPD) project (391-0481). The project is designed to strengthen the capability of federal, provincial and local institutions to design, implement and evaluate policies and programs for increasing the production of fuelwood and timber in Pakistan. The project includes the provision of technical assistance, training and commodities to strengthen the capability of the GOP to: undertake effective integrated and provincial analyses of forest and fuelwood development programs to encourage farm and energy forestry; and develop and conduct a program of research and training in support of on-farm tree crop management strategies.

A key concept of the original project design is the need for a phased, coordinated approach to developing and building an effective farm forestry outreach program. Key components of this development effort include: data collection, systematic analysis and planning; detailed technical, economic and social designs of field implementation models and strategies; a companion program of forestry and socio-cultural research; human resources development; and, policy dialogue and changes necessary to foster a national farm forestry program.

Thus, assessment of the provision of inputs, their adequacy and timeliness to date, including technical and commodity assistance, as well as the implementation strategy, arrangements and resultant activities carried out, are primary objectives of this evaluation. This evaluation will determine whether the component parts are proceeding together in a coordinated manner and facilitate mid-course corrections as may be necessary. It will also identify significant issues affecting implementation and recommend solutions.

The evaluation team including a Senior Forester/Team Leader, a Senior Pakistani Forester, a Training Specialist and a General Development Specialist, conducted the evaluation in-country during the period of 20 July to 21 August. A level of effort totaling 17 person-weeks and six-day work weeks was authorized under an indefinite quantity contract (IQC) work order extended to Associates in Rural Development, Inc. In order to compile the information necessary for the analyses, conclusions and recommendations, the evaluation team undertook a judicious mix of activities including secondary data review, interviews and site visits.

Findings and Conclusions

The evaluation team is firmly convinced that the Forestry Planning and Development project and its original design concept (enhancing the capability of the GOP forestry institutions to carry out farm forestry extension and demonstration) continues to be extremely relevant to development needs and opportunities in Pakistan. Promoting and facilitating the farmers capacity to respond to the emerging income earning opportunities connected with tree-planting is considered to be the best investment strategy for the sector, offering high returns for the farmer and the nation.

Despite its evident potential, project goals and activities, the need for complementarity, continuity and a phased approach to implementation, as well as the roles, responsibilities and implementation procedures and arrangements within the project are still poorly understood by project staff, including the GOP and the technical assistance team (TAT).

The evaluation team strongly believes that resolving the range of issue currently troubling the project is as or more important than additional physical accomplishments on the ground. The evaluation team is concerned that the announced revision of the PC-1, although most welcome and appropriate, not become a substitute for making meaningful decisions about major issues in project implementation required (and possible) at the earliest date. Bearing in mind that revision and approval of a revised PC-1 will take time, these issues including those related to goals/objectives, roles and responsibilities, budgets and funding processes, and implementation procedures can and should be systematically addressed as soon as possible.

The FPD project has been effectively hamstrung in several areas (field operations, training and construction) by the lack of timely and adequate GOP budget allocations. Although it is difficult to calculate exact amounts of planned GOP contributions, it appears that these are presently less than 20 percent of what was originally anticipated. Interim steps will have to be taken immediately for corrective action on the GOP fiscal year (FY) 1987-88 allocation and funds release, to buy time for the overall budget readjustment which will result from the major revision of the PC-1.

The evaluation team believes that the Winrock technical assistance team has a continuing need for internal team building in order to improve both its engagement with and impact on the FPD project. It is vital that the TAT understand that its fundamental role is that of assisting in building and strengthening the institutional capability of its GOP partner forestry institutions involved in this project.

The evaluation team is well aware of the intense pressure, voiced recently at the highest levels of the GOP, to improve the impact of forestry development projects and programs on the ground. The FPD project can provide the vehicle for demonstrating such impact. The needs of the project, however, are many and the Inspector-General of Forests (IGF) is urged to obtain the assistance he will require, by completing the assignment of the Additional Inspector-General of Forests (AIGF) and seeking to use, as appropriate, the skills and resources of the TAT.

The Provincial Forestry Department (PFD) staff assigned to the project are the frontline troops in the effort to expand tree-planting among the farmers and on the farmlands of Pakistan. There is a receptive audience if they can organize themselves to reach out and service it. Doing so will be the greatest challenge of the project so far; delaying affirmative action will only make it harder. An interim solution to the PC-1 targets dilemma is urgently needed and cannot be postponed.

Principal Recommendations

- The evaluation team strongly recommends that a comprehensive planning exercise, get underway immediately to address issues, problems and opportunities which have emerged during project implementation. Decisions taken should be relayed to all parties and as these are completed they should lay the basis for the revision of the PC-1.

- The evaluation team recommends that a small, select working group be constituted soonest to prepare a working paper for field guidance on the immediate issue of coping with PC-1 targets, field staff capability and budget shortfalls and procedures.

- The evaluation team recommends that every effort be expended by the GOP and USAID to resolve the GOP funding problems troubling the FPD project.

- The evaluation team recommends that every effort be made to quickly identify promising candidates for long-term training in forest resources planning or economics.

- The evaluation team recommends that the TAT, in close consultation with the GOP units, complete a first full draft of the comprehensive training plan, including both overseas and internal training programs.

- The evaluation team suggests that in order to allow the ICF to function in a policy/decisions-making leadership role with regard to this project, the GOP should complete the steps necessary to designate and post an AIGF.

- The evaluation team also suggests that the TAT hire a Senior Pakistani Forester to assist the Chief of Farty (COP) in discharging his duties, particularly as this concerns liaison with the GOP.

- The evaluation team recommends that serious consideration be given to substantially strengthening the project contribution to Pakistan Forest Institute (PFI) for program improvement in the areas of both research and education. The evaluation team believes this would be preferable to widening the scope of the territorial coverage of field operations as is being considered as part of the redesign effort.

- The evaluation team recommends that the present staffing shortfalls for the FPD project at the PFI be resolved soonest.

- The evaluation team suggests that project leadership look into the current split between research infrastructure development and program development as it is being carried out under the project.

- The evaluation team suggests that the socio-cultural analysis (SCA) group prepare a synthesis report that explains the role of SCA in the FPD project.

- The evaluation team recommends that the vacant position of Farm Forestry Advisor be filled expeditiously insuring that the candidate be a seasoned professional capable of providing pragmatic advice on solutions to the technical as well as procedural problems of the field operations.

- The evaluation team strongly recommends that the training program for foresters and farmers begin as soon as possible.

- The evaluation team feels that the next 18 months will be vital if the FPD project is to succeed. It therefore recommends that the next project evaluation take place at that interval.

II. INTRODUCTION

This document is the report of the first mid-term evaluation of the Pakistan Forestry Planning and Development project. It has been prepared by the evaluation team fielded by Associates in Rural Development, Inc. under the indefinite quantity contract delivery order (PDC-0000-I-13-4104-00-No.13) extended by the Agency for International Development for the implementation of the evaluation of the subject project.

A. Activity Being Evaluated

The Project Paper (PP) for the USAID/GOP-funded FPD project was approved by the USAID/Pakistan Mission Director on 14 July 1983 and the project was subsequently authorized in AID/Washington by the Administrator on 11 August 1983. A Project Grant Agreement (ProAG) was executed in Islamabad, Pakistan on 28 August 1983. The Government of Pakistan, Ministry of Food, Agriculture and Cooperatives prepared their own project document (known as the PC-1) entitled "Forestry Planning and Development to Organize, Establish and Expand Energy Plantations on Private Lands in Pakistan;" it was formally approved on 25 September 1985.

The FPD project is designed to strengthen the capability of federal, provincial and local institutions to design, implement and evaluate policies and programs for increasing the production of fuelwood and timber in Pakistan. The project includes the provision of technical assistance, training and commodities to strengthen the capability of the GOP to:

- undertake effective integrated and provincial analyses of forest and fuelwood development programs to encourage farm and energy forestry; and
- develop and conduct a program of research and training in support of on-farm tree crop management strategies.

Authorized life-of-project (LOP) funding includes $25 million in grant funds economic support funds (ESF) from USAID, another approximately $14.3 million equivalent in Pakistani Rupees as the host country contribution from the GOP, and an additional $5 million in loan funds for commodity support from the USAID-funded Agricultural Commodities and Equipment (ACE) project (391-0468). The project assistance completion date (PACD), unchanged from the original authorization, is 30 August 1991. With regard to PACD, it is worth noting that a contractor team is presently in-country assisting USAID/Pakistan in designing possible new components and activities for the FPD

project to be considered for incorporation into a planned project amendment in the first quarter of FY 1988.

B. Purpose of the Evaluation

The present evaluation is the first of four evaluations planned over the eight-year life of the FPD project. As a result of approval and implementation delays, the evaluation coincides, more or less, with the beginning of the first full operational field planting season. The implementation activities to date, can be considered as a mobilization phase whose broad aim was to put in place the inputs and mechanisms focusing on beginning to fulfill the policy, technical, socioeconomic, institutional, financial and administrative requirements for developing a successful National Farm Forestry Program in Pakistan. Thus, assessment of the provision of inputs, their adequacy and timeliness to date, including technical and commodity assistance, as well as the implementation strategy, arrangements and resultant activities carried out, are primary objectives of this evaluation.

A key concept of the original project design is the need for a phased, coordinated approach to developing and building an effective farm forestry outreach program. The component parts of this development effort include:

- data collection, systematic analysis and planning aimed at assessing the need for and potential of farm forestry as a sector strategy option, and the requirements for achieving a viable program;
- detailed technical, economic and social designs of field implementation models and strategies;
- a companion program of forestry and socio-cultural research aimed at improving farm forestry field efforts;
- human resources development, organization and training;
- institutional, administrative and financia arrangements for carrying out the planned activities;
- management and supervision to ensure timely, effective and efficient implementation of the project, and ultimately of the program; and

- policy dialogue and changes necessary to foster replicable and sustainable expansion of a national farm forestry program.

This evaluation will determine whether the component parts are proceeding together in a coordinated manner and facilitate mid-course corrections as may be necessary. It will also identify significant issues affecting implementation and recommend solutions. Thus, it will ensure that the next phase of the project, which contemplates additional field demonstration through enhanced operational activities, refinement of operational models, further institutionalization of the program, and fully supportive research and training components, has a viable basis for continued pursuit and progress towards project goals.

The primary clients for this evaluation will be the GOP and USAID/Pakistan. The Office of the Inspector-General of Forests (O/IGF) in the Ministry of Food and Agriculture directs the project for the GOP. The Office of Agriculture and Rural Development (ARD) in USAID has management responsibility for the project. The evaluation report may also be useful as guidance to the TAT in performing their contractual responsibilities.

C. Implementation of the Evaluation

The evaluation commenced on 20 July 1987 with the simultaneous arrival in-country of the three expatriate members of the team, namely, Thomas M. Catterson, Senior Forester/Team Leader; Joseph Hoffman, Training Specialist; and Kerry J. Byrnes, General Development Specialist. A fourth member of the evaluation team, Hameed Ahmad, a Senior Pakistani Forester, was contracted in-country to participate from 21 July to 21 August, 1987. A GOP forester, Mohammad Afzal of the Punjab Provincial Forest Department was assigned by the Office of the Inspector-General of Forests as a full-time observer during the evaluation.

The evaluation team conducted the evaluation in-country during the period 20 July to 21 August. A level of effort totaling 17 person-weeks and six-day work weeks was authorized. A copy of the relevant portions of the work order outlining USAID expectations regarding the qualifications of the team members, their activities and reports may be found as Annex A to this report.

1. Evaluation Methodology

In order to compile the information necessary for their analyses, conclusions and recommendations, the evaluation team undertook a judicious mix of activities including secondary data

review, interviews and site visits. An extensive series of documents, reports, working papers, work plans and files from USAID/Pakistan, GOP Federal and Provincial Forestry authorities and the Winrock International technical assistance team were screened and reviewed. Annex B contains a bibliography of the materials consulted. In addition, a wide ranging series of interviews, often involving several occasions for discussion and including the concerned officers of the O/IGF, the Provincial Forestry Departments, the Pakistan Forestry Institute, USAID/Pakistan and a number of other related institutions and projects, were conducted. Annex C is a list of persons met and interviewed during the evaluation exercise. The team also carried out extensive travel throughout the country involving both office visits to provincial authorities and site visits in all the four Provinces of Pakistan. A detailed schedule/itinerary for the evaluation exercise is included as Annex D to this report.

As part of the reporting requirements, the team prepared a brief Evaluation Plan shortly after their arrival in-country which was reviewed by USAID/Pakistan staff. Furthermore, a review meeting was held on 14 August at which the evaluation team presented its conclusions and recommendations to representatives of the O/IGF and USAID. On the basis of the comments and suggested revisions received at this meeting, the team leader completed and edited this report.

2. Scope of Work

The scope of work (SOW) prepared by USAID/Pakistan and under which, the evaluation team carried out its responsibilities for reviewing the performance of the FPD project, was as follows:

- evaluate progress towards achievement of goals in the Project Paper;
- analyze the effectiveness of the technical assistance team in accomplishing the goals of their contract;
- assess progress towards establishing training and research programs that meet the requirements of the project;
- review the adequacy of the disbursement mechanisms and budgeting process;
- assess progress of the socio-cultural baseline studies and their appropriateness to identifying farmer/private sector participation strategies; and

- review and comment on the major conclusions and recommendations of the design team draft report.

Management Assessment:

- effectiveness of the technical assistance team in providing timely and appropriate assistance to the GOP for implementation, in accordance with their contract responsibilities;

- effectiveness of GOP Agencies in implementing the project with regard to staffing, transfer of funds, and appropriate budget allocation; and

- effectiveness of institutional relationships and interactions among the various entities including USAID, GOP Federal, GOP Provincial and the technical assistance team.

Development Concerns:

- impact of two-year delay in start of project on overall implementation--effectiveness of measures being taken to recover from this delay;

- effectiveness of training of farmers and field foresters;

- appropriateness of project-funded research to field operational activities;

- progress in designing and carrying out socio-cultural baseline studies and analysis of data for identifying a methodology to induce farmer/private sector involvement in the project; and

- project progress to date as contrasted with goals and physical inputs envisaged in the project paper.

Policy Concerns:

- progress toward identifying priorities of a "National Forest Management Plan".

D. Special Circumstances

Like many evaluations, this particular one has come at a time and under a set of circumstances which have a mitigating impact on its findings and which were beyond the control of the evaluation team. The team wishes to make brief mention of this situation in order that the reader may know that the evaluators are aware of these circumstances, and for those readers not intimately acquainted with the FPD project, add to their understanding of the conclusions and recommendations drawn in this report.

Two of the key players in this project are relative newcomers. The Inspector-General of Forests, who directs the project on behalf of the GOP, has only taken up his post since April of this year. It is clear that a previous void at this level has had a serious impact on the project. Likewise, the present Chief of Party/Senior Farm and Energy Forestry Advisor who replaced the former man at this post on the technical assistance team arrived last January. He is expected to improve contractor performance. Both, however, deserve a settling-in period to become acquainted with project operations and needs. Although the evaluation team is confident that these gentlemen will enhance implementation and progress, their roles in the project cannot and should not, in fairness, be evaluated at this time, even though they both appear well suited to and interested in carrying out their responsibilities as principal counterparts.

Furthermore this evaluation is clearly a time-specific snapshot of a fast moving and dynamic project. Certain enunciated future changes, e.g., a revision of the PC-1, project-related position appointments at the Pakistan Forestry Institute, and USAID plans for project amendment, may indeed soon shift the fundamental basis on which the project operates. The evaluation report should be considered in that context.

Of a more pragmatic nature, are a set of circumstances that have hampered, at least to some degree, the role of the evaluation team. The project involves a large number of people over a wide geographic area. Even at this early stage of implementation, the team could do no more than sample the field operations. For example, owing to the need to obtain security clearances for travel in interior Baluchistan well in advance, the team was unable to visit project sites in the Nasirabad District of that Province.

Lack of good detailed and comprehensive project reporting (a subject addressed below) obliged the evaluation team, and it has been reported, the design team presently in-country, to piece together its own overview of the project. They recognize the very real possibility that they may have done so in an erroneous way. The divergent views about the project and particularly its

implementation strategy, manifest in the discrepancies between the USAID Project Paper and the GOP PC-1, and frequently expressed by field staff, are as yet to be reconciled. It is still early enough to do so, and indeed the evaluation team hopes that its suggestions will facilitate that process. Nevertheless, this situation has not eased the fact-finding tasks of the evaluators.

Finally, while the agreement between USAID and the GOP conceives this effort as a "project", one must wonder whether a "program" approach might not have been better suited. The emerging understanding of the difficulties of the "projectized" approach currently among the priority concerns of the worldwide development community, are also germane to any consideration of the FPD project. They may be summarized as follows: a project of this nature and magnitude, aiming essentially to change the way forestry is carried out in Pakistan, is affected by numerous important externalities which it is unable to hold constant nor on which it can have practical impact. Examples of these pertinent to the FPD project include overall GOP budgets, agriculture and related sector development policies, and the internal political situation; there are indeed others. It must be borne in mind that these very real concerns deserve some attention but that they are, at least to some degree, outside of the purview and sphere of influence of project staff, local and expatriate alike, who already have heavy work loads and responsibilities. Many of the readers of this report will be well acquainted with the externalities issue and wonder why a forestry project evaluation team is venturing into the arena of development theory. The only intent here is to signal the importance of the issue so that it may receive the attention it merits over the life of this project by those who can and must address this level of concern, both in USAID and within the GOP.

E. Contents of this Evaluation Report

This report has been specifically written, as requested in the reporting requirements of the work order, to distinguish among descriptions, analyses and recommendations. Section III which follows details the present status of the project, as the evaluation team perceives it. It is intended to be the descriptive framework on which the team based its analysis. In addition to a general overview, it provides information on each of the three major components of the project. Section IV presents the analyses and conclusions based on the specific review considerations provided in the SOW. Section V contains the recommendations for modifications and/or further action stemming from the conclusions. These have been organized along the lines of the major components of the project with a view to ease of applicability. The final major section, VI, presents lessons learned which may provide future guidance for other

activities and for AID generally. The report concludes with a series of Annexes providing additional detail where it has been thought useful.

III. PRESENT STATUS OF THE PROJECT

The section which follows details the present status of the FPD project as the evaluation team has come to understand it. This includes an appreciation of the overall project strategy suggested in the Project Paper and a brief summary of the current implementation situation including inputs put in place, implementation procedures and arrangements, component activities undertaken and achievements leading to anticipated project outputs.

The realization of actual outputs has been, of course, relatively modest as must be expected given the early date in project life. Therefore, exacting comparisons of physical targets and results to date are less important in drawing inferences about the progress of the project. However, given that many of outputs are institutional in nature. i.e., putting in place GOP capability to promote and service the relatively new sector strategy of farm forestry, the team has tried, as objectively as possible, to assess and describe the present situation. Institution-building cannot be readily measured; it is absolutely vital to establish (and then recognize) some benchmarks along the way. The evaluation team has had difficulty in discerning whether project staff have identified such steps and mapped their climb through them.

Much of what follows can be construed as interpretive and opinions will vary over details and meaning. The team fully recognizes this, but has tried to fairly portray the perceptions, opinions and attitudes (often quite contradictory), of the many people involved, in describing the present process and progress of institution-building. It is after all, people who make up institutions.

A. Project Overview

1. Goals and Purposes

The goals and purposes of the FPD project remain those contained in the USAID Project Paper and later officially confirmed by the Government of Pakistan in the Project Grant Agreement, to wit:

> The primary goal of the project is to help Pakistan increase its energy supplies and achieve energy self sufficiency. The secondary goal is to reverse the process of deforestation in Pakistan and to expand the extremely limited forest resource base. The primary purpose of the project is to strengthen the capability

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

These same goals and purposes are also repeated in the GOP planning document (known as the PC-1), specifically written under the aegis of the Ministry of Food, Agriculture and Cooperatives and circulated to the Provincial Governments and the Federal Planning Commission for approval of this project. It is the latter document (PC-1), as the evaluation team has been informed on numerous occasions by involved Pakistani project staff, which guides their own commitment and approach to actual implementation. Although copies of the Project Paper have been widely circulated among the field staff, they do not appear to have been extensively consulted and, in several instances, could not be located.

2. Project Design Documentation

There are some differences between the PP and the PC-1, both of nuance, in terms of implementation approach as well as quantitative, in terms of field targets. One can only speculate, however, as to whether and when these differences have been noted by field staff. They do not appear to have been addressed or reconciled at the local level, although the Inspector-General of Forests has made clear his understanding of the need to revise the PC-1. It is worth mentioning, however, that discrepancies (which are also discussed in detail below) gave rise to essentially parallel but separate paths of implementation. The USAID Project Paper was used as a basis for preparing the request for proposals (RFP) and subsequent Technical Assistance Team contract while the PC-1 became, and still is, the fundamental framework for the preparation of annual work plans by the four Provinces (Punjab, Sind, Baluchistan and Northwest Frontier) and the Pakistan Forestry Institute.

A few comments on the USAID Project Paper seem warranted, although the intention of the evaluation team is not to carry out a rigorous direct comparison with the PC-1. The PP is generally considered a well conceived and well written document by both Pakistan and U.S. personnel (those who are familiar with it). The evaluation team also found it comprehensive, well thought-out and useful. However, like almost all PPs, it is not intended to be the final word on implementation. The implementation schedule (pp. 87-92) is as stated, "illustrative"; several issues and details were logically left to be resolved or specified as the work got underway. This is normally accomplished by the

preparation of a more detailed working plan for the first year to 18 months of the project and indicative planning for the remainder of LOP. In the case of this project however, there are two principal parties involved in implementation, namely the TAT and the GOP entities. The latter includes the four Provinces, the PFI and the O/IGF. The need for simultaneous, coordinated preparation of implementation plans, even in the PC-1, was not foreseen or perhaps not fully appreciated in the PP. Indeed, the PC-1 process itself was not mentioned in the PP although there are some references in the conditions precedent about "written opinion of Counsel acceptable to AID that the Project Agreement has been duly authorized and/or ratified by, and executed on behalf of the Grantee." USAID certified this condition as satisfactorily fulfilled early on after the ProAg but long before GOP approval of the PC-1.

It is difficult for the evaluation team to reconstruct the full historical record of project design and agreement between USAID and GOP but there seems to have been some fairly significant misunderstandings right from the start, regarding key details of implementation of this project. As will become obvious in the discussion below, many of these points have had additional implications and repercussions yet to be reconciled. The evaluation team has, however, observed what it believes is a genuine climate of cooperation, willingness and determination, at the highest levels, to resolve these issues--founded on the bilateral recognition of the inherent worth of the project and its goals.

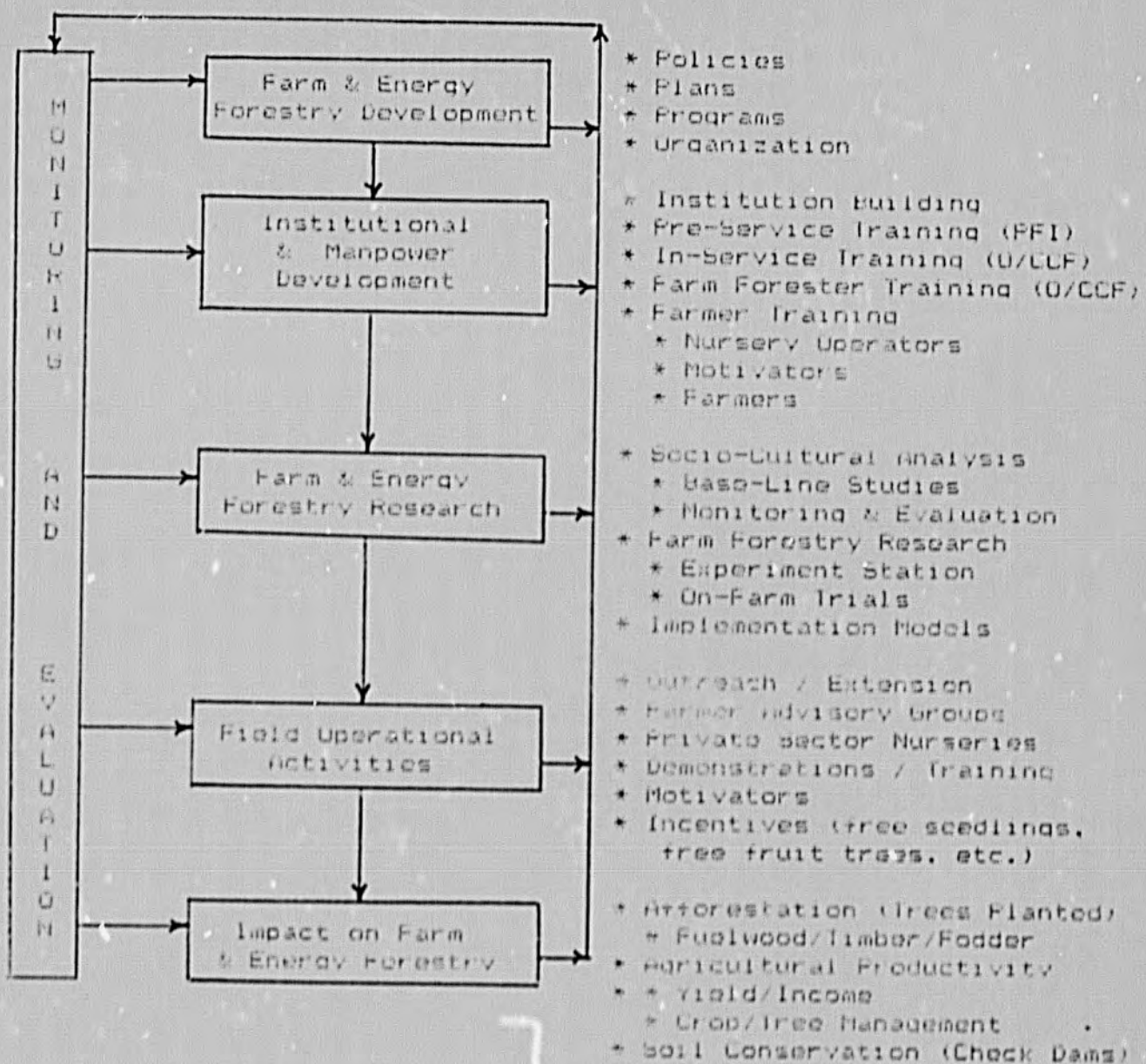
3. Implementation Strategy

A brief discussion on implementation strategy or approach is also necessary at this point to set the stage for a full appreciation of project design and present status. There are two key features of the implementation strategy that were purposefully designed into this project which seek to introduce the new farm forestry program as sector strategy in Pakistan. They are:

- the closely related nature of the three project activity components (institutional and manpower development, farm and energy forestry research, and field operational activities); and
- the sequenced or phased approach to implementation.

Figure 1 further illustrates the evaluation team's understanding of project interrelationships. The PP (p. 36) states it as follows:

Figure 1. Schematic Representation of Interrelationships among Key Components and Activities of Forestry Planning and Development Project.



Source: Based on project design concepts presented in Forestry Planning and Development Project Paper, United States Agency for International Development, 1983.

> Implementation of project components will be phased to ensure a high degree of complementarity among the institution-building, research and operational activities. The scale and pace of operational and research activities requiring professional staff will be matched to their availability as the training programs initiated early in the program take effect.

The PP explicitly mentions in greater and lesser detail the types of activities that will take place in years one to four. Although discussed in the section on implementation (pp. 86-94) which includes the "illustrative implementation schedule," the most sanguine statement spelling out the interrelatedness and sequential nature of project activities may be found in the summary at the beginning of the document (p. 3), and also in the ProAg.

> Although the approach taken will differ somewhat from area to area, the activities will follow a similar pattern. In project years one and two, detailed technical, economic, and social designs of the strategies likely to work in each region will be prepared. During this period, the staff who will be responsible for managing the activities will be identified and provided training as appropriate; farmer advisory groups will be established to help guide design and implementation of operational activities; designation of the initial planting sites will be made; and, the nurseries necessary to provide seedlings during years three and four of the project will be organized and initiated. In project years three and four, the initial planting of seedlings on the project sites will occur. An evaluation conducted at the end of year four will play a substantial role in shaping the strategy for the final four years of the project. It is anticipated that tree planting will be proven most successful during the early stage of the project in locales where farmers show the greatest interest.

The PP also states that the technical assistance team and particularly the Chief of Party will insure continuity and coordination among the three components. It also mentions a distinction between Phase I and Phase II whereby in the latter the focus will shift to include "development of federal and provincial plans for public and private forest resources."

These essential elements of the implementation strategy (complementarity, sequencing, continuity and coordination) are not, as far as the evaluation team has been able to observe, with the exception of inferences about the two major phases of the

project, reflected in either the PC-1 or the technical assistance contract. That these elements make good common sense, and that they have been explained subsequently and verbally, ad infinitum, to all concerned by the USAID Project Officer, is beyond doubt. Whether, however, in fact their implications have been understood, and to what degree, will emerge in the discussion which follows on the status of implementation.

B. Project Start-up

As mentioned earlier, shortly after project authorization in Washington, the ProAg was signed in Islamabad on 28 August 1983. Things slowed down considerably thereafter. The period for meeting the conditions precedent was extended on several occasions through the mechanism of project implementation letters (PILS). These extensions were necessary because a number of the conditions required prior GOP approval of the PC-1. It was not until August 1985 that USAID notified the Ministry of Finance and Economic Affairs that the conditions precedent (Sections 4.2 and 4.3 of ProAg) had been met to AID's satisfaction.

This delay was due in part to the difficulty of and length of time necessary for the preparation and approval of the PC-1. This process took considerably longer than originally anticipated because of both the complexity of the project and the need to circulate it for input and clearance to each of the four provinces. One of the most significant features of this PC-1 approval process, which went through three drafts, was the decision to increase the physical targets substantially from what was originally envisaged in the PP. For example, the approximate total acreage to be planted was raised from 26,483 acres (PP) to 76,718 acres in the PC-1 (Appendix 3), i.e., almost tripled. The soil conservation work (8,000 acres) identified in the PP as supplemental work to be undertaken on areas destined for plantation, was actually lowered to 6,550 in the PC-1. It would appear, however, that this work is conceived as an entirely separate activity, although this is far from explicit. The number of nurseries to be established over LOP was raised from 191 to 1,550.

While it is entirely within the purview of the GOP to try to expand the impact of the project, the rationale for and the impact of these changes must be thoroughly understood. The evaluation team has been told that during the review process the cost/benefit analysis was challenged--based on the traditional cost of tree-planting. What was overlooked, of course, was the innovative aspect of this project intended as farm forestry, the developmental nature of the investment and the costs required for changing the way forestry was traditionally carried out in the country. Also overlooked, however, was the potential for multiplier effect as the project demonstrated the feasibility of

on-farm tree-planting to farmers and foresters alike. The impact has been more deeply felt in that the physical targets as big as they are, have left the Forest Departments more concerned with the quantitative than the qualitative dimensions of their work--an anathema to the sound introduction of a new way of doing things.

While these in-country arrangements were taking place, USAID/Pakistan was also in the process of recruiting a General Technical Assistance services contractor under open competition. The contract was signed between USAID and the International Agricultural Development Service (IADS, later Winrock) on 24 April 1985 and the Chief of Party (Dr. C. B. Briscoe) arrived in-country in early May 1985. The remaining members of the TAT arrived in Pakistan before mid-December that same year, i.e., more or less bracketing the actual GOP start-up date for project initiation which may be taken as the date of PC-1 approval (August 1985). A number of other procurement actions for household and office furniture for the expatriate staff and for project vehicles, were undertaken by USAID/Pakistan directly.

The Project Paper envisaged approximately one year (remainder of 1983 through the first half of 1984) for these pre-implementation activities. It took instead, two years to complete them, although it is fair to say that this happened in a synchrorized (admittedly coincidental) manner. Having obtained the necessary approval, brought in the TAT staff, alerted the provinces and PFI to their respective programs, the project was at the point of starting up the next two year phase--mobilization for field activities and supporting actions.

C. Project Funding

The Project Paper was authorized to include life-of-project funding of $25 million in grant funds (ESF) from USAID, another approximately $14.3 million equivalent in Pakistani Rupees as the host country contribution from the GOP, and an additional $5 million in loan funds for commodity support from the USAID-funded Agricultural Commodities and Equipment project (391-0468). The evaluation team has been informed that a subsequent USAID decision changed the ACE contribution from loan to grant. Figure 2 provides a summary budget table extracted from the PP for ease of reader reference.

To date, the project has been incrementally funded as follows: original obligation FY 1983 - $3 million; FY 1984 - $7 million; FY 1986 - $8 million; totaling $ 18 million. A further obligation of $7 million is planned for FY 1988. According to the MACS system report provided to the evaluation team by the USAID/Pakistan, Office of Financial Management (FM), the FPD

Figure 2

TABLE 30

SUMMARY OF PROJECT COSTS BY PROJECT COMPONENT

EXPENSE CATEGORY AND SOURCE OF FUNDING (in $ 000)

Project Component[a]	Life of Project Funding				
	AID Grant[b]			GOP[c]	Grand Total
	FX	LCC	Total		
1. Institutional and Manpower Development					
a. Technical Assistance	4341	1837	6178	-	6178
b. Training	1477	837	2134	490	2804
c. Commodities	348	368	716	-	716
d. Other Costs	-	523	523	543	1066
Sub-total	6166	3565	9731	1033	10764
2. Farm and Energy Forestry Research					
a. Technical Assistance	691	313	1004	-	1004
b. Training	404	-	404	98	502
c. Commodities	120	-	120	-	120
d. Other Costs	-	164	164	1358	1522
Sub-total	1215	477	1692	1456	3148
3. Field Operational Activities					
a. Technical Assistance	1556	505	2061	-	2061
b. Training	-	570	570	-	570
c. Commodities	-	785	785	178	963
d. Other Costs:					
i. Barani	-	5391	5391	6540	11931
ii. Nasirabad	-	832	832	1554	2386
iii. Sind	-	1501	1501	2277	3778
iv. Construction	-	279	279	231	510
Sub-total	1556	9863	11419	10780	22199
4. Evaluation	206	168	374	-	374
TOTAL	9143	14073	23216	13269	36485
Contingency	703	1081	1784	1031	2815
GRAND TOTAL	9846	15154	25000	14300	39,300

a/ Inflation = 10% on FX Salaries; 15% on all other FX costs, local salaries and vehicle operating and maintenance costs; and 20% on all other local costs. Inflation compounded annually.

b/ Does not include a $ 5.0 million loan for commodities under the Agricultural Commodities and Equipment Program (391-0468) in FY 1983.

c/ Expressed as dollar equivalents at the exchange rate of US $1.00 = Rs 12.83.

project summary budget status, as of 31 July 1987 was as given in the figure below:

Figure 3. Summary Budget Status

Element/ line Item	Obligated/ Earmarked	Committed	Disbursed	Unliquidated Obligation
Technical Assistance	5,000,000	4,215,947	1,836,090	3,163,910
Training	3,279,000	1,640,022	57,445	3,221,555
Commodities	1,621,000	1,059,671	656,301	964,699
Other Costs*	6,799,000	827,540	173,639	6,625,361
Evaluation	114,000	0	0	114,000
Contingency	1,187,000	0	0	1,187,000
TOTALS	18,000,000	7,743,180	2,723,475	15,276,525

*Other costs are predominantly local currency expenditures for such things as field operational activities, research activities and construction, including the student hostel at PFI. Much of this funding is intended as reimbursement to the GOP for expenditures incurred in carrying out these activities.

Fuller details and information may be seen in the Comprehensive Project Pipeline Report (MACS - P07A) of 31 July 1987 included as Annex E of this report. As can be seen from this summary, disbursements are currently approximately 15.1 percent of present obligation ($25 million). The bulk of these disbursements (see figure above) is in the technical assistance and commodities line items, which is normal during the start-up period of projects of this nature. If one assumes that the project actually got underway once the pre-implementation activities were completed, i.e., January 1986, these figures may be taken to represent approximately one and one-half years of full-scale implementation. A number of comparisons of this disbursement figure could be made. For example, comparing it with planned expenditures by fiscal year (as per PP Annex K, Table 2) which can be extrapolated to approximately $2,613,000, or in other words roughly equal. As an alternative, one might compare it with the annual expenditure prorated in equal annual disbursements over LOP; one and one-half years would be

equivalent to 18.75 percent of the total, or approximately $4,687,500.

As was stated above, project disbursement includes a significant amount of funding in local currency, a good percentage of which is intended as reimbursements to the GOP for expenditures incurred in field operations, including nurseries and tree-planting, in-country training and local construction of project offices and buildings. The evaluation team has been informed by numerous individuals that both timing and amount of GOP contributions to the project have been a major constraint. This matter bears some explanation and examination

The subject of GOP budget responsibility is a complex one. Some things, however, seem quite apparent. For example, the capital costs for the project in the PC-1 as compared with the PP, are as follows:

	$ EQUIVALENT	U.S. DOLLARS
	PC-1	PP
GOP Contribution	$ 13,838,269	$ 14,300,000
USAID Contribution	$ 27,945,674	$ 25,000,000
TOTAL	$ 41,783,943	$ 39,300,000

The PC-1 summary budget table (p. 3) appears to have been constructed out of the cost information contained in Appendices 1-42. This must have been an extremely tedious task. Whatever its strengths and weaknesses (the evaluation team has not attempted to cross-check it), the fact of the matter is that it cannot be used to identify annual budget needs, either in total or by line item, whether for the GOP or USAID.

The year-wise phasing of project expenditures in the PC-1 (Appendix 1) is also inadequate to the annual budget task as it lumps GOP and USAID expenditures together. Furthermore it includes only seven fiscal years of GOP funding. It is this Appendix however, which the O/IGF appears to be using to propose annual project budgets for the annual development plan (ADP). This conclusion is drawn from the fact that there are a good deal of similarity between the ADP 1987-88 budget table and the column 1987-88 of Appendix 1. How the differences in these columns were arrived at, the evaluation team was unable to discern.

Another issue, of course, is cumulative funding shortfalls. The 1987-88 GOP portion of the ADP is stated to be 17.965 million Rupees. The evaluation team was informed by the DIGF assigned to

the project that total GOP funding actually released for 1985-86 and 1986-87 was as follows (the breakdown GOP/USAID is theirs):

Year	Allocation	Release	GOP	USAID
1985-86	7.100	7.100	2.155	4.945
1986-87	8.015	5.685	3.666	2.019

The information provided goes on to state that of the total released, 5.14 million Rupees was to be covered by reimbursements from USAID. In other words, net GOP contributions to this project through the ADP up to 1986-87 fiscal years have been (at today's exchange rate) roughly the equivalent of $300,000. As was pointed about above, this cannot be compared against PC-1 projections of GOP contributions because such figures are not readily discernible in the tables contained therein. However, using the PP summary table of project expenditures for GOP funds (Table K-3 of PP), it could be compared against expected cumulative totals, i.e., Year 1 - $205,000; Year 2 - $1,299,000; Year 3 - $2,635,000; etc. Two additional points must be made about this figure. The GOP total contribution under the ADP does not reflect the expenditures for staff (establishment) and other costs being met through normal Federal and Provincial Forestry Department budgets. This may be substantial but the figure is not readily available nor discernible. The second point is that the PC-1, it should be carefully noted, only authorizes GOP expenditures for three more fiscal years: 1988-89, 1989-90, and 1990-91.

There is another important dimension to the project funding issue. It concerns reimbursement procedures and levels to date. According to project financial records reviewed in the USAID/FM, earmarks and disbursements as of 31 July 1987 against FPD project PILS No. 13 and 14 were as follows:

	PIL 13			PIL 14		
expenditure	RPs TOTAL - 12 million			RPs TOTAL - 17 million		
element	earmarked	disbursed	%	earmarked	disbursed	%
Training	$ 50,000	$22.38	/	$140,000	0	/
Commodities	$475,000	$29,833.01	/	$110,000	$12,717	/
other costs	$250,000	$72,201.32	/	$750,000	$101,438	/
TOTAL	$775,000	$102,056.71	13%	$1,000,000	$114,155	11%

The periods under which funds could be extended according to

these PILs have both expired and indeed the remaining funds under PIL No. 13 were de-earmarked. PIL No. 14 expired 30 June 1987 as it coincides with the GOP fiscal year. Additional expenditures may be vouchered, but according to procedures, the period will have to be officially extended.

This low level of expenditure is noteworthy because these expenditures, reimbursable by USAID include the amounts allocated to tree-planting, the best indicator of real project progress. It is, however, too early to be concerned about this matter because by design, little was expected to be accomplished on the ground during the early years. What is, or could be important, however, is whether this level of expenditures is symptomatic of other problems, namely of procedure. Certainly at the field level, there is a good deal of confusion about eligible expenditures for USAID reimbursement. The voucher system passes through the O/IGF and the USAID project office, so supposedly ineligible expenses have been minimized and valid ones maximized.

The question is then whether GOP funding releases are adequate to meet both GOP expenditures (establishment, POL, nurseries, etc.) and USAID eligible reimbursement items. Clearly, they have not been so over the preceding GOP fiscal years 1985-86 and 1986-87. Fiscal year 1987-88 looks more promising but a question arises. In a recent (July 1987) exchange of correspondence between the Secretary, GOP Ministry of Finance and the Director, USAID; the Ministry confirmed that the 1987-88 revised ADP allocation (local currency) would be more or less as understood by project staff, i.e., 17.965 million Rupees for the FPD project. The evaluation team has been unable to ascertain whether that is the total amount that the project will receive or whether the Government will make available sufficient advances, at least for the first quarter or two, to cover both GOP and USAID (reimbursable) expenditures. This matter is rather complex and the evaluation team understands that USAID PDM is still pursuing it in order to clarify the intended procedure.

Mention should be made here that project expenditures are not uniform over the year but rather include peaks and lows related to the operational and biological calendar. GOP project staff have indicated, however, that unless adequate funding (at least one full quarter's worth) is received by the December of the fiscal year, implementation is severely hampered. As a further example, it has been learned that Provincial project staff in both Punjab and NWFP have made agreements with private sector farmers to establish nurseries and produce plants for the current 1987 monsoon (August onwards) planting season. Although exact figures are difficult to ascertain, according to reports issued by these two provinces they will have to pay the farmers for more than 1.5 million seedlings very soon. At the established rate of Rps. 1.25 per seedling that amounts to Rps. total 1,875,000. They do not have that money now, either left

over from last year or received as first quarter 1987-88 release to date. A problem is clearly on the horizon.

Finally, as concerns budget and funding procedures, the evaluation team has been informed that once the Ministry of Finance approves ADP allocations for release, the money must move through a torturous circuit before it reaches the PLA of the District Forestry Officer, from whence it can be actually expended. The route described is as follows: Ministry of Finance; Accountant General Pakistan Revenues; State Bank of Pakistan, Karachi; Provincial Accountant General; Provincial Ministry of Finance; Provincial Ministry of Forestry; Budgets and Accounts Officer; District Treasury Officer; PLA at State Bank of Pakistan Branch in District Headquarters. Reportedly this process can take two to three months, meaning that first quarter releases if approved by Ministry of Finance by 1 August, will not reach the field before 1 October. The evaluation team cannot attest to the accuracy of this description but several Forest Department officers have tried to spell it out for them, to the point of committing it to a rough working paper entitled: Projected Constraints in the Flow of Funds. A copy of this paper has been passed on to the USAID Project Officer. The concern in this regard seems genuine. The Project Officer has informed the evaluation team that he feels the release problems are more likely attributable to the delays at the provincial level in submitting accrued expenditure vouchers. The evaluation team was not able to go beyond this point in its pursuit of this complex subject.

D. Project Staffing and Management

There are eight readily identifiable organizational units involved in the FPD project, namely, the Office of the Inspector-General of Forests, the offices of the four Provincial Forest Departments (note: Punjab presently has three Chief Conservators of Forests), the Pakistan Forests Institute, the Technical Assistance Contractor and USAID/Pakistan. Each of them has roles and responsibilities, described to a greater or lesser degree, in project documentation. The evaluation team has observed, however, that confusion about roles and responsibilities is widespread among the project staff from the field level up to USAID/O-IGF. This confusion involves both lack of understanding about one's own duties as well as expectations regarding the activities of others.

This confusion arises for two reasons. One is the failure to define certain of these roles and/or explain them to those who must carry them out. The other stems from a feeling among staff that given their own recognized limitations in staffing, surely "someone else must be responsible for that." The evaluation team has come across numerous instances where Pakistani project field

staff have referred to the TAT as representatives of USAID. On the other hand, field staff seem to uniformly understand that they are responsible for implementation of field activities (nursery and tree-planting) but are uncertain about training, demonstration and research, planning and budget responsibilities.

At times, there is even some question about in which project they are involved; the NWFP calls their efforts "Social Forestry project" and in Punjab, it is called the "Farm Energy Forestry project." The 1986-87 work plan proposed by the Punjab project team states: "Farm Energy Forestry Project Punjab is the operational phase of Forestry Planning and Development project of the Government of Pakistan which is aided by USAID." The evaluation team believes there is more than semantics involved here.

1. Staffing Levels

The PP is not particularly clear about the level of GOP staffing suggested to carry out the activities of this project. A number of new full-time staff assignments (AIGF, provincial Project Directors) are explicitly mentioned. However, for the remainder, the expectation seems to be that existing staff from the DFO to the Forest Guard level will take over these responsibilities. The intent as is discussed under the section on APAC considerations is "to minimize the expansion of the Forest Department bureaucracies," (PP p. 7). The document also raises the need to significantly strengthen, both in number and skill, the staff responsible for farm and energy forestry, and further mentions the position of "professional farm foresters." The latter presently does not exist in the current scheme of the forestry bureaucracy and hierarchy in Pakistan. Table K-7 and K-8 (PP) referring to organization and staffing, give intended numbers and levels of personnel but here again, these may be presumed to be existing staff trained and posted for farm forestry. The bottom line, however, is that the project anticipates a GOP contribution of $14.3 million which includes $3.682 million explicitly for staffing (Source: Tables K-4 and K-5, PP).

The PC-1 is a good deal more explicit in this regard. Establishment costs (the GOP budget line designation for personnel) earmarks about the same amount, i.e., $ 3.6 million. This figure is derived from detailed budgets prepared for each of the six operational units (O/IGF, PFI and Provinces). Total staff to be assigned to the project under these assumptions is presented in the following figure which gives both approved and actual staffing levels:

Figure 4. Staffing Levels

Operational Unit	Approved in PC-1		Filled			
	Forestry Staff*	Support Staff	Forestry Staff		Support Staff	
			No.	%	No.	%
O/IGF	4	28	2	50	16	57
PFI	23	83	4	17	48	57
PUNJAB	54**	149	41	76	86	68
NWFP	10	24	10	100	21	87
SIND	9	33	9	100	25	76
BALUCHISTAN	19	37	11	58	16	43
TOTALS	119	354	77	65	21	60

* all forestry staff at all levels including foresters and forest guards

** includes 30 foresters (sub-professional level staff)

This is certainly both a reasonable overall level of staffing as well as a good rate of filling the positions. There are, however, a number of anomalies which have come to light. The level of support staff to forestry staff would appear to be an unusually high ratio--almost three to one. This is especially poignant in the provinces if one takes into account the relative weakness at the field level for forestry staff who must carry out the extension work with the farmers and fulfill the PC-1 physical targets. For example, in the Punjab where 30 of the 54 forestry staff shown in the table are to be foresters (the staff who meet the farmers face-to-face on regular basis), they must induce 21,249 families to plant trees over the life of the project. That works out to approximately 87 families per forester/year (21,000 families divided by eight years times 30 foresters). In NWFP, which has only six individuals at this level, the ratio (similarly calculated) is one to 330. All of these staff are not yet in place, and little has been accomplished in the first two years of the project, thereby further exacerbating the problem of targets versus staff.

A number of other interesting and revealing comparisons of this type are possible, but these are beyond the scope and time allotted for this evaluation. It would appear, however, that field staffing is far from adequate to meet PC-1 expectations and that as can be expected with a new activity (farm forestry), the ideal ratio of staff to accomplishments is not yet known. The intention, of course, of the original design was to spend the first two years developing these operational modalities. The attempts to start the nursery/tree-planting activities from project inception (also discussed under the section below on

implementation status) has made it impossible to assign staff in a rational manner. The present lack of staff assigned to project activities at the PFI has obviously been a major constraint there. This is well known by all concerned. Recently announced intentions, to assign individuals presently on the staff there and due to be promoted, may help to resolve this situation. The evaluation team has been informed, however, that of the six individuals so identified, only two really have the credentials to operate as research scientists, i.e., Master of Science degrees or better. Research personnel assigned to the project have pointed out that the PC-1 makes no provision for research personnel at the provincial research centers with which the project is intended to collaborate.

Staffing on the part of the TAT has been, for the most part, adequate. Nevertheless, the replacement of the COP and the Farm and Energy Forestry Advisor (Messrs. Briscoe and Current, respectively) has slowed down the ability of the TAT to carry out its responsibilities. The continued vacancy of the Farm and Energy Forestry Advisor, as a result of an abortive attempt to involve the International Council for Research in Agroforestry (ICRAF), has left an important void in TAT capabilities. There are a number of issues and opportunities related to project implementation which also suggest that the technical assistance contractor should have drawn more heavily on their short-term consultant allocation. Steps are now underway to do so.

2. Management

Similar to the organizational pattern, the chain of command and management relationships within the project are both complex and vitally important. Until quite recently, the key leadership position of the Inspector-General of Forests was vacant or covered by an acting incumbent without sufficient authority. It is expected that the new IGF (Mr. Abeedullah Jan) will quickly resolve any number of outstanding issues; he has already signaled his intention to revise the PC-1. Nevertheless, the position of IGF must deal with the entire scope of forestry and related issues in the country and even the best of efforts will not prevent him from being spread too thinly vis-a-vis the FPD project. The appointment of the Additional IGF foreseen in the PP/PC-1 has not yet been completed. This individual once in place will be able to handle the day-to-day management and overall coordination responsibilities of the O/IGF, leaving major decision-making and policy matters to the IGF. The two Deputy IGF's assigned to the Project under the O/IGF have been in place since 1986; one is about to retire. Here again, senior capable individuals will be required. The appointment of an Additional Director-General at PFI who may be able to look after the project related activities full-time, could help to resolve the staffing

constraints and get this important component of the project on track.

As is to be expected, TAT management has suffered because of the decision to change the COP. Valuable time was lost in addressing three management themes, namely, improved work planning and reporting, better communications and greater team cohesion. The new COP is cognizant of these issues, and members of the team have already reported that communications and team work have improved since his arrival. Comprehensive work plans and subsequent quarterly reporting still represent a management challenge for the new COP.

The evaluation team has noted that the management structure, originally envisaged for USAID as concerns this project, included the equivalent staff time of one USAID direct hire officer (project officer plus various mission staff), two foreign service nationals (FSN) and a Joint Career Corps (JCC) forestry advisor. In actuality, there is one full-time project officer and one FSN forestry specialist. Despite this reduced staffing, and in contrast to the level of management exercised by others to date, the USAID management team has been intensively involved in all aspects of the project. The evaluation team has observed that the Project Officer's activities extend to the administrative, managerial, financial and technical dimensions of the project as well as to major program oversight and liaison with GOP officials. A certain degree of micro-management has crept into the operating style of the USAID Project Officer, no doubt as a result of his genuine concern for facilitating and improving implementation. The USAID mission, as well as the Project Officer himself, appear to be cognizant of this situation and intent on improving it, particularly as this concerns the technical assistance team. The appointment of the new IGF and the arrival in-country of the new COP for the TAT should allow the project officer to focus his efforts on particular major management problems troubling the project.

Comprehensive progress reporting is an area that needs USAID management attention; neither the PROMIS report nor the PIR give an accurate picture of the current situation of the FPD project. Written clarifications of USAID's view on roles and responsibilities, in close liaison with the O/IGF and the COP TAT are another management need.

E. Implementation Status

The discussion which follows is broken down on the basis of the three principal activity components of the project, and as appropriate, their various distinct parts, whether by type or in the case of field operations, by their geographical spread.

1. Institutional and Manpower Development

The objective of this project component is to strengthen the capability of the Office of the Inspector-General of Forests in the Ministry of Food, Agriculture, and Cooperatives, the Offices of the Provincial Chief Conservator of Forests (O/PCCF), and the Pakistan Forest Institute to:

- develop sound afforestation and fuelwood policies that are adequately coordinated with the activities and approaches of the agriculture and energy sectors;

- design and implement cost-effective and coherent plans at the federal and provincial levels for the integrated development of farm and energy forestry and to monitor and evaluate ongoing programs in order to adapt subsequent plans to take advantage of successes and to avoid recurrent failures;

- provide training for forestry officials to develop improved skills in the design, organization, and implementation of programs to encourage farmers to adopt afforestation practices on suitable lands;

- broaden research capability in the natural and social science aspects of farm and energy forestry systems to build the basis for improving these systems and their management in the future; and

- design and administer effective and efficient programs to encourage the production of trees for fuelwood, fodder, timber and soil conservation on private lands.

The latter two topics, research and programs, although also part of the institutional strengthening efforts of the project, are discussed below in the two sections addressing the other activity components, namely farm and energy forestry research and field operations.

Policy Initiatives

Forestry policy established in Pakistan since well before Independence has been focused on government responsibilities of managing and maintaining forest resources on reserve forest areas. In other words, the forester's domain has largely been on lands directly controlled and managed by the Forest Department. Despite a relatively capable cadre of personnel, intense pressure on the forest resource base, resulting from population growth and

the expansion of the agricultural frontier, has reduced forest cover to less than five percent of the total land base. In turn, much of this area is degraded, and official figures suggest that less than three percent of the total land area in the country can be classified as actively and sustainably productive.

Thus, the decision to emphasize forestry and tree-planting activities on lands "outside" the forest reserves is not surprising. Concern for productive potential is matched by the present supply/demand equations for fuelwood and the burgeoning marketplace opening to the farm for both fuelwood and other tree products. The economic opportunity for income generation possibilities on the farms and forests of the country is paralleled by the emerging national concern for the impact of large-scale deforestation and incipient desertification over large areas. Thus, the farmer attracted by the income incentives possible through raising trees and the real but less well recognized opportunity to enhance crop productivity on his land, can in the long-run, turn back the tide of ecological destruction and improve the wood-based dimensions of the national economy.

This potential has been officially recognized in Pakistan. Indeed the forestry and wildlife sections of the National Agricultural Policy directive, issued in February 1980, give a prominent place to the following policy measure: "a bigger thrust on tree plantation of fast growing species in areas outside forest." Similarly, it could be a argued that GOP approval for implementation of the FPD project constitutes a policy level decision. The PC-1 clearly states that: "The project will provide assistance for collecting data and conducting analysis that will . . . consider the trade-offs between forestry on government lands and assistance for forestry provided to the private sector." This, it is stated, "could result in a shift of GOP efforts from the public lands to private sector forestry."

This shift in policy emphasis is already underway but it must be accompanied by a carefully thought out and gradual shift in policies (and procedures) at both the level of the O/IGF and the Provincial CCF's. Policy should not be developed in the abstract and indeed this project was intended as a field laboratory for examining policy and strategy options. While it is clearly too soon to be demanding results in this regard, the evaluation team feels that too little has been done in this important arena. That is not to say that a number of policy issues have not already arisen. The following issues are an early indication of the need for policy consideration and subsequent decision-making which have arisen in the context of this project already:

- the question of emphasis on big or small farms;

- the matter of creation of separate extension cadre or the assignment of extension responsibility to territorial forestry staff;

- block plantations versus lineal or scattered tree-planting;

- changes in tne basic educational curriculum for professional forestry personnel;

- the potential competition between private sector and GOP nurseries;

- the contradictions in extension models, some of which are highly subsidized; and

- a series of more mundane but equally important matters concerned with operational aspects of Forest Department work (staffing, management, budgets and training).

Many of these concerns are being dealt with on a day-to-day basis by project staff.

A set of circumstances apparently beyond the control of the project has slowed progress in the matter of policy. The Inspector-General of Forests is the senior spokesperson for forestry-related activities in Pakistan. He develops and recommends forest policies to the Secretary of Agriculture and to the Cabinet and coordinates forestry activities in the Provinces. The present incumbent has only been his post since March of this year. Prior to that, and almost since the inception of the project (i.e., PC-1 approval), the position was covered by an acting IGF whose lack of seniority did not permit him to make policy. Likewise, in the absence of an IGF, it has been impossible to convene the Federal Advisory Committee for Farm and Energy Forestry which was established under the covenants to this project and includes representatives of each of the Provinces and the following Ministries: Food, Agricultural and Cooperatives, Planning and Development, and Petroleum and Natural Resources. In addition to its important oversight of responsibilities for the FPD project, this committee was expected to provide guidance to the implementing agencies and translate the lessons being learned into revised policies. The IGF is fast taking up his responsibilities within the project and his leadership is already quite tangible. For the short-term, however, it would appear that he will have to occupy the little time he can take from his already busy schedule for FPD-related matters to address operational issues. The Additional Inspector-General of Forests, identified in the project design and agreed to in the ProAg, is yet to be appointed. Once he comes on board, this individual will be able to look after day-to-day project operations

deferring, as it should be, policy matters to the attention of the IGF and the Advisory Committee.

It is also noteworthy and unfortunate that the technical assistance team has not had greater impact in the policy area. Their role, identified in their contract, is quite specific, to wit:

> the analysis of alternative afforestation and fuelwood development policies including a comparison of the direct returns to investments in forestry on government versus private land, the division of federal and provincial responsibilities for forestry and fuelwood development, the role of fuelwood as an energy resource, and the role of farm forestry in enhancing agricultural productivity.

This responsibility has been assigned to the Chief of Party/Senior Farm and Energy Forestry Advisor, although short-term consultants in the area of policy and economics have also been suggested as well. The evaluation team is cognizant of the fact that the original COP was replaced and that the present incumbent, like his counterpart, the IGF, is still in a period of getting established. The previous COP has prepared a draft working paper on forest policy issues; a cursory review of it suggests that it is a good start on the subject but rather wide-ranging in scope. As the evaluation team understands it, this paper has as yet to be shared with the GOP. The TAT has not as yet called upon short-term assistance in this area.

In short, as was said above, little has been accomplished in resolving emerging policy issues although a number of important ones could well be the subject of early future attention. Policy decision-making is clearly the explicit purview of the government, but the project can and should assist in the discussions of these and in reviewing the pros and cons of various options. The TAT can and should participate in this process.

Planning

The PP as well as the PC-1, envisage an important contribution to building institutional capability for planning at both the Federal and Provincial levels. It constitutes a major focus of project activities, as stated in the PP (p. 1), to: "collect data, conduct systematic analyses, and develop integrated Federal and Provincial plans for the cost-effective development of forest resources on the public and private land of the country." While this particular focus is explicitly intended to be emphasized in the second half of the project, there is no intention that it be disregarded at this point.

It is evident that there are only limited skills and experience in planning and/or resources economics within the GOP forestry establishment. Work plans and micro-economic analyses are carried out but macro-economic planning, much related to the policy and strategy decision-making discussed above, has yet to take a firm foothold in the country. Annual work plans are prepared routinely by divisional and/or project staff throughout the country, although these are very much focused on the quantitative aspects of planning, i.e., physical targets, staffing, work days, and budget requirements. It would appear that at least one of the reasons for the noted GOP budget problems within the project, is the lack of planning skills.

It is significant that adequate implementation planning has as yet to take place in the project, much less any attempt at sector planning. To a certain extent, the lack of planning has been a structural problem, simply stated, there was no one within the Provincial project teams to carry out this work. The appointment of Provincial project directors, as well as DFO's responsible for monitoring and evaluation should improve that situation. The evaluation team has observed a sincere effort to prepare annual work plans although the merits of these plans are thwarted by the difference between the unreconciled PC-1 targets and available budgets.

The TAT has made some effort to assist in improving work plan preparation through a series of local workshops with project staff in each of the Provinces; more work is evidently needed. Planning, however, is more than compiling lists of things to do. The work plans of the TAT themselves leave something to be desired in that regard. They tend to focus on activities rather than objectives, on how these may be accomplished and what will be required to attain them. Throughout the FPD project, one gets the impression of a fundamental need to plan. In fact, the rather lofty goals and purposes of the project have not been desegregated into a phased series of attainable objectives to be pursued over LOP and directed at a step-wise approach. TAT staff as well as their counterparts throughout the project, presently have difficulty in seeing their roles and responsibilities within the overall implementation framework. This is partly as a result of inadequate planning. Failure to do realistic planning has also resulted in the activity/target driven approach to the work, and overly ambitious and dubiously achievable work loads. Both the PP and the TAT contract mention the introduction and initial execution of systematic forest planning processes and related analytical techniques. The evaluation team is aware that the TAT and project directors view the installation and operation of the micro-computer stations as a key element in improving planning capability. The evaluation team is somewhat dubious as to whether this will really be as important as it is anticipated. More than a capacity to do spreadsheets is required to inculcate the planning process. The evaluation team believes that given

the proper attention and involvement of representative staff from throughout the project, the upcoming revision of the PC-1 may be the first real planning exercise undertaken within the FPD project.

Responsibility with the TAT for assistance in planning has been allocated in the contract SOW to the COP and the Farm and Energy Forester. In the latter case, this responsibility is to be directed at planning field operational aspects of the project. At present, this slot on the team is vacant owing to the dismissal of the previous advisor. The Outreach Specialist has taken it on his shoulders to do both the work plan and computer skills training; the latter task was not specifically allocated under the individual TAT SOWs. A first draft of a manual on work plan preparation has been prepared and as mentioned above, training workshops on this phase of the project given to field staff. Regrettably, this has taken as significant amount of the Outreach Specialist's time. In witness thereof, his principal planning activity, that of preparing a comprehensive training plan for the project, has yet to be completed.

Some efforts at assistance in monitoring and evaluation have also been undertaken. A group of Pakistani professionals was sent to the United States for short-term (three months) training in monitoring and evaluation. The report prepared by the sub-contractor (University of Connecticut) suggested, however, that more basic training in management and organization was required and indeed imparted to the participants. Project-related efforts to foster monitoring and evaluation, in the opinion of the evaluation team, would appear to be quite fruitless if competent planning skills are not first acquired and practiced.

Training

The Forestry Planning and Development project was designed to include a substantial, multifaceted education and training program. This program is a key element within the overall efforts aimed at institutional and manpower development. Training elements are, however, also a part of research and operational components. All of the above are discussed in this section for the sake of a comprehensive overview. For the purposes of this report, the term "training" is defined as including both the transfer of knowledge in educational settings as well as the extension/outreach activities between forestry staff and their peasant clientele.

The training program was accorded high priority during the early years of the project in the original design. During this period it was intended to concentrate efforts on designing programs and building institutional capacity for farm forestry. In the later years, the intention is to shift to a more planning-

oriented mode with returning participant trainees gradually taking over routine implementation responsibilities. Hence, the early and effective delivery of the training program was considered vital to the long-term evolution of project operations.

The focus of the training program addresses three project objectives: strengthening the capability of the federal and provincial forestry authorities to design policies, plans and programs for farm and energy forestry development; enhancing the capability of the Pakistan Forestry Institute to conduct training and research programs in support of farm and energy forestry; and training the staff who will interact with and assist private farmers and landowners to adopt farm and energy forestry practices.

Training activities foreseen in project design documentation include: long-term overseas training (graduate degree fellowships), short-term overseas training (study tours and short courses), long-term in-country training (project-sponsored B.S./M.S. students at PFI), short-term in-country training (short courses and study tours), and a substantial farmer training and extension program associated with field operations. In addition, supporting activities in the training realm included the preparation of a comprehensive project training plan and the revision of the curriculum at PFI. The latter was expected to become the core teaching curriculum of a farm and energy forestry specialization for B.S./M.S. students at PFI.

There is some slight confusion concerning the overall level of effort to be devoted to the training program. The PP provides a clear synopsis as well as a full breakdown of the training (see Table 13- Summary Training Plan and Figure 7 - Illustrative Training Plan Schedule, pp. 103-106). The PC-1 breakdown of the training plan has inadvertently left out the schedule given on page 105 of the PP, and thus the total trainees and duration vary between the two documents. This slight variance has as yet to have any substantive impact and the evaluation team understands that USAID and the GOP intend to implement the training program more or less as originally envisaged. This minor discrepancy in targets will be addressed during the upcoming revision of the PC-1. It is nevertheless worth bearing in mind the fact that the training program, involving up to 400 forestry personnel and up to 30,000 farmers is a substantial undertaking. It will take the time and energy of all concerned to carry it out efficiently. The evaluation team has noted that there is a tendency among project staff, both national and expatriate to consider training efforts to be the exclusive purview of the TAT Outreach Specialist. He has consistently tried to live up to those expectations but the tasks are clearly overwhelming. This is in part due to lack of understanding regarding roles and responsibilities for training. Neither the PP nor the PC-1 are

particularly explicit in this regard although both suggest that the PFI will be centrally involved. The evaluation team believes that other members of the TAT and the federal/provincial staff can and should take on greater responsibility in this area of activity.

Several individuals including the IGF have pointed out the continuing need for the comprehensive training plan mentioned in the PP. This document has yet to be finalized although the TAT Outreach Specialist has already requested and received indicative training plans from several of the provinces. Despite some questions about the intensity of this planning tool, the evaluation team believes it is a vital document given the level of effort foreseen for training. The training plan must, however, be more than a list of personnel to be trained. It should be a more programmatic document, based on a project-related needs assessment, that will consider implementation responsibilities, educational/training objectives for the various needs, a preliminary outline of training methodologies and approaches for each facet of the program, overall costs, and annual budgeting and scheduling needs. It would also be worthwhile to address, to the degree possible, follow-up placement for returning trained staff.

The evaluation team believes that a good start has been made at operationalizing the training program, albeit not to the degree specified in the original design. It should be pointed out, however, that the schedule of training was perhaps a bit optimistic in its projections of early implementation. For example, the nominations and approval process for overseas fellowships candidates has proven tedious and time consuming, especially for the TAT Outreach Specialist whose responsibility it has been to track the candidates. Indications are that the FPD project has fared no worse than many projects in-country which traditionally find difficulty in implementing their overseas training programs. The IGF has indicated his willingness to provide greater advocacy and support to the nominations process and this will likely quicken the pace.

The actual training accomplishments to date are detailed below.

Long-term Overseas Academic Training

As of August 1987, five participants had been processed and approved for M.Sc. training in the United States. Three are in the United States presently and two more are scheduled to begin in Fall 1987. Planning for additional fellowships continues.

Short-term Overseas Training Courses

Six participants attended a three-month short course (Fall 1986) in monitoring and evaluation at the University of Connecticut. A similar short course on management, planned for Fall 1987, has been postponed to Fall 1988 for lack of nominations. A total of 10 participants have been sponsored by the project for participation in USDA or USAID short courses; topics have included land-use planning, irrigation and water management, arid zone tree establishment and public forestry administration and management. Another small group (three) are scheduled to participate in the 1987 version of the latter course and other nominations are under consideration.

Overseas Study Tours

A three-nation (Nepal, Thailand, and the Philippines), two-week Asian Study Tour on Farm Forestry was organized by the TAT and successfully carried out. Eleven individuals participated, nine of whom were Forest Department staff and two of whom were private farmers. A second such tour, hopefully featuring a tour of social forestry projects in India is being planned.

In-country Short-term Training Courses

Numerous orientation meetings and brief workshops have been held with GOP staff including O/IGF, PFD's and PFI to acquaint them with the Forestry Planning and Development project. A series of training sessions of short duration on the preparation of annual work plans and budgets have been held for provincial staff engaged in the project. A draft manual on annual work plan preparation has been prepared. Taking good advantage of locally organized short courses, two forestry staffers attended an On-Farm Water Management course, and three forestry school teachers participated in a Training of Trainers short course organized by USAID and the Academy for Educational Development (AED). Similar opportunities, both project-sponsored or being organized by other organizations, are being sought. The FPD project TAT is planning a short course on the use of the microcomputers procured with project funding.

In-country Study Tours

The first Interprovincial Farm Forestry Study Tour with 16 gazetted forest officers (Range Forest Officers and Conservators of Forests) was carried out in the last quarter of CY 1986. A second tour for subdivisional forest officers and above is planned for November 1987 and a third for range foresters and foresters is scheduled for December 1987.

Curriculum Development at PFI

A three-person consulting team of distinguished American forestry educators spent three months in-country working in collaboration with the staff at PFI to prepare a proposed Farm and Energy Forestry Curriculum for student specialization at PFI. Approved by the PFI Board of Studies in November 1986, the curriculum is still awaiting overall approval from the Agricultural University at Peshawar. The intention is to begin using the new curriculum in Fall 1987. The TAT including the anthropologist and the Outreach Specialist, helped to teach an innovative course on "Sociology, Public Administration and Extension" at PFI in 1986. The course was not repeated in 1987. Staffing constraints at PFI, discussed earlier in this chapter, will until satisfactorily resolved, be likely to jeopardize the full implementation of the revised curriculum.

Project Sponsored B.S./M.S. Training at PFI

Funding was included in this project to facilitate training provincial forestry department staff, utilizing the revised curriculum in farm and energy forestry. The first class of students under this arrangement are expected in October 1987. There appear, however, to be a number of anomalies associated with this activity that need to be resolved if it is to work smoothly.

Staffing Capability to teach the new curriculum is here again one issue. In fairness to PFI, it must be pointed out that they have already instituted a "social forestry" specialization and at the request of the Punjab Provincial Forest Department, trained and graduated a group of 20 students in that program. Nominations have been requested from the provincial Forest Departments for a group of 12 project-sponsored (six B.S., six M.S.) students for the October 1987 class. First notification was given in January and a reminder in mid-May; to date no nominations have been received. Typically, the nomination process is a slow one and PFI authorities are confident that candidates will be put forward. It seems unlikely, however, that this will include B.S. students this year since such candidates must pass through the full civil service recruitment process. Furthermore the provinces are required to establish and fund these new positions in their forestry cadre. It is expected, however, that staff already serving in funded positions and with B.S. training could be nominated for M.S. slots. It should be borne in mind as well that under current PFI practice, student specialization is only available at the M.S. level.

Furthermore, there is some confusion about whether USAID reimbursement for these positions is intended to include both tuition costs as well as staff salaries while in training.

Forester/Farmer Outreach Training

A good deal of the training program was to be associated with and in direct support of the field operations (tree-planting) component. This training was originally scheduled to begin in the latter part of the second year of the project to prepare staff to carry out their extension activities and. subsequently to begin actual contact with the farmers and landowners. None of this training has been accomplished to date. In the opinion of the evaluation team, it is very much needed as the tree-planting program has already gotten underway (albeit prematurely, a subject discussed below in the section on field operations). The evaluation team has also observed some confusion about responsibility for this level of training, i.e., whether the PFD's and their staff or the TAT should do it. It would appear that much of this sort of training, both for foresters and forest guards as well as farmers will need to be done in the appropriate local language. Accordingly the role of the TAT should probably be in helping the PFD to devise the programs (they will need to be tailored to local site conditions and tree-planting modalities) and in training the trainers. This is a vital part of the overall project and urgently needs more attention. It would appear that the TAT Outreach Specialist (and the missing Farm and Energy Forester) should have devoted more time to it, but were busily engaged in numerous other activities.

Additional Training Activities

A number of other minor and sometimes unscheduled activities have been addressed under the training program, most involving the TAT Outreach Specialist. A Farm Forestry Newsletter was proposed and a first edition prepared in 1986. For some reason, it has not as yet been published. Training in micro-computer skills was begun at PFI and with the delivery of project-procured computers at the PFD's, a short course was organized and scheduled. Nominated staff were not forthcoming an the course has been postponed. The Farm Forestry Research Specialist has been working with PFI and provincial research staff in improving the preparation of research protocols and proposals. The results are encouraging. There has also been considerable interaction with the provincial Forestry Training Schools, particularly in Punjab and Sind. These schools train the "forester" and "forest guard" personnel for their respective departments and could take on some of the responsibility for farm forestry training. A report suggesting specific recommendations for upgrading these schools was prepared by the Outreach Specialist in collaboration

with provincial staff in mid-1986. Sorting out and proceeding with what should be done at these schools is directly linked to the larger issue of roles and responsibilities with the provincial project teams for the farm forestry outreach/extension activities. This in turn is directly linked to the lack of a focused effort on project implementation modalities and arrangements yet to be decided for the field operations component.

In summarizing the implementation status for the training program, a number of general points are worth reiterating or bear some mention. The training program is a substantial one with a demanding associated work load to implement it. It has, in the view of the evaluation team, gotten off to a good start. A comprehensive training plan is necessary in order that the full breadth of the program, its objectives and requirements can be well understood. This is particularly important as concerns implementation roles and responsibilities (a key issue) and the match of project resources compared to expected outputs. The evaluation team has observed that the PFI and the Provincial Schools are expected to become vitally involved in a renewed training thrust aimed at farm forestry. The team questions whether in fact there are enough project-provided resources, particularly person/months of advisors, to have the desired impact. The Pakistan Forest Institute is an older, large and established institution with its own rather complex procedures and development agenda. Then too, the PFI itself, has extremely limited resources in the area of social sciences (economics, planning, sociology) which are essential elements of a people-oriented farm forestry curriculum. The progress of the training program is also likely to be undermined by the low status accorded to training positions; staff are normally quite reluctant to leave their territorial positions to take up the role of teacher or trainer at one of the institutions. The evaluation team has been told these positions, with the exception of a limited number of motivated staff who prefer them, are normally viewed as punishment posts. The evaluation team feels the whole training program merits continuous serious scrutiny and support--perhaps considerably more than it is getting now. They wonder whether in fact forestry and the PFI might not be suitable subjects to consider under the upcoming USAID Institutional Excellence Project.

2. Farm and Energy Forestry Research

Under this activity component, a comprehensive long-range farm and energy forestry research program is to be developed and implemented. Its objective is to provide an improved understanding of the advantages and disadvantages of alternative approaches to farm forestry development in Pakistan. The Project Paper includes a broad indicative list of the research topics of

likely importance for the near to medium-term expansion of the programs. These same topics are also discussed in the PC-1. The topics can be divided and are being addressed under two major categories: those concerned with the technology of farm forestry (economics, design and yield of farm forestry systems, species trials and seed supplies, ecological and hydrological studies), and those concerned with the participatory dimensions of farm forestry (socio-cultural baseline studies and analyses).

These two categories of research endeavors have been treated separately during the evaluation. As per the scope of work for the evaluation, the technical aspects of research have been reviewed by the forestry personnel (Messrs. Catterson and Hameed Ahmad) assigned to the team. Owing perhaps to the innovative nature of the socio-cultural analysis, certain sensitivities about the utility of this type of work, and to the fact that the socio-cultural analysis group (Anthropologist and Rural Sociologist) fielded by the technical assistance contractor have been operating as a distinct unit within the project, one member of the evaluation team -- Dr. K. Byrnes, the Rural Development Specialist -- devoted his time and efforts almost exclusively to this research category. The socio-cultural baseline studies efforts are quite advanced. As a result, the Development Specialist was able to prepare a detailed, comprehensive report reviewing the progress of this activity. For the sake of brevity and clarity, no effort has been made to summarize his findings on implementation status in this sector. Rather his full report is included herein as Annex G. His findings and recommendations, however, have been incorporated in the sections on analyses and conclusions (IV) and recommendations (V). Thus the section which follows deals specifically with what has been termed the technical aspects of farm and energy forestry research.

The evaluation team was somewhat constrained in its review of the technical research program due to the fact that the TAT Research Specialist (Mr. K. McNabb) was on home leave and the principal counterpart (Dr. K. M. Siddiqui) was on duty travel during the major part of the evaluation. It was not until the last week that a meeting was held to discuss the research program. The team did not have the opportunity of site visits accompanied by these two individuals. Despite these caveats, the evaluation team, relying on the substantive discussion held with the research personnel, a thorough review of the full documentation on the research program, and its discussions with others concerned with the project, was able to draw some inferences about the program worth recounting here.

The research program appears well underway. A research advisory committee has been constituted, including members from all the provinces and the PFI. The committee has been meeting regularly and the carefully produced minutes of these meetings provide evidence that a solid process of research program

planning and implementation is taking place. It is precisely this planning and prioritizing of the project-related research program which is the most essential step at the outset. The committee's efforts have been guided by an extremely useful document outlining the procedures for setting up the research program. Committee members have been encouraged to interact with their local colleagues and to bring forward suggestions of high priority research needs emerging as provincial project teams begin to implement field operational activities. It is noteworthy that in addition to compiling a useful needs assessment for research, the committee has occasionally rejected certain topics or relegated them to a place of secondary importance. Research capability for farm forestry in Pakistan is still rather limited, especially as concerns qualified research personnel. Avoiding duplication of efforts, or false starts on topics that have either known solutions or are overly complex will be of paramount importance. Indeed the functioning of this committee have moved rather expeditiously in this direction, and could, with continued follow-up, produce a very useful prioritized master plan for farm forestry research for the country.

The committee also serves another purpose fundamental during the initiation of a focused research program. Greater communication and a constant exchange of research results and field experience--what the research community calls networking--can vastly enhance the development contribution of the research program. The workings of this committee also include an important although low-key, training element. By working through the process of research programming, the committee is building important analytical skills which will provide future sound technical backstopping for the farm forestry program. The research advisory committee should, as it develops, become the clearinghouse for the state-of-the-art and the principal brokers of a field-oriented problem solving capability. As concerns research planning and programming, the committee, in the view of the evaluation team, seems to be headed in the right direction.

The research program itself is, at this point and as might be expected, rather modest. The TAT specialist has assisted his peers and counterparts to develop and utilized a standard research protocol/proposal approach and format. As a result, approximately one dozen experiments are underway. These are for the most part extremely technical experiments aimed at nursery practice, basic silvicultural and management issues. The evaluation team questioned the elemental nature of some of these experiments, e.g., those related to shade and water regimes for Eucalyptus spp. seedlings. The research specialist has indicated that these are part of a strategy for program start-up, focused on testing actual research capability as well as responding to important controversies or issues regarding nursery practice in Pakistan. This is both plausible and useful, however, both time

and resources suggest that this strategy must be efficiently implemented. It does not seem likely that the project, the field staff or the farmers can wait until each and every element of the technical package has been rigorously experimented with and documented in-country. The notion of multiple trials focused on elemental research topics might more readily be applied as an adjunct to the M.S.-level teaching strategy at the PFI. The evaluation team believes that greater recourse to existing literature from national, regional and international sources should be sought and utilized by the research advisory committee in an attempt to resolve technical issues before launching experiments. This subject is closely related to the matter of technical manuals which the TAT is supposed to be producing as part of its support to field operations. As these manuals (nursery, plantation and management) are prepared, they should be vetted by the research advisory committee.

The present overall approach to research, i.e., formally established and carefully controlled experiments also bears some scrutiny. The PP suggests that the research approach should be one which utilizes the field operations as a "living laboratory" from whence data and information can and should be collected and analyzed. Furthermore, the PP suggests by virtue of its indicative list of topics that the focus should include both the traditional matters of species adaptation and growth trials, and the systems aspects of forestry as a production scheme. The latter will be vitally important in promoting farm forestry whereby trees must be integrated into farming systems. It is clearly too early in the implementation of field operations to expect that the research program be fully directed at either the living laboratory approach or the systems concerns. Given the resources available, within the FPD project and at PFI (time and trained personnel are the most serious constraints), the present approach must begin soonest to include pragmatic efforts in these directions

It is indeed, as has been mentioned elsewhere, the staffing issue which remains the weakest link in the research program. Not a single position among the 14 professional personnel anticipated at PFI have been put in place. The evaluation team has been informed that as a result of upcoming promotions, six individuals already on staff at PFI will be added to the project team. Two of these are M.S. graduates; the remainder B.S. or below. Whether they can be expected to function successfully as researchers is an important question. Similarly, social science research capability at PFI is almost nonexistent. The only economist is presently in the United Kingdom for an extended period of training. This again raises the issue of whether there are or will be in the near term, adequate resources to address the ambitious list of research topics outlined in the original design of the project. Additional training fellowships seem

necessary, particularly those focusing on farm forestry economics and agroforestry.

There is one other issue regarding the research program which the evaluation team believes warrants serious scrutiny by the project authorities, GOP and USAID alike. This is the matter of research infrastructure development. The PP states clearly that the research program should be developed both at PFI and at provincial research stations. Funds have been allocated under the USAID budget for vehicles and equipment to enhance research capability and indeed procurement in that regard is already well-underway. The PC-1 also allocates funds for GOP contributions to research operations. The Advisory Committee, including the TAT Research Specialist and the PFI research counterpart have already devoted considerable attention to this issue. At the existing stations at Gatwala (Punjab) and Miani (Sind), limited improvements to existing buildings and the procurement of research equipment are foreseen. The plan, however, also suggests that new research stations will be acquired and constructed at several other locations--near D.I. Khan, at Kharian and at a site near Nasirabad. Until quite recently, there was some confusion about how laboratory construction would be financed. There was a mistaken impression that these buildings were to be included under the USAID reimbursable construction program. Having sorted this matter out, the question still remains how such building will be financed. If the intention is recourse to the GOP budget, a number of concerns must be born in mind. As far as the evaluation team has been able to determine, such buildings are not specifically earmarked for funding in the PC-1. Should a decision be made to go ahead with building them utilizing GOP funds, they will compete for the already limited resources earmarked for residential accommodation of provincial field staff. To date, none of the anticipated housing has been constructed and field staff in several provinces have expressed their concern over the lack of suitable accommodation. The evaluation team is concerned that these efforts at developing research infrastructure are drawing from the already limited time of competent staff (GOP and TAT) who must also work on program development. The evaluation team questions the logic of developing such infrastructure, or attempting to do so without a clear funding mandate, and more importantly, in absence of a reasonably strong on-going research program and the staff to man it. Beyond the PFI, the evaluation team has been informed, there are only one to two reasonably qualified staff assigned to research in the provinces.

3. Farm and Energy Forestry Field Operations

This third component of the FFD project is its largest and, in effect, its most important. It is here that project efforts come together in the form of tree-planting by farmers and

landowners, and by the Forest Department in Sind. This component has multiple objective:

- to provide a tangible opportunity for on-the-job training and demonstration of the technical and economic feasibility of improved tree crop management techniques;
- to test and evaluate alternative methods for encouraging farmers to plant trees;
- to promote the establishment of privately-owned seedling nurseries; and
- as an overall outcome, to assist a large number of families to move towards greater fuelwood self-sufficiency.

As specified in the PP, three types of areas have been identified for operational (tree-planting) activities. They are:

- the barani (or rainfed) areas in Punjab and NWFP;
- the irrigated farmlands of Nasirabad District in Baluchistan Province; and
- the irrigated forest plantations in Sind Province.

The discussions which follow below are drawn from field observation visits in the barani areas of Punjab and NWFP and to the irrigated forest plantations near Hyderabad in Sind. Owing to the need for a 30-day application period for permits to visit interior Baluchistan, the evaluation team was unable to travel to that site. A visit was made to the headquarters of the Provincial Forest Department of Baluchistan at Quetta, but fundings there included in discussions elsewhere in this report.

A great deal could be written about this component, and indeed, much of what has been reported on above refers directly to some facet or another of the field operations component. Furthermore, the evaluation team's Development Specialist, in preparing his report, has analyzed the field operations component in some detail; see particularly Section C and Tables 3 and 4 (Annex G). This is also the area of the project on which the most management oversight has been focused. Accordingly, the two sections which follow below report generally on the implementation status of the field operations in the barani areas and in Nasirabad. Neither are exhaustive but in view of the broad scope of the evaluation and the time available for field visits, the evaluation team believes important and noteworthy issues have been identified.

The Barani Areas of Punjab and NWFP

In both provinces, provincial project teams have been constituted and tree-planting efforts seriously begun. Having received their first allocation of operating expenses in May 1986, only limited planting, drawing on seedlings from Forest Department nurseries was possible during the 1986-87 (August to October) monsoon planting seasons. Spring planting took place in both provinces, and at the time of the evaluation, final preparations for the 1987-88 monsoon planting season were underway. The tree-planting campaign is clearly at a take-off point although it is out of sync with many of the other activities of the project which were intended as early mobilization to prepare for field operations. In both provinces, local staff informed the evaluation team that they felt obliged to move ahead with field operations because of the magnitude of the targets written into the PC-1. As has been pointed out earlier, this situation was further exacerbated by choosing to undertake 1986-87 targets as calendar year activities rather than reverting to the original modest start-up activities planned for project years one and two.

Both provinces have also initiated the private farmer nursery program suggested in project documentation although in the Punjab, given the greater targets (40 percent of the field operations are planned to take place there), a much larger number of these nurseries have been established. Even the cursory examination which the evaluation team was able to perform, demonstrated the very real interest of the farmers in participating in this program. Large numbers of seedlings were almost ready for planting, and despite some significant nursery technology issues (characterized by either too large or too small seedlings), credit is due to those foresters and farmers who have been engaged in this work. A major issue remains the availability of funds to pay the farmers for the seedlings and thus withdraw them from the private nurseries for outplanting.

Further troubling the private farmer nursery program is the confusion surrounding the GOP/USAID reimbursement procedures for this activity. The notion of a fixed amount reimbursement (FAR) system for the operation of these nurseries was continuously mentioned by GOP forestry personnel. This system has as yet to be worked out. The TAT was supposed to develop a working paper on this subject but it has not done so to date, no doubt because they too are confused about the intentions. A careful reading of the PP suggests that the FAR method was to be used to establish private farmer nursery infrastructure for which reimbursement would then be provided by USAID. It does not appear that the project designers expected that actual seedling production would be reimbursed. Frankly speaking, the whole subject is quite nebulous and warrants assiduous attention by project authorities.

GOP provincial forestry staff rightly point out that establishment costs vary greatly according to the capabilities of the farmers involved. In some cases, they may be minimal. This is one of the most salient matters that should have been carefully thought out during mobilization and which should have been addressed by the (now withdrawn) TAT Farm Forestry Specialist.

The whole question is extremely important because the FPD project and its credibility may be jeopardized if a satisfactory solution to reimbursing the substantial sums owed to farmers is not quickly found. It is an example of the implementation difficulties associated with the overly rapid start-up which may have a future negative impact on continued operations. In resolving this issue, project authorities will also have to cope with the apparent contradiction between promoting private farmer nurseries and undermining their potential sales of seedlings to neighboring farmers. Private nursery operators uniformly asserted that their neighbors expressed no interest in buying seedlings from them because the Forest Department had already indicated that they would be providing free seedlings in these areas.

This is but one example of a general lack of clarity regarding implementation modalities which pervades the field operations component. The evaluation team believes that there is indeed a very real interest among farmers, small and large, to plant trees on their own lands. Provincial authorities have moved quickly under the aegis of the FPD project to respond but implementation modalities are neither uniform nor suitably flexible. The Punjab has assigned a fairly large staff while NWFP has few designated project staff preferring to depend on the territorial staff in place. Like many attempts at community forestry around the world, the early efforts, being close to the traditional strength of the forestry agencies, have not had as much difficulty with the technical dimensions as with the organizational problems. The evaluation team saw little of what was intended of the early mobilization efforts that were to lead to full-scale implementation. For example, no actual demonstration plantings, other than a small direct seeding trial, were seen. As has been discussed earlier in the section on training, no real farm forestry training, either for provincial field staff or farmer participants, has actually taken place. Suitable arrangements for housing field staff are still lacking as is transport for forester/forest guards who must act as extension personnel visiting large numbers of families throughout their respective areas. The evaluation team believes that transport for such staff might help to diversify the present project clients by enabling forestry personnel to reach small farmers who live away from readily available mass transportation networks. In the Kohat area of NWFP, much of the tree-planting is being done on barani areas well watered by tube wells. This

suggests that early project efforts may be missing the smaller farmers living in more barren areas where tree-planting would be more appropriate from both ecological as well as farming system viewpoints.

In short, the field operations on the barani areas although encouraging from the perspective of interest and demand from the potential farmer clients, suffers from a number of serious debilities. The principal cause, in the opinion of the evaluation team, is the over-riding importance being given to quantitative accomplishments resulting from the unjustifiably high targets in the PC-1. Provincial project staff at the field level, have in many cases, tried hard to cope with this demanding situation. They require more assistance and engagement from the TAT including training and assistance with devising implementation modalities for both nursery operations and plantations. Implementation modalities must be translated into extension/outreach programs as well as packages and supporting promotional materials. In addition, a network of demonstrations must be developed. They need relief from the untenable quotas that have been assigned, and support and encouragement to undertake their new farm forestry tasks.

Irrigated Forest Plantations in Sind

The evaluation team carried out a brief one-day visit to the irrigated forest plantation site at the Penah/Huderani Forests near Daro in Sind Province. The original design in the PP called for upgrading and improved management of approximately 1800 acres of existing irrigated forest plantations and the conversion of older degraded plantations and establishment of additional areas on approximately 950 acres. This target was substantially increased during the PC-1 approval process to include 5400 acres of new plantations and the renovation of 1800 acres of older plantations. To the evaluation team, it seems like a formidable task although none of the team members have particular expertise in this field. A careful review of the minutes of a November 1985 meeting between USAID and the Sind Forest Department do, however, bear witness to the complexity of the undertaking--to which must be factored in the desire by USAID to carry out this work on a FAR basis.

The planning which took place at that meeting projected that the major initiatives of land preparation for irrigated forestry, for which a FAR agreement would be prepared, would take roughly two years to get underway. The evaluation team has been informed that activities are approximately on schedule. The first FAR's are being prepared in the USAID Engineering Office. Indeed, owing to the arrival of substantial amounts of machinery and the need to operate it during the warranty period, a considerable

amount of land clearing has already been undertaken--totaling some 660 acres.

Despite what appears to be a fairly successful effort to date, the evaluation team feels a number of implementation realities need to be raised. An immediate question is the adequacy of technical oversight. An early consultancy provided through the efforts of the technical assistance contractor was largely ineffective because suitable topographic maps of the site were not available. The team has further noted that the bulldozers procured under the project are unable to remove the larger stumps in the land clearing operation. The design of this component of the project was predicated on Pakistan's ample experience in irrigated forestry and the inherent potential for cost effective operations facilitated by financial and technical assistance. The evaluation team does not believe that the TAT possesses the expertise to oversee or guide these operations except by bringing in additional consultants.

In addition to meeting the exacting engineering requirements of a canal-fed, gravity irrigation system, the silvicultural aspects of irrigated plantation forestry are still to be reviewed. An intended early consultancy on this subject has not been carried out. A tour through the adjacent older established plantations managed by the Sind Forest Department raises the issue of both budgets and recurrent costs and management capability. Does it make sense to be establishing new plantations when the older ones clearly demonstrate a lack of maintenance and management? Whether this is a result of budget constraints or lack of management skills is unclear. While project-sponsored renovated plantations may exist, the team was neither informed of them, nor shown them. Provincial project staff have also told the team that they have had budget allocation problems similar to those experienced elsewhere within the project. The evaluation team was also surprised to find that the Forest Department was windrowing and burning to waste the substantial quantities of wood being cleared from the land--in a project that is intended to produce fuelwood for a deficit market.

Perhaps the overriding factors inducing a good deal of skepticism, admittedly poorly informed, on the part of the evaluation team regarding the irrigated forest plantation program, are the apparently excellent development opportunities near at hand. The team believes improved management and renovated irrigation systems would be preferable to new plantations--as was the original intention of the PP. The potential for widespread farm forestry in the irrigated areas, demonstrated by the "houri" system, also appears better suited to the project and its goals. The team was on several occasions, informed by knowledgeable individuals that there is a good deal of interest as well on the part of the irrigation authorities to

investigate the potential of canal-side tree-planting. The team discussed among themselves and with the provincial staff in the Sind, the need for in-depth analysis of the economics (macro and micro) as well as silvicultural practices of irrigated plantation forestry in the Sind. Most agreed it would be opportune.

IV. ANALYSES AND CONCLUSIONS

The section which follows is a discussion of the evaluation team's analysis of the present situation of the FPD project based on the largely descriptive information found in the previous section. It is organized along the lines suggested under the reporting requirements, with minor changes and additions, of the SOW issued for this evaluation.

A. General Matters

The evaluation team is firmly convinced that the Forestry Planning and Development project and its original design concept (enhancing the capability of the GOP forestry institutions to carry out farm forestry extension and demonstration) continues to be extremely relevant to development needs and opportunities in Pakistan. Promoting and facilitating the farmers capacity to respond to the emerging income earning opportunities connected with tree-planting is considered to be the best investment strategy for the sector, offering high returns for the farmer and the nation. In doing so, the GOP can tap the enormous potential resources of the farmer community (land, labor, capital) to achieve maximum impact in reversing the present deforestation rate and control the incipient desertification that is eating away at large areas of the rural countryside. A gradual restoration of trees scattered across the rural landscape along the margins of fields, intercropped in farming systems near the homesteads or on small blocks and patches of land, will also enhance environmental stability and sustainable agricultural productivity. The findings of the socio-cultural baseline studies indicate that the FPD project is on target in terms of being the right kind of project to address the needs of the small farmer clientele identified in the Project Paper. Small farmers in Punjab, NWFP and Baluchistan are interested in planting trees and receptive to project-provided assistance which will enable them to do so.

Conclusion: The Forestry Planning and Development project can and must continue to carry-on its important tasks with increased and concerted action by all involved.

Project goals and activities, the need for complementarity, continuity and a phased approach to implementation, as well as the roles, responsibilities and implementation procedures and arrangements within the project are still poorly understood by project staff, including the GOP and the TAT (see Annex F for a specific discussion of ongoing operational misunderstandings). The evaluation team believes that these misunderstandings arise from:

- a failure to disaggregate the lofty goals and purposes of the project down to achievable objectives which could then be more carefully, systematically and effectively defined in terms of activities, timing, inputs required, expected outputs, and implementation plans, roles and responsibilities;

- unreconciled and fundamental differences both quantitative and qualitative between basic project documentation (the PP, the PC-1, and the TAT contract) and a persistent lack of leadership at the highest levels (hopefully now improved and operative) to overcome these differences; and

- lack of concise but comprehensive reporting and communication on the project as the efforts to date, including those of USAID, GOP and TAT, are overly activity-oriented and do not deal adequately (and often not at all) with progress, processes, problems or constraints.

Conclusion: Despite its evident promise, the FPD project has to date, failed to come together. The problems can and must be solved by the staff concerned who should be guided by able and sustained leadership.

The evaluation team finds that the project is at an important juncture. The first two years were clearly intended as a mobilization period. In effect, they have been just that, albeit, in a rather disorganized and disjointed manner. A concerted effort to consolidate gains and solve problems is necessary over the next 18 to 24 months, without which, the risk of collapse is real. Important, hard won lessons have been learned by all concerned; these must be identified and nurtured. This effort should also address the issue of waning staff morale which has been weakened by months of unresolved problems, discrepancies and frustration. The evaluation team strongly believes that resolving the range of issues currently troubling the project is as or more important than additional physical accomplishments on the ground.

Conclusion: Addressing these issues will require fortitude and affirmative action, particularly, resolve on the part of the IGF whose forester colleagues are daily confronted with the impossible enormity of the targets laid out in the present version of the PC-1.

The evaluation team is concerned that the announced revision of the PC-1, although most welcome and appropriate, not become a

substitute for making meaningful decisions about major issues in project implementation required (and possible) at the earliest date. Bearing in mind that revision and approval of a revised PC-1 will take time, these issues including those related to goals/objectives, roles and responsibilities, budgets and funding processes, and implementation procedures can and should be systematically addressed as soon as possible. In doing so, they will allow for a steady improvement in project activities and lay the groundwork for a sound and effective revision of the PC-1.

Conclusion: The revision of the PC-1 should be the outcome of a process undertaken by all concerned to address and resolve the present problems of the project and not vice-versa.

The FPD project has been effectively hamstrung in several areas (field operations, training, and construction) by the lack of timely and adequate GOP budget allocations. It is the number one complaint voiced by provincial field staff. Although it is difficult to calculate exact amounts of planned GOP contributions, it appears that these are presently less than 20 percent of what was originally anticipated.

Budget shortfalls are cause for concern, however, the problem of funding is not merely one of disbursement. Owing to the fact that there is no year-wise summary table in the PC-1 which isolates GOP responsibilities, either in yearly totals or in yearly line item totals, annual budget proposals for the ADP seem to have been a matter of estimates. Presently, there have been no measures for correcting accumulated shortfalls and indeed, given 1987-88 ADP projections, the matter seems to be getting worse. This situation has been known for some time, although the evaluation team doubts that the complexity of the issue has been fully understood by the concerned parties (GOP, O/IGF, or TAT). USAID has raised the issue of GOP contributions on numerous occasions but a serious exercise to examine, resolve, or adjust this situation has yet to take place.

As concerns even the meager amounts of GOP funds released, the evaluation team has encountered widespread misunderstandings about how the expenditure along with the reimbursement process should work and what constitutes legitimate reimbursable expenditures. At present, reimbursement by USAID for agreed GOP claims is running only slightly above 10 percent of PIL earmarks.

In the case of nursery and tree-planting operations, timeliness, meaning sufficient budget releases before December each year, will be just as important as overall amount. This is due to the inflexibilities of the biological calendar which guides forestry field operations. A major issue of payments promised to private nursery operators contracted by provincial forestry staff and amounting to approximately 1.8 million Rupees

must be resolved immediately if project field credibility is to be maintained. Under present circumstances, the evaluation team feels this is unlikely to occur. USAID disbursements, for the time being appear to be appropriate to the early stages of project implementation.

Conclusion: The troublesome matter of GOP budget contributions to the project are well known but poorly understood by all concerned. Interim steps will have to be taken immediately for corrective action on the GOP FY 1987-88 allocation and funds release, to buy time for the overall budget readjustment which will result from the major revision of the PC-1.

B. Management Effectiveness

1. Effectiveness of the Technical Assistance Team

The evaluation team believes that the Winrock technical assistance team has a continuing need for internal team building in order to improve both its engagement with and impact on the FPD project. It is vital that the TAT understand that its fundamental role is that of assisting the GOP to build and strengthen the institutional capability of its partner forestry institutions involved in this project.

The TAT is presently too task or activity oriented and indeed several of the TAT staff members are attempting to carry out too many activities. This issue is directly related to the present inadequacy of their work plans and subsequent quarterly reporting which can only be characterized as lists. The TAT has so far failed to reconcile the overall SOW of their contract, the individual SOWs of the long-term staff and the need to program their work over time, in a phased manner, and aimed at specific steps along the way to achieving the overall goals of this project. It should be pointed out that this is a weakness shared throughout the project, i.e., the lack of understanding of the need for a phased, complementary approach to develop farm forestry extension capability.

Although some effort has been made by the TAT to assist provincial project staff with preparing annual work plans, real assistance and impact on planning has been minimal. The GOP entities involved in the project at all levels continue to require substantial attention and support in the area of planning. Greater linkages between GOP and TAT work plans are fundamental and would constitute excellent opportunities for pragmatic attention to planning. Hopefully, the TAT will be intensively involved in the activities leading to the revision of the PC-1.

Focused assistance in the areas of policy review and advice, and project and program budget preparation have been minimal to date. For the former, the new COP along with his principal counterpart, the IGF, will now likely find the opportunities to engage in useful policy dialogue related to farm forestry. Here again, the revision of the PC-1 will provide a practical forum for beginning to resolve policy issues. The evaluation team believes that, for the short-term, TAT assistance in the area of budget preparation must await high level clarifications of the intended process and funding levels to be tabled by USAID and the GOP.

Much of the responsibilities, for TAT management and policy and planning advice fall on the shoulders of the COP. The evaluation team feels that he, like a number of his colleagues, is overburdened with incidental administrative responsibilities. The increased use of planned short-term assistance and further strengthening of the TAT will be required if the COP is to discharge his responsibilities effectively.

Conclusion: The evaluation team does not believe that the TAT is vitally engaged in this project, particularly in the areas of policy and planning. GOP weaknesses in these areas are in turn, adding to the problems at the field level. The TAT must recognize that its task is principally oriented to institution-building rather than tree-planting.

Overall, the activities of the present long-term TAT team members have been effective, some more than others. The regrettable need to replace the former COP and the Farm and Energy Forestry Advisor are symptomatic of the earlier problems of the TAT. The situation both, reported and observed, appears to have improved considerably since the arrival of the new COP. The evaluation team believes that all members of the present TAT have proved themselves to be hard-working and committed to their responsibilities in the FPD project. Individual component TAT activities are discussed below.

Farm and Energy Forestry. The evaluation team has been unable to detect any appreciable impact of TAT assistance on the field operational activities currently underway in each of the Provinces. To some degree this is due to the fast and unanticipated startup of tree-planting and nursery operations by Provincial project staff. The TAT has been trying to catch up. Their efforts have been hampered by the confusion regarding roles and responsibilities and the need to carry out a large number of mobilization tasks originally foreseen for the first two years of the project before field operations were originally scheduled to begin. Now that experience is accruing in the field, the living laboratory concept discussed in the PP's is operational.

Conclusion: The present lack of a full-time Farm and Energy Forestry Specialist is a major weakness. This position must be filled as soon as possible, and with a seasoned professional able to provide timely and expert assistance in resolving the problems, both technical and procedural arising out of ongoing implementation.

Socio-Cultural Analysis. The socio-cultural baseline studies and subsequent analysis, being carried out by the TAT Anthropologist and the TAT Rural Sociologist (the SCA group) is, in the opinion of the evaluation team, the strongest element of TAT efforts to date.

The SCA group is on schedule, per the original Project Paper, in developing the socio-cultural baseline studies. These studies are methodologically sound and have already provided project-relevant information on a timely basis. Follow-up monitoring and evaluation studies are scheduled. While resources were available to the TAT (i.e., 18 months of social science short-term c ultant support which have remained unused), the Women's Stud, roposed over a year ago, has yet to be implemented.

The SCA group has, in the course of developing the baseline studies, interacted informally with FPD project foresters at all levels. However, the lack of implementing any forester or farmer training programs, which were to be fundamental to the orderly start-up of sociologically sound field operations, has precluded a key forum for professional interaction between the SCA group and the foresters. Furthermore, FPD project foresters have had misgivings about the role of socio-cultural analysis in this project, which have even degenerated into bickering with or about the SCA group. There are three possible explanations:

- that foresters often have not understood the value of SCA, possibly because this project component has not yet been adequately explained to them;
- the picture the baseline studies are painting is different than the forester's beliefs about the type of farmer interested in planting trees and the interests and needs of the farmer; and/or
- that foresters are under pressure to "get on with the work."

FPD project foresters are moving ahead, at least in their work plans, to talk about using such mechanisms as "incentives," "motivators," and "farmer advisory councils" to support field operations. The baseline studies have produced information relevant to evaluating the potential utility of these mechanisms

in achieving the goals of the FPD project. However, the TAT has yet to take any firm stand, one way or the other, on whether these mechanisms are necessary or what other mechanisms might be more effective.

Conclusion: The SCA group is at an important crossroad. While limited resources could be allocated to new studies (e.g., initiating a baseline study in Sind), the need is much greater for the Anthropologist and the Rural Sociologist to now begin working more closely with the TAT on the problem of assisting the FPD project foresters to design field operational strategy models and activities that will be sociologically sound; that is, effective in helping the project's intended clientele (small farmers) to adopt farm forestry practices.

Outreach/Training. Clearly some of the outreach/training tasks foreseen under this component of the project are on target and laudable. The TAT and the specialist involved can point to an impressive array of tangible training accomplishments. The nominations and approvals process for candidate participants continues to be a major obstacle. The curriculum revision at PFI has been successfully carried out although it remains to be seen if it will be implemented. There is some confusion in the PP regarding the level of and need for training plans; at this juncture, it is clear that a comprehensive training plan including in-country activities would be an extremely useful tool. Despite some attempts to compile one, it has yet to appear.

Both training and outreach have been lumped together under the responsibilities of the TAT Outreach Specialist. The assumption is that training includes both the transfer of knowledge in formal or academic settings as well as the more informal interchange between forester and farmer inherent in extension programs. Trained personnel are required in all aspects of project operations and indeed by its very nature, technical assistance implies training or the transfer of technology. The evaluation team believes that the Outreach Specialist is overextended because of his implied central role in training and the general confusion over training responsibilities between the TAT and GOP staff. He himself has also taken on too many additional responsibilities which might better have been carried out by others. In the final analysis, the failure to produce the comprehensive training plan has delayed the realization of the enormity of the task and the need for better scheduling and assignment of responsibilities.

Much of the internal training was intended as on-the-job or short-term training for foresters in outreach skills, for successful farm forestry extension or practical tree-planting advice and training for farmers. The accelerated field

operations implementation schedule and the problems emerging therein confirm the need for this type of training. It is the responsibility of the Outreach/Training Specialist to help organize and initiate these programs; provincial staff have principal implementation responsibility. The TAT specialist may play a greater role in training staff at the higher levels, and indeed the evaluation team believes that his best contribution regarding internal outreach training would be to focus on training the trainers.

The project anticipates achieving a reasonable amount of change in the way forestry education and training is carried out in Pakistan by introducing farm forestry at PFI and the Provincial Training Schools. The evaluation team is unconvinced that the TAT, given the suggested present level of effort focused on outreach and training, will be able to have much impact among these institutions. The team believes that outreach/extension on-the-job, which is extremely practical, should be the focus of the years to come.

Conclusion: Training and education are the legacy the TAT can pass on to its Pakistani colleagues. Awards of training fellowships at an accelerated pace should be pursued; this should not, however, consume a large amount of the TAT specialist's time and energy. There are others who can better handle the nomination/clearance process and should, namely USAID/Human Resources and Training (HRT), ARD and the AED.

The evaluation team is convinced that the Training Specialist soon to be recruited, should concentrate on the internal training program necessary to improve the farm forestry extension field activities.

The evaluation team believes the incumbent Outreach Specialist should remain as the training specialist; his SOW should focus on outreach and the COP-TAT should ensure that he pursues his objectives in an orderly manner and is not burdened with non-outreach specific tasks.

Farm Forestry Research. The evaluation team has noted with satisfaction, the progress made in launching a companion research program as part of the FPD project efforts. Of particular note, is the establishment of the Farm and Energy Forestry Research Advisory Committee, its regular meetings and carefully prepared protocol to guide its operations. This progress has been made despite the continuing total absence of full-time staff assigned to the project at PFI.

The evaluation team believes the guidance on research topics contained in the PP is too broad and does not take cognizance of the skills, experiences, strengths and weaknesses at PFI. Some

rational choices have been made in that regard and indeed research activity to date has mostly concentrated on the biological-silvicultural side. Aside from the socio-cultural baseline studies which are being pursued independently of PFI, research on the planning and policy issues suggested in the PP/PC-1 are difficult to carry out because of lack of qualified local staff in these fields. There is, however, a continuing need to press for greater selectivity and prioritization of research topics. The Advisory Committee should be encouraged to carry their present review process through to a more complete farm forestry research plan.

Considerable efforts are being made to establish research infrastructure at the provincial level as suggested in the PC-1. This focus was not foreseen in the PP and the evaluation team believes there are several reasons to be concerned about it. Aside from the established facilities at Gatwala and Miani, such an effort is likely to absorb the limited time and energies, as well as considerable funding--all of which are presently constrained. Establishing field trials, followed by a research program at out-stations, it is suggested, should precede full-scale field station development. Once research has proven its worth and that it can be sustained, buildings may follow. Of major concern, is the almost absolute lack of qualified staff to man the planned provincial facilities. As it has been explained to the evaluation team, there appears to be some doubt as to whether these stations are to be provincial enterprises or substations of the federally funded PFI. The construction program for these station is to be GOP-funded; no allocations for the same have been planned in the USAID budget. As GOP budget responsibilities, they will compete for already severely constrained resources intended for residential accommodation of field staff assigned to the project and posted in the provinces.

Clearly the research program has made some progress but the evaluation team is concerned that the TAT Research Specialist may be spreading himself too thinly. The team believes that the resources allocated to the PFI and the research program under both the GOP and USAID budgets is already insufficient to achieve the sought-after threshold of action and results aimed at developing a comprehensive, long-range farm and energy forestry research program. The facilities already available to the PFI are impressive; the question is whether indeed there are adequate staff to man even these. The Research Specialist must bear in mind the fact that the research career path within the Pakistani forestry establishment is not well accepted as yet. Coincidental to its concern about the need for the TAT Research Specialist to focus his efforts, is his role in providing support to the F/FRED regional forestry project activities. His involvement should be held to the absolute minimum and strictly concern itself with areas of mutual interest and potential benefit to the advancement of farm forestry in Pakistan.

Conclusion: The TAT Research Specialist has made considerable progress particularly in the area of research topic selection and in-country research networking. He should, the evaluation team believes, seek to focus his efforts along the following lines:

- strict adherence to farm forestry-related research topics;
- continue to encourage the process of research master planning and priority setting;
- avoid overly elemental research endeavors unless addressing a particular problem for which recourse cannot be found in the literature or where such might serve as a training/institution-building exercise; and
- attempt to work more closely with both TAT and GOP staff directly involved in field operational activities with a view, as the PP suggests, to greater reliance on operational activities as field experiments.

2. GOP Project Staff Effectiveness

The Office of the Inspector-General of Forests has been accorded wide-ranging leadership responsibilities within the organizational pattern planned for FPD project. The IGF and his staff are expected to:

- provide direct liaison with USAID and the TAT;
- direct policy decision-making;
- foster coordination among the provinces;
- ensure oversight of staffing and organization;
- carry out central financial management;
- promote and coordinate the training program; and
- provide central monitoring and evaluation.

This is a tall order for the relatively small unit of the O/IGF, especially considering the fact that the present incumbent took his post in March of this year. It would be manifestly unfair to draw in-depth conclusions as the IGF has already stated his intentions to improve the overall situation.

Some observations are, however, pertinent at this point. The evaluation team believes the two DIGFs and the support staff are unable to cope with the present demands of the project. This is manifestly apparent in the current budget crises (discussed at length earlier) which troubles the project. The early appointment of the Additional IGF will alleviate the problems and would appear to be a logical step to institutionalizing the shift within the national forestry establishment towards farm forestry. Efforts to strengthen the O/IGF, like so much else in this project, must begin to follow a critical path towards the long-term goals. The evaluation team believes that early action on identifying candidates for long-term graduate training in forest resources planning or economics who will ultimately return to the O/IGF warrants attention now.

The IGF, in taking up the affirmative control of the FPD project, is in effect ratifying and strengthening the implicit policy decision embraced in the farm forestry approach of this project. The coordination role vis-a-vis the provinces which the IGF can exercise, must still, nevertheless defer action to the provincial forestry authorities who have the territorial mandate. Insight and leadership will be the key ingredients to accomplishment of the objectives set for the O/IGF as part of this project. A principal theme which will be implicit in the planned revision of the PC-1 is the importance of organization and management systems for the forestry establishment without which even the most enlightened policy and technical solutions will flounder. Fostering and promoting such systems as the mark of a fully professional organization is also a most appropriate undertaking for the O/IGF and its leader.

Conclusion: The evaluation team is well aware of the intense pressure, voiced recently at the highest levels, to improve the impact of forestry development projects and programs on the ground. The team believes that the FPD project can provide the vehicle for demonstrating such impact on the ground. The needs of the project, however, are many and the IGF is urged to obtain the assistance he will require, by completing the assignment of the AIGF and seeking to use, as appropriate, the skills and resources of the TAT.

The second tier in the organizational structure of the GOP for effectively carrying out this project lies with the Provincial Forestry Departments and their staff assigned to this effort. It is vital that this staff, currently undermanned in all four provinces (with the possible exception of the Punjab), obtain release from the unrelenting pressure of the unrealistic targets of the PC-1. This situation has severely jeopardized their effectiveness and undermined their field credibility. The emphasis they are forced to accept is quantitative rather than qualitative.

Staffing, organizational patterns, management and supervision must be reviewed as well as the present field implementation models chosen for farm forestry extension. There is a real risk that the present impractical operational pattern will make future activities in extension that much harder. The evaluation team clearly recognizes that all of their suggestions regarding provincial project operations will be fruitless unless the funding levels and procedures issues are not resolved. It is also manifestly clear that the DFOs, RFOs, and foresters assigned to the project must attempt to reach a wider audience with their extension activities, in particular, the smaller farmers. To do so, they will need clear directions from provincial forestry authorities, added encouragement combined with systematic supervision and additional performance-based job incentives and support.

Conclusion: The Provincial Forestry Department staff assigned to the project are the frontline troops in the effort to expand tree-planting among the farmers and on the farmlands of Pakistan. There is a receptive audience, of this the evaluation team is convinced, if the forestry personnel can organize themselves to reach out and service it. Doing so will be the greatest challenge of the project so far; delaying affirmative action will only make it harder. An interim solution to the PC-1 targets dilemma is urgently needed and cannot be postponed.

The professional staff of the Pakistan Forest Institute has been given the responsibility for providing the core support in education and research that will be required for the enduring institutionalization of farm forestry in Pakistan. Their role in training the future forestry staff and guiding and implementing research to improve the socioeconomic and technical packages will be vital.

At this point, given the still totally unresolved issue of staffing, an evaluation of their effectiveness is difficult. Nevertheless, they should get credit for what has been accomplished to date with the limited resources they have been able to muster. This is not intended to negate the challenge of fulfilling their staffing pattern which must still be confronted. The evaluation team is cognizant of the difficulties of recruiting qualified research staff; it is, however, the first step to achieving effectiveness.

The Farm and Energy Forestry Research Advisory Committee, on which PFI personnel play a key role, is a genuine accomplishment. It appears to be functioning quite effectively. The farm forestry-based curriculum revision has also been completed. PFI faculty took an active role in carrying out this work. A series of useful research trials are presently underway and more, are reportedly, planned.

The evaluation team is concerned, however, that too much attention is being accorded to infrastructure development involving construction of field stations in the provinces in the absence of qualified staff and established research programs. The evaluation team is uncertain where the mandate to undertake this building program came from and whether indeed, funding has been foreseen in the GOP project budget. Equally worrisome are the recurrent costs such stations will entail. Another area of concern is the lack of either training or research capability in the socioeconomic or socio-cultural sciences at PFI. It is precisely these disciplines which will provide the foundation for an effective extension/outreach program.

Conclusion: The Pakistan Forest Institute must quickly resolve its staffing problem if it is to continue to play an effective part in the FPD project.

3. Intra-Project Institutional Relationships

The complexity of the organizational pattern involving, as it does, eight distinct units (O/IGF, four Provincial Forestry Departments, the PFI, the TAT and USAID) immediately suggests the potential difficulties. Under the pressure of work and given the programmatic disfunctions within the project and owing to its erratic startup, cracks are beginning to appear in the institutional structure of the project. The following is a list of these emerging institutional problems.

- The confusion over roles and responsibilities is perhaps the major issue after budget shortfalls and uncoordinated implementation. Given the present lack of definition of roles, the evaluation team has noted that the three principal parties (namely GOP, TAT and USAID) profess strict adherence to their own basic project documentation (respectively, the PC-1, the TAT contract, and the PP). As none of these are particularly precise regarding roles and responsibilities, this choice will likely exacerbate the problem.

- Relations are presently cordial among project staff, but scratch the surface in pursuing difficult topics, and tensions quickly appear. Some unfortunate bickering and casting blame has already broken out. This is regrettable and responsible leadership is required to help sort out these matters and improve staff morale.

- Interchange has apparently been fairly collegial but here again, once pressures arise, the call to "resort to channels" is heard. Good communications

will be fundamental if staff are to overcome the inherent disadvantage of territorial spread.

- The evaluation team is of the impression that the TAT is overall, spread too thinly across activities and provinces. In the early years of project implementation, they should be utilizing the bulk of the personnel, resources and allocations described in their contract, gradually handing over to GOP counterparts, as the project moves forward.

- Weaknesses in leadership in both the TAT and GOP teams have left room for a more forceful management posture by the USAID Project Officer. Now that the new COP and IGF have taken up the reins, the Project Officer must downplay his own role and focus on major issues.

- In the revision of the PC-1, it will be vital to address the issue of institutional relationships, and later see that definitions thereof circulate to the field.

- At the provincial level, the relationship between the Project Director and the Chief Conservator of Forests must be clarified. Also the relationship between territorial forest department staff serving in the project areas not directly assigned to the project and project outreach personnel should be worked out.

Conclusion: Institutional relationships between GOP, TAT and USAID are unclear as yet and occasionally strained. Defining their respective roles and responsibilities should be a high priority concern and focused on reconstituting the full project team in both form and substance.

C. Development Concerns

1. Impact of the Delayed Start-up

Most of the impact on project implementation has not been the result of the delay itself but rather the response to it. The decision by the GOP to begin field operational activities, presumably in an effort to catch up, has thwarted the original design concept which called for a phased, coordinated approach to developing and implementing a farm forestry program. Accordingly, the FPD project now suffers from a considerable disfunction between field operations and the need to carefully design practical tree-planting extension modalities and

procedures, to undertake staff training both offshore and in-country, to identify research needs, to carry out the socio-cultural baseline study, and to assign field staff and otherwise gear up for the formidable task of reorienting traditional forestry practice in the country. In effect, the GOP project staff are still, for the most part and with notable, encouraging exceptions, unprepared for their new assignments. In contrast, those who were to assist them, the TAT, are confronted with the need to hasten the performance of their already heavy responsibilities.

Another important element in this equation is the seemingly irrational choice to adhere to the PC-1 calendar year-based physical targets which are far in excess of what was planned for the early years of the project thereby further exacerbating the dilemma. The emphasis on quantity rather than quality may be accelerating physical impact, although the evaluation team would respectfully submit that even that is doubtful, but it is severely undermining the entire strategy of the project.

The area most affected by the impractical, overzealous start-up is training. The original design suggested that a first wave of long-term participants would be returning to the country as full-scale implementation got underway. While this may indeed have been a naive expectation, the first long-term candidates will now not return before mid-1988. Worst yet, is the fact that training for foresters and farmers, those who are the principal actors in the extension/outreach model of farm forestry, has neither been organized nor implemented.

In effect, the mobilization period originally foreseen has now passed, but it has been disorganized and difficult for all concerned. It will take considerable resolve to now muster the energy and enthusiasm that will be required to consolidate the gains made and resolve the problems. The solution to this dilemma lies in leadership and fortunately the new IGF appears both capable and determined to take on the problems.

Conclusion: The delay itself had relatively minor impact on implementation; a series of poor choices and operational disfunctions are the basis for present problems. With capable leadership and timely actions, these problems can be resolved and the project put back on course. It seems unlikely, however, that the project will survive if all decision-making must await the PC-1 revision.

V. RECOMMENDATIONS

The recommendations for modifications and/or further actions which follow here below have been organized along the lines of the major components of the project with a view to ease of applicability. Each section includes principal recommendations which the evaluation teams commends to the high interest of the three major parties (GOP, TAT, USAID) involved in the FPD project. The other recommendations which follow will, with some exceptions, be directed specifically at individual units of the overall project team. A final set of general recommendations focused on project management is also included.

A. Institutional and Manpower Development

Principal Recommendations:

The evaluation team strongly recommends that a comprehensive planning exercise, under the leadership of the IGF, get underway immediately to address issues, problems and opportunities which have emerged during project implementation. This exercise should involve representatives of all eight operational units and meet regularly to address needed changes in the way the project operates. Decisions taken should be relayed to all parties and as these are completed they should lay the basis for the revision of the PC-1. Doing so will, in and of itself, constitute a pragmatic exercise in institution-building in the areas of policy, planning, budgets and management. The evaluation team further suggests the following steps be considered in conducting this exercise:

- establish a realistic time table and agenda;
- meet regularly until finished;
- constitute smaller working groups on particular subjects as necessary;
- issue "farm forestry directives" as matters are resolved; and
- program the need for consultation with others as required.

The evaluation team recommends that a small, select working group (suggested membership: IGF, USAID Project Officer, TAT COP) be constituted soonest to prepare a working paper for field guidance on the immediate issues of coping with PC-1 targets, field staff capability and budget shortfalls and procedures.

This group's objective will be to avoid similar problems occurring in GOP FY 1987-88 as have been experienced to date.

The evaluation team recommends that every effort be made to quickly identify promising candidates for long-term training in forest resources planning or forest economics. These individuals will take over responsibilities in the O/IGF for FPD project planning and monitoring and evaluation once they return.

Other Recommendations:

The evaluation team recommends that the TAT, in close consultation with the GOP units, complete a first full draft of the comprehensive training plan, including both overseas and internal training programs. This must be more than just a list. It should be based on perceived training needs for implementing farm forestry, identify specific fields of endeavor and educational objectives, suggest a realistic, phased time table and an indicative budget.

The evaluation team suggest that as, and if USAID funds earmarked for the FPD project go unused and need to be reprogrammed, USAID and the GOP should consider giving high priority to increasing the participant fellowships component, especially in formalized courses and included additional long-term degree programs.

The evaluation team suggests that in order to allow the IGF to function in a policy/decision-making leadership role as regards this project, the GOP should complete the steps necessary to designate and post an Additional Inspector-General of Forests.

The evaluation team also suggests that the TAT hire a senior Pakistani forester to assist the COP in discharging his duties, particularly as this concerns liaison with the GOP. Funds should be available to do this from savings accruing as a result of the vacancy in the Farm and Energy Forestry Advisor position. This individual may also help the Forestry Training Advisor with his responsibilities for in-country training.

The evaluation team recommends that the project consider contracting with a local Pakistani accounting firm experienced with GOP procedures to provide assistance for the budgeting requirements of the O/IGF.

The evaluation team recommends that the issues blocking publication of the Project newsletter be resolved immediately and that it be issued regularly with contributions of articles welcomed from all staff.

B. Farm and Energy Forestry Research

Principal Recommendations:

The evaluation team recommends that serious consideration be given to substantially strengthening the project contribution to PFI for program improvement in the areas of both research and education. The evaluation team believes this would be preferable to widening the scope of the territorial coverage of field operations as is being considered as part of the redesign effort.

The evaluation team recommends that the present staffing shortfalls for the FPD project at PFI be resolved soonest.

Other Recommendations:

The evaluation team suggests the project leadership look into the current split between research infrastructure development and program development as it is being carried out under the project.

The evaluation team recommends that the TAT Research Specialist and the designated Project Director at PFI encourage and assist the Farm and Energy Forestry Research Advisory Committee to prepare a farm forestry research master plan.

The evaluation team suggests that the SCA group prepare a synthesis report that explains the role of socio-cultural analysis in the FPD project, identifies the kinds of issues or problems addressed by SCA, summarizes the key findings that have emerged to date from the baseline studies, and identifies the implications of these findings for FPD project field operational strategy and activities. This report should address the issue of the potential utility of "incentives," "motivators," and "farmer advisory groups" as mechanisms to encourage and facilitate farmer adoption of farm forestry practices. This report should be circulated to FPD project foresters and be the subject of a project planning workshop involving the TAT and the foresters. The aim of this workshop would be to increase the foresters' knowledge and understanding of the FPD project and SCA's role in the project.

The evaluation team recommends that the SCA group continue to develop the needed analysis of the baseline data collected to date. However, the SCA group should not at this time embark on any new baseline studies such as that which is currently being planned for Sind. Rather the SCA group should devote the lion's share of its attention to working more closely with the TAT on the problem of assisting FPD project foresters to design field

operational strategy, models, and activities that will be sociologically sound, that is, effective in helping the FPD project's clientele (small farmers) to adopt farm forestry practices. Given the SCA group's proximity to the FPD project foresters in Punjab, this province would be a logical place for the TAT to begin working with project foresters to design and implement a sociologically sound field operational strategy. As project personnel gain experience in this area, the experience can then be shared with FPD project personnel in NWFP and Baluchistan (e.g., by bringing project personnel from these provinces to observe and participate in the design and implementation of field operational strategy in Punjab).

The evaluation team recommends that the TAT's SCA group (Anthropologist and Rural Sociologist) proceed to implement the proposed Women's Study, using available short-term consultant time to contract a female social scientist to lead the study's field work.

C. Field Operational Activities

Principal Recommendations:

The evaluation team recommends that the vacant position of Farm Forestry Advisor be filled expeditiously insuring that the candidate be a seasoned professional capable of providing pragmatic advice on solutions to the technical as well as procedural problems of the field operations.

The evaluation team strongly recommends that every effort be made to resolve the present concerns of field staff posted to the project regarding allowances and conditions of work. The team fully endorses the suggestion that the FPD project, with USAID funding, provide motorcycles to the farm forestry extension staff to enable to extend their work zones away from the mass transportation network.

The evaluation team recommends that an expeditious solution be found immediately to the issue of payment owed to the private sector farmers contracted by the forest departments to raise seedlings for this monsoon planting season.

The evaluation team strongly recommends that the training program for foresters and farmers begin as soon as possible. It is suggested that a debriefing seminar at the level of field staff be convened after the current planting season as an exercise to get field staff input on training needs.

D. Additional General Recommendations

Principal Recommendations:

The evaluation team recommends that every effort be expended by the GOP and USAID to resolve the GOP funding problems troubling the FPD project.

The evaluation teams feels that the next 18 months will be vital if the FPD project is to succeed. It therefore recommends that the next project evaluation take place at that interval.

Other Recommendations:

The evaluation team recommends that USAID prepare a comprehensive report on the status of the FPD project including information on progress, process, problems and constraints.

The evaluation team suggests that as possible and practical the USAID Project Officer devote his time to major issues and general project oversight leaving day-to-day matters in the hands of the USAID Forestry Specialist.

VI. LESSONS LEARNED

While the objective of this evaluation is to review the achievements and develop conclusions and recommendations specifically for the Pakistan Forestry Planning and Development project, USAID has also asked the team to assess lessons learned. These lessons are intended to have applicability beyond the ambit of the project from which they were drawn, including possibly others within the mission portfolio or as general lessons which might apply to AID projects elsewhere.

Time constraints have limited the evaluation team's efforts on focusing substantially on this dimension of their work. Nevertheless, the following points do seem to fit the category of lessons learned.

Project Papers and PC-1s. The evaluation team was, despite its evident shortcoming, impressed by the level of effort associated with preparing the PC-1. Clearly, GOP practice in routinely preparing their own project documentation, and reviewing and approving it in high level fora means that they have taken a serious in-depth look at the project and considered its merits. The team believes that AID should encourage other governments to do likewise; there would appear to be ample payoff to the effort resulting from the potential policy dialogue as well as project planning inherent in such a process. Too often, donor governments fail to translate their project documentation into the local language with a resultant lack of real understanding of and commitment to the project, its development goals and intended operations. Clearly, however, PP/PC-1 contrasts such as have occurred in the case of the FPD project are inimical to sound project implementation. The evaluation team understands that USAID/Pakistan is now making increasing efforts to prepare documents together in close collaboration with their GOP counterparts and decision-makers.

Mobilization. The present status of the FPD project has once again confirmed the need for and utility of building explicit mobilization phases into the implementation plans of large and complex projects. These plans should routinely program adequate time for activities which condition operational capability such as: commodity procurement, host country personnel designation and organization, contractor selection and staff recruitment, and where necessary, counterpart training. These key steps are too often taken for granted with resulting inefficiencies in the utilization of time, funds and personnel.

Implementation and the Biological Calendar. Directly related to the above is the question of implementation planning and capability synchronized to the biological calendar of forestry and agriculture projects. Tree-planting, particularly under arid/semiarid conditions is directly linked to an exacting biological calendar including seed production, nursery schedules and the onset of the rains essential for successful dryland reforestation. It is extremely difficult to accelerate or retard this schedule without serious implications for quality control or operational efficiency. This is often overlooked as a result of more important project programming demands. Even seemingly insignificant delays such as the signature on a PIL can cause a project of this nature to miss an entire field season.

Project Monitoring. In the case of carefully phased or sequenced implementation such as that envisaged for the FPD project, effective monitoring and management is necessary early on before activities get out of sync. As this also is usually a period of intense start-up demands, coordination is sometimes hard to maintain. Typically project management personnel are also "learning the ropes" and therefore reluctant to point out discrepancies. Nevertheless, monitoring and control characterized by good communications from the outset are essential to build the team effort required to properly deliver coordinated project activities.

Conditions Precedent and Covenants. The FPD project has provided a renewed reminder of the difficulties of extracting compliance with exacting conditions precedent or project covenants. Typically, many prove to be supercilious when contrasted with the real needs to get the project started. Too often, they are imposed from a distance which belies the need for a full understanding of host government capabilities and pressures. Extreme care should be exercised in setting these in place as well as monitoring and managing compliance; realism should be the key note.

ANNEX A

Synopsis of USAID/Pakistan Cable on SOW for this Evaluation

Evaluation Scope of Work:

I. Activity to be evaluated: The mission requests a midterm evaluation of the Forestry Planning and Development Project (FPD) from project authorization to the present day. Authorized LOP funding is $25,000,000 with an additional $5,000,000 in commodity support from the ACE program. The life of project is eight years, running from August 1983 to August 30, 1991, the project assistance completion date (PACD).

II. Purpose of evaluation: This evaluation will coincide with the first operational field planting season in the farm forestry target areas. Assessment of the adequacy and effectiveness of the inputs of technical assistance, commodity assistance, and review of the proposed strategy to implement the field activities are primary goals of this evaluation. Findings from the evaluation are planned to be incorporated into a project amendment scheduled to be drafted in the fall of 1987. The evaluation report will be widely reviewed in AID and will be shared with the Federal Office of the Inspector General of Forests in the Ministry of Food and Agriculture.

The evaluation is designed to guide mission management in the implementation of this project and to address the following kinds of questions: What has the project achieved to this date? What unplanned changes have occurred and what are their effects? What major constraints remain and how should they be overcome? What parts of the project are progressing satisfactorily?

This evaluation is the first of four external evaluations scheduled over the life of the project at approximately two-year intervals.

III. Background: The primary goal of the FPD Project is to help Pakistan increase its indigenous energy supplies and achieve energy self-sufficiency. The secondary goal is to reverse the progress of deforestation in Pakistan and to expand the extremely limited forest base. The primary purpose of the project is to strengthen the capability of federal, provincial and local institutions to design, implement, and evaluate policies and programs for increasing the production of fuelwood and timber in Pakistan. The secondary purpose of the project is to demonstrate the economic, technical, and social feasibility of producing

tree crops on privately owned farm and range lands.

The FPD proag was formally signed in August 1983. Because the GOP PC.1 was approved late, actual project start-up began September 1985. Federal project funding did not reach the provinces until spring, 1986.

The Winrock TA team has been in country since June 1985. ACE-funded commodities have been purchased and are either in country or on the way. Tree plantations have been established and a sociological baseline study is in progress with considerable raw data collected. A review of curriculum and recommendation for course work at the Pakistan Forest Institute was completed by the TA team in April 1985 and is now being implemented. In-country training has started and a number of individuals have been sent to the United States for long- and short-term training. A contractor team is scheduled to arrive in Pakistan in April 1987 to design possible new activities/components for the FPD Project.

IV. Statement of work: The evaluators shall review the performance of the FPD as follows: (A) evaluating progress toward achievement of goals in the PP; (B) analyzing the effectiveness of the TA team in accomplishing the goals of their contract; (C) assessing progress toward establishing training and research programs that meet the requirements of the project; (D) reviewing the adequacy of the disbursement mechanisms and budgeting process; and, (E) assessing progress of the socio-cultural baseline studies and their appropriateness to identifying farmer/public-sector participation strategies. If the design team report is available, the evaluators shall also review and comment on the major conclusions and recommendations of the team's report.

The evaluation shall include, but not be limted to, the following special considerations:

(1) Management assessment:

(A) Effectiveness of the TA team in providing timely and appropriate assistance to the GOP or implementation in accordance with their contract responsibilities.

(B) Effectiveness of GOP agencies in implementing the project with regard to staffing, transfer of funds and appropriate budget allocation.

(C) Effectiveness of institutional relationship and interactions among the various entities: USAID, GOP Federal, GOP Provincial, TA team.

(2) Development Concerns:

(A) Impact of two-year delay in start of project on overall implementation.

(B) Effectiveness of training of farmers and field foresters.

(C) Appropriateness of project-funded research to field operational activities.

(D) Progress in designing and carrying out socio-cultural baseline studies and analysis of data for identifying methodology to induce farm/private-sector involvement in the project.

(E) Project progress to date as contrasted with goals and physical inputs envisaged in PP.

(3) Policy Concerns:

(1) Progress toward identifying priorities of a "National Forest Management Plan."

V. Team Composition: The evaluation team shall include three members having the mix of skills described below. One team member shall be designated as team leader with full responsibility for coordinating the evaluation, and drafting and presenting the final evaluation report. Strong writing skills, experience with forestry projects preferably in South Asia, and evaluation experience are essential for the team leader and highly desirable for team members.

(A) Senior forester with extensive experience with farmer/private-sector fuelwood production in developing countries, preferably in arid climate, will have primary responsibility for assessing and evaluating effectiveness of technical assistance, operational strategy, managerial support, and progress toward development of policy.

(B) General development specialist, a sociologist/anthropologist, if possible. Requires experience in locally managed, locally implemented development activities with emphasis on forestry/natural resources management. Experience in South Asia is essential. Will review appropriateness and effectiveness of socio-cultural studies, farmer involvement(especially those

76

with very small farms,) and development involving women.

(C) Training specialist must be knowledgeable in methodology of training rural farmers in technology relating to forestry/natural resource management. This person will be responsible for evaluating the progress of the in-country and out-of-country training programs. Of special emphasis is the appropriateness of proposed training to meeting project goals.

In addition, a senior Pakistani forester (a retired or private-sector senior forester with at least 20 years experience with implementation of forestry activities in Pakistan) is expected to be recruited to advise and assist other team members in assessing the project. He will have principal responsibility for arranging contacts and assisting in analyzing appropriateness of field operational strategy.

VI. Reporting Requirements:

(A) Format of the report: the final report shall contain at a minimum the following sections:

(1) basic project/program identification sheets;

(2) executive summary of not more than three single-spaced pages reviewing major findings and conclusions;

(3) main report, which reviews and analyzes the questions raised in the statement of work, identifies lessons learned and ends with a list of conclusions and recommendations; and

(4) FPD logical framework with a brief summary of the current status/attainment of original or modified inputs and outputs.

The contents of the report shall distinguish clearly between the descriptive information underpinning the evaluation team's findings, interpretative information leading to conclusions and the team's recommendations for modifications and further action which stem from the conclusions.

(B) Annexes which include at minimum:

(1) the evaluation scope of work;

(2) a bibliography of individuals and sources consulted;

77

(3) a completed evaluation summary in the format provided by AID/W;

(4) logical framework with a brief summary of its current status.

Ten copies of the final report shall be submitted to USAID/Islamabad for distribution in Pakistan. The final report shall be well written and reflect the use of professional editing services.

(C) Evaluation team shall meet in Washington prior to leaving for Pakistan to coordinate with the evaluation unit of the Asia and Near East Bureau (ANE/DP/E). By the end of the first three days in-country, the team will be required to have developed an evaluation plan, including an estimated division of time between interviews and document review to be conducted in Islamabad, site visits, data analysis, and editing of the first and second draft reports. The evaluation shall be conducted in-country and should take approximately three to five weeks, including a final week in-country completing the final report. Six-day workweek are authorized and desirable. Individual members of the team shall make every effort to coordinate simultaneous arrival and departure times, to ensure that all members are involved in conducting the evaluation findings to the mission and the GOP.

The final evaluation document shall consist of the final report, including an executive summary and the completed evaluation summary format in accordance with instructions provided by AID/Washington and USAID/Islamabad. A draft report shall be submitted to USAID/Islamabad no later than four weeks after arrival in Islamabad for preliminary mission review. A near final draft report shall be submitted to the mission before the evaluation team leader leaves Islamabad. Prior to departure, the evaluation team may be requested to meet with the project committee and/or mission management and staff for debriefing. The complete and edited evaluation document shall be forwarded to the mission no more than four weeks after the evaluation team leaves Pakistan.

78

ANNEX B

Documentation Consulted

Dove, Michael R., Determinants of Interest in Farm Forestry, Forestry Planning and Development Project, July 1987 (draft).

Dove, Michael R., Social Forestry and Livestock Systems: Part I, Traditional Use of Tree Fodder, paper presented at NARC Livestock in Farming System Workshop, April 1987.

Dove, Michael R., and Qureshi, Jamil, Farmer Interest in Planting Trees and Operating Nurseries (series): Village and District Reports, Punjab; Provincial Report, Punjab; Village and District Reports, NWFP; Provincial Report, NWFP; Village Reports, Baluchistan; Provincial Report, Baluchistan.

Dove, Michael R., and Qureshi, J. A., Field Researcher's Orientation Manual and Guide, Forestry Planning and Development Project, 1986.

FAO, Guidelines for the Evaluation of Technical Cooperation Projects, October 1984.

Farm Energy Forestry Project, Progress 1986-87, Punjab, 1987.

Forestry Planning and Development Project, Annual Plan of Operations in Nasirabad, 1986-87 (working paper), Winrock International TAT, March 1986.

Forestry Planning and Development Project, Proposal for Consultancy by Anthropologist to Carry Out a Women's Study, June 1986.

Forestry Planning and Development Project, sundry memos, trip reports, letters, briefing papers.

Forestry Planning and Development Project, Technical Assistance Contract, April 1985, plus three contract amendments.

Gibbs, Christopher, Training Needs for Farm Forestry in Pakistan, working paper in preparation for Forestry Planning and Development Project PP, June 1983.

Government of Pakistan, Ministry of Food, Agriculture and Cooperatives (PC-1), Forestry Planning and Development to Organize, Establish and Expand Energy Plantations on Private Lands in Pakistan, February 1985.

Government of Pakistan, Ministry of Food, Agriculture and Cooperatives, National Agriculture Policy, February 1986.

Hart, William, A Recommended Program for Provincial Forest Training Schools, Winrock International, Forestry Planning and Development Project, April 1986.

Memorandum, William Hart, TAT to Director-General, PFI, on Sociology Public Administration and Extension Course: Academic Year 1985-86, January 1987.

Pakistan Forest Institute, Peshawar, mimeograph note, n.d.

Pakistan Forestry Institute, Technical Notes (Nos. 1-55), Peshawar, 1984.

A Plan for Implementing and Coordinating Farm and Energy Forestry Research, sponsored by Pakistan/USAID Forestry Planning and Development Project (discussion draft).

Position Paper on Forestry in Sind, Forest Department, Sind, 1986.

Qureshi Jamil A., FP&D Baseline Studies (working paper), Winrock International, Forestry Planning and Development Project, n.d.

Seventh Five-Year Plan, chapter on renewables (draft), February 1987.

Syllabus, Six-Month Training Course of Forest Guards, Miani Forestry Training School, Sind.

University of Arizona, Office of Arid Land Studies, Environmental Profile of Pakistan, U.S. MAB Program, May 1981.

USAID, AID Evaluation Handbook, AID Program Design and Evaluation Methodology Report No. 7, April 1987.

USAID/GOP Project Grant Agreement, Forestry Planning and Development Project (No. 83-16), August 1983, plus three ProAg amendments.

USAID/Pakistan, Agriculture and Rural Development, Portfolio Booklet, 1986-87.

USAID/Pakistan, Assignment to Pakistan, A Handbook for Contractors.

USAID/Pakistan, PID - Institutional Excellence, July 1987.

USAID/Pakistan, Project Implementation Letters (PIL), Nos. 1-16.

USAID/Pakistan, Project Implementation Reports (LOP to date).

USAID/Pakistan, Project Paper, Forestry Planning and Development Project (391-0481), August 1983.

USAID/Pakistan, PROMIS Report, Forestry Planning and Development Project, April 1987.

U.S. Department of State, Background Notes - Pakistan, March 1987.

Winrock International, Baseline Studies Field Assistants, Task Order No. WI-03, Forestry Planning and Development Project, September 1986.

Winrock International, Baseline Study Villages, Forestry Planning and Development Project, Map Folio.

Winrock International, The Concept of the Motivator in a Farm Forestry Program: A Working Paper for the FPD Project, 1987.

Winrock International, Forestry Planning and Development Project, Quarterly Reports: April-June 1985; July-September 1985; October-December 1985; January-March 1986; April-June 1986; July-September 1986; October-December 1986; January-March 1987.

Winrock International, Forestry Planning and Development Project, Work Plan, 1 April 1985.

Winrock International, Forestry Planning and Development Project, Work Plan, January-June 1987.

Winrock International, A Recommended M.Sc. Forestry Curriculum - Farm and Energy Forestry Planning and Development Project.

Work Plan 1986-87, Farm Energy Forestry Project, Punjab, 1986.

Work Plan 1987-88, Farm Energy Forestry Project, Punjab, July 1987.

Work Plan 1986-87, Social Forestry Project O/CCF Northwest Frontier Province, March 1987.

ANNEX C

Persons Met

Islamabad

Mr. Abeedullah Jan
Inspector General of Forests/Addl. Secretary
Ministry of Food and Agriculture
Government of Pakistan, Islamabad

Mr. Abdul Sattar Hussain
Deputy Inspector General of Forests
Office of Inspector-General, Islamabad

Mr. Nasarullah
Deputy Inspector-General of Forests
Office of Inspector-General, Islamabad

Mr. Akhlaq Ahmad Khan
Chief Conservator of Forests-Northern Zone
Rawalpindi

Mr. Ajmal Hussain
Project Director, Punjab Farm Energy Forestry Project
Islamabad

Mr. Liaqat Hayat
Farm Energy Forestry Specialist
Punjab Farm Energy Forestry Project

Malik Nazir Ahmad
DFO Project Area, Attock District, Punjab

Mr. Nasir Mahmood
DFO Project area, Rawalpindi District, Punjab

Haji Nazir Ahmad
Senior Instructor Punjab
Provincial Forest School
Ghoragalli

Mr. Mohammad Naeem
Instructor
Punjab Provincial Forest School
Ghoragalli

Lahore

Mr. S.K. Khanzada
Chief Conservator of Forests-Central Zone
Lahore

Mr. Mahmud Ahmad
Conservator of Forests, Headquarters, Lahore

Quetta

Arbab Mohammad Nawaz Kansi
Minister for Food, Agric. Livestock, Fisheries and Forests
Government of Baluchistan, Quetta

Mr. Alam Gul
Secretary-Forest and Wildlife Department
Government of Baluchistan, Quetta

Mr. Mohammad Rafiq
Chief Conservator of Forests Baluchistan, Quetta

Mr. Habib-Ullah
D.F.O.-Quetta Forest Division, Quetta

Mr. Mohammad Shafiq
D.F.O.-Director Division, Quetta

Mr. S. M. Irshad
Retired Chief Conservator of Forests
Quetta, Baluchistan

Hyderabad

Mr. Bahuddin Sirhindi
Chief Conservator of Forests-Sind/Acting Secretary
Forest Department, Government of Sind, Hyderabad

Mr. Shamsul Haq Memon
Conservator of Forests-Hyderabad Afforestation Circle
Hyderabad

Mr. Ghulam Mustafa Shaikh
Project Director-Sind

Mr. Tando Mohammad Khan
D.F.O.-USAID/GOP Project

Mr. Najamuddin Vistro
D.F.O. Silvicultural Research Division-Sind
Hyderabad

Mr. Niaz Ahmad Soomro
Principal-Provincial Forest School
Miani, Hyderabad

Peshawar

Mr. Yar Mohammad Khan
Chief Conservator of Forests-Northwest Frontier Province
Peshawar

Mr. Mumtaz Khan
Conservator of Forests-Southern Circle
Peshawar

Mr. Mohammad Ikram
D.F.O., Monitoring Cell
Northwest Frontier Province Project, Peshawar

Mr. M. I. Sheikh
Director-General
Pakistan Forest Institute
Peshawar

Raja Wilayat Hussain
Director Forestry Research
Pakistan Forest Institute
Peshawar

Dr. K. M. Siddiqui
Director Forest Product Research
Pakistan Forest Institute
Project Director FP&D, Peshawar

Kohat

Mr. Ensan Ullah Wazir
D.F.O., Kohat

Mr. Abdul Rahman Khan
R.F.O., in charge Kohat Project Area

Farmers

Sheikh Riaz Mohammad
Farmer, Hatrian, District Attock (Punjab)

Mr. Barkat Khan
Farmer, Burhan, District Attock (Punjab)

Mr. Nur Akhtar
Farmer, Hazro, District Attock (Punjab)

Mr. Afsar Khan
Farmer, Hamid Nagar, District Attock (Punjab)

Mr. Riaz Muhammad
Farmer, Hazro, District Attock (Punjab)

Members of Burhan Union Council (Attock-Punjab)

Two forest rangers in charge of project area

Technical Director, Lawrencepur Woolen Mills

Mr. Tayyab Ali
Farmer, Alizai
District Kohat (Northwest Frontier Province)

Mr. Ali Muhammad Samo
Farmer, Matiari, District Hyderabad (Sind)

Mr. Muhammad Khan Baluch
Farmer, Matiari, District Hyderabad (Sind)

Technical Assistance Team (Winrock International), Islamabad

H. Eugene Ostmark, Team Leader

Michael R. Dove, Anthropologist

William J. Hart, Forestry Outreach Specialist

Jamil A. Qureshi, Sociologist

Kenneth McNabb, Research Advisor

USAID/Pakistan

Hans P. Peterson
Chief/AkD

Harold L. Dickherber
Agr. Dev. Officer

Albert L. Merkel
Project Officer

K. Hameedullah
Program Specialist-Forestry

Grant Morrill
Assistant Program Officer

Mahmood Ahmed
USAID/FM

Jonathan Addleton
Assistant Project Officer

Marion Fuchs-Carsch
Technical Writer/PDM

Yousaf Saeed
Architect

Others

Raymond Fort
FAO Representative-Pakistan

George Belt
Chief-of-Party, Project Design Team

Hans Shroeder
Team Member/Economist, Project Design Team

Jack Farmer
Command Water Management Team Leader

F. Whitney Glynn
USAID Office of Inspector General
Singapore

Dr. Muhammad Afzal
GOP Evaluation Observer

ANNEX D

Schedule/Itinerary

Date	Activity
18-19 July	-- Team travel - U.S. to Pakistan.
20 July	-- Simultaneous arrival in-country of expatriate team-members: Catterson, Byrnes, Hoffman. - First briefings by USAID/Pakistan. - Logistical support arrangements begun.
21 July	-- USAID briefings continue. - Assembling project - related documentation. - Mr. Hameed Ahmad, recruited as Senior Pakistani Forester team member. - Team-building/planning exercise. - Mr. Mohammad Afzal, GOP observer joins evaluation team.
22 July	-- USAID meetings continue. - First meeting with the Inspector General of Forests, Mr. Abeedullah Jan and staff of the Office/IGF. - Meeting with Mr. F. Whitney Glynn, USAID/Singapore Office of the Inspector General (project general audit). - First meeting with Winrock International Technical Assistance Team, Messers. Ostmark, Hart, Dove.
23 July	-- USAID meetings. - Document Review. - Meeting with Ronco, Inc. provided Project Design Team, Mr. George Belt.
24 July	-- Preparation of Evaluation Plan Report for USAID. - Intensive Document Review. - Evaluation Team-General Meeting. - Meeting with USAID/Singapore auditor, Mr. Whitney Glynn.
25 July	-- Rest day.
26 July	-- Presentation of Evaluation Plan Report to USAID. - Meeting with Provincial Project staff, Punjab Forest Department, Messers. Ajmal and Afzal.
27 July	-- Field visit - District Attock - Punjab, full team accompanied by Messrs. Hart, Merkel, Hameedullah, Glynn and R. Ichord of AID/ANE/TR. - Catterson, Hameed, Ichord, Glynn, Merkel and Hameedullah return to Islamabad.

- Byrnes, Hoffman, Afzal and Hart continue to Peshawar.

28 July -- Byrnes, Hoffman, Afzal and Hart visit with Chief Conservator of Forests, Northwest Frontier Province and Director General and staff Pakistan Forest Institute, Peshawar.
- Catterson and Hameed travel to Quetta for meetings with Chief Conservator of Forests and staff, Baluchistan Province.
- Catterson and Hameed visit Kharkhasa Watershed Management Project Area near Quetta with CCF.

29 July -- Byrnes, Hoffman, Afzal and Hart continue meetings in Peshawar with mid-day air flight return to Islamabad.
- Catterson, Hameed meet with CCF - Baluchistan and subsequently Secretary - Forests and Minister of Agriculture for Baluchistan.
- Catterson and Hameed travel by air around mid-day to Lahore.
- Catterson, Hameed have late afternoon meeting with Chief Conservator of Forests - Central Zone - Punjab and staff - joined by Messrs. Ajmal and Afzal.
- Catterson has evening meeting with Mr. Jack Farmer of Command Water Management Project.

30 July -- Byrnes and Hoffman continue reviewing documentation in Islamabad.
- Catterson, Hameed return by air to Islamabad.
- Evaluation Team meeting to review findings of field trips.

31 July -- Meeting with Mr. Merkel to review findings to date, request clarification, further information.
- Meetings, one-on-one with individual Technical Assistance Team members.
- Evaluation Team meeting - report preparation planning and outlines.

1 August -- Meeting with Chief Conservator of Forests - Northern Zone - Rawalpindi - Punjab.
- Catterson, Byrnes, Hoffman, Hameed visit to Punjab Provincial Forestry School at Ghoragali.
- Evening departure - Catterson, Hoffman, Hameed with Merkel to Karachi.

2 August -- Byrnes in Islamabad for additional discussions with TA team social analysts and report writing.
- Catterson, Byrnes, Hoffman, Hameed and Merkel begin visit to project activities in Sind with a meeting with the Chief Conservator of Forests in Hyderabad.

- Field visit (PM) to Miami Reserve Forest Area and Miami Forest and Wildlife Training School, including stop on way back to view farmer initiated "Houri" (Acacia Nilotica) plantation systems.

3 August -- Visit to private farm near project site (Daro) to see bamboo and tree plantations.
- Visit to project site activities at Pennah and Honderani Reserve Forests.
- Return early evening to Karachi and late evening flight to Islamabad.

4 August -- Meeting with Inspector General of Forests, Mr. Abeedullah Jan.
- Meeting with Technical Assistance Team members.
- Meeting with USAID/Pakistan Project Management staff - Messrs. Merkel and Hameedullah.

5 August -- Beginning of four day holiday in Pakistan.
- Evaluation Team members engaged in report writing.
- Meeting with Design Team Leader, George Belt.

6 August -- Evaluation Team engaged in report writing.

7 August -- Meeting with Technical Assistance Team Chief-of-Party, Mr. Ostmark.
- Report preparation.

8 August -- Rest Day

9 August -- Catterson, Hameed depart early morning for Peshawar.
- Catterson, Hameed travel overland to Kohat where they are joined by Byrnes accompanied by Messrs. Ostmark, Dove and Qureshi of TA team.
- Meeting with DFO-Kohat (NWF Province) and FPD project staff in Kohat.
- Field visits to project activities in Kohat area (afternoon), including:
  - farmer nursery
  - two plantation sites
  - village survey site.
- Evening meeting with DFO Kohat and staff at Government Circuit House, Kohat.

10 August -- Byrnes, Ostmark, Dove, Qureshi depart by road on return trip to Islamabad.
- Catterson, Hameed depart by road on return trip to Peshawar for meetings at Pakistan Forest Institute (remainder of day).

11 August -- Catterson, Hameed meeting with Chief Conservator of Forests, Northwest Frontier Province, Peshawar and provincial project staff (morning).
- Catterson, Hammeed return mid-day by air to Islamabad.
- Byrnes, Hoffman heavily engaged in report writing.
- Evaluation Team meeting - general review of report preparations and conclusions and recommendations.

12 August -- Evaluation Team all engaged in report preparation.
- Meeting with USAID staff (Office of Agriculture and Rural Development).

13 August -- Preliminary review meeting with USAID staff on conclusions and recommendations.
- Byrnes and Hoffman revising and finalizing their report contributions.
- Team leader Catterson reviews preliminary conclusions and recommendations with USAID project management staff.

14 August -- Byrnes and Hoffman finalize their reports.
- Catterson, Hameed preparing full evaluation report.

15 August -- Byrnes, Hoffman complete their assignments and turn in their reports.
- Rest Day.

16 August -- Catterson, Hameed fully engaged in report writing.
- Additional meetings with USAID staff in FM and PDM offices.

17 August -- Catterson meets with Messrs. McNabb, TAT research advisor (just returned from home leave) and his counterpart M. Siddigui of Pakistan Forest Institute regarding project activities in research.
- Catterson, Hameed fully engaged in report preparation.

18 August -- Catterson, Hameed fully engaged in report preparation.
- Near final version of report presented to USAID project management officers for reproduction and circulation.

19 August -- Report preparation (word processing) continues.
- Draft report being reviewed by USAID and O/IGF staff.

20 August -- Final full review meeting with USAID and GOP representatives.
- Report revisions based on outcome of review meeting begun.

21 August -- Hameed Ahwad completes contract period.
- Catterson continues report revisions.

22 August -- Catterson departs Pakistan for US (early AM).

MACS-PC7A

USAID / PAKISTAN
COMPREHENSIVE PIPELINE REPORT BY PROJECT
AS OF 03/31/87

DATE : 08/04/87
REPORT PAGE NO.: 91
MISSION PAGE NO.: 76

OPTION NO.: 2

OFFICE CODE: 000 OFFICE NAME : AG & RURAL DEVELOPMENT (ARD)
PROJECT NO.: 391-0481.00 PROJECT TITLE: FORESTRY PLANNING DEVELOPMENT PROJECT OFFICER: ALBERT L MERKEL

EARMARK RULE_ID	EARMARK CODE_NO.	BUDGET PLAN CODE/ EARMARK_DESC.	OBLIGATED/ EARMARKED	COMMITTED	DISBURSED	UNLIQUIDATED OBLIGATION	ACCRUED	UNEXPENDED OBLIGATION
ELEMENT NO. : 1								
ELEMENT NAME: TECHNICAL ASSISTANCE			5,000,000	4,215,947	1,936,090	3,163,910	0	3,163,910
PIOT#391-0481330356	A481001	HESA-83-27391-KG13 LONG TERM FORESTRY TECH ASSTT	3,737,216	3,737,216	1,501,096	2,236,120	0	2,236,120
PIOT#391-0481330357	A481002	HESA-83-27391-KG13 LOG SUPPORT FOR PIOT#30356	215,274	215,096	209,761	5,513	0	5,513
PIOT#391-0481330361	A481003	HESA-83-27391-KG13 LONG TERM USDA PASA FORESTER	189,114	145,898	57,585	131,529	0	131,529
PIOT#391-0481330362	A481004	HESA-83-27391-KG13 LOGIST SUPPORT OF PICT#30361	52,224	7,682	7,682	44,542	0	44,542
PIOT#391-0481330447	A481011	HESA-83-27391-KG13 CONTRACT WITH PAK ABE FIRM	107,000	81,417	25,635	81,365	0	81,365
PIOT#391-0481360246	G481002	GESA-86-27391-KG13 ADD FUNDS IN PICT # 481-30357	200,000	41,642	34,331	165,669	0	165,669
PIOT#391-0481360247	G481006	GESA-86-27391-KG13 TO ADD FUNDS IN PIOT 40435	0	0	0	0	0	0
		UNEARMARKED BALANCE	499,172	0	0	499,172	0	499,172
		EARMARKED TOTALS > > >	4,500,829					
ELEMENT NO. : 2								
ELEMENT NAME: TRAINING			3,279,000	1,640,022	57,445	3,221,555	0	3,221,555
PIOT#391-0481330323	A481005	HESA-83-27391-KG13 PARTICIPANT TRAINING BY AED	659,000	659,000	7,950	651,050	0	651,050
PIL#13	D481002	HESA-84-27391-KG13 EXP OF FED & PROV FOREST DEPT	22	22	22	0	0	0
PIL#14	D481004	HESA-84-27391-KG13 FUNDS FOR O/IGF & PROV FOREST	140,000	140,000	0	140,000	0	140,000
PIOT#391-0481340405	D481001	HESA-84-27391-KG13 PARTICIPANT TRAINING THR AED	841,000	841,000	49,473	791,527	0	791,527
		UNEARMARKED BALANCE	1,638,978	0	0	1,638,978	0	1,638,978
		EARMARKED TOTALS > > >	1,640,022					

E-11

22

MACS-P07A

USAID / PAKISTAN
COMPREHENSIVE PIPELINE REPORT BY PROJECT
AS OF 09/31/87

OPTION NO.:

DATE : 08/04/87
REPORT PAGE NO.: 92
MISSION PAGE NO.: 77

OFFICE CODE: [illegible] OFFICE NAME : AG & RURAL DEVELOPMENT (ARD)
PROJECT NO.: 391-0481.00 PROJECT TITLE: FORESTRY PLANNING DEVELOPMENT PROJECT OFFICER: ALBERT L MERKEL

EARMARK DESCRIPTION	EARMARK CODE	BUDGET PLAN CODE/ EARMARK DESC.	OBLIGATED/ EARMARKED	COMMITTED	DISBURSED	UNLIQUIDATED OBLIGATION	ACCRUED	UNEXPENDED OBLIGATION
ELEMENT NO. : 3								
ELEMENT NAME: COMMODITIES			1,021,000	1,059,671	656,301	964,699	0	964,699
PIL#13		A481012 MESA-83-27391-KG13 EXP OF FED & PROV FOREST DEPT	29,833	29,833	29,833	0	0	0
PIL#14		A481014 MESA-83-27391-KG13 FUNDS FOR O/ICF & PROV FOREST	110,000	110,000	12,717	97,283	0	97,283
PIOC#391C481430340		A481009 MESA-83-27391-KG13 SMALL VALUE ITEMS	10,000	674	673	9,327	0	9,327
PIOC#391C481430308		A481006 MESA-83-27391-KG13 PROC OF FURNITURE	39,000	32,022	30,860	8,740	0	8,740
PIOC#391C481430304		A481006 MESA-83-27391-KG13 PROC OF 5 TOYOTA LAND CRUISER	439,000	324,951	308,097	130,903	0	130,903
PIOC#391C481430307		A481007 MESA-83-27391-KG13 HOUSEHOLD/OFFICE FURNIT/EQUIP	191,400	160,195	157,440	33,960	0	33,960
PIOT#391C481330356		A481010 MESA-83-27391-KG13 PROC OF LONG TERM FORESTRY TA	261,000	261,000	116,681	144,319	0	144,319
PIOC#391C481440301		B481006 MESA-84-27391-KG13 BOOKS/JOURNALS FOR PFI & PFD	0	0	0	0	0	0
PIOT#391C481330356		B481006 MESA-84-27391-KG13 ADD FUNDS IN PIOT 391-30356	139,000	139,000	0	139,000	0	139,000
		UNEARMARKED BALANCE	401,167	0	0	401,167	0	401,167
		EARMARKED TOTALS > > >	1,219,833					
ELEMENT NO. : 4								
ELEMENT NAME: OTHER COSTS			6,799,000	827,540	173,639	6,625,361	0	6,625,361
PIL#13		A481013 MESA-83-27391-KG13 EXP OF FED & PROV FOREST DEPT	72,201	72,201	72,201	0	0	0
PIL#14		A481015 MESA-83-27391-KG13 FUNDS FOR O/ICF & PROV FOREST	193,000	193,000	96,099	96,901	0	96,901
PIL#14		B481006 MESA-84-27391-KG13 FUNDS FOR O/ICF & PROV FOREST	513,000	513,000	0	513,000	0	513,000
PIOT#391C481440302		B481006 MESA-84-27391-KG13 CONSTRUCTION OF HOSTEL AT PFI	230,000	5,339	5,339	224,661	0	224,661
PIL#14		B481001 MESA-84-27391-KG13 FUNDS FOR O/ICF & PROV FOREST	44,000	44,000	0	44,000	0	44,000
PIOT#391C481440302		B481006 MESA-84-27391-KG13 ADD FUNDS IN PIOT 391-30356		0	0	0	0	0
		UNEARMARKED BALANCE	5,746,799	0	0	5,746,799	0	5,746,799
		EARMARKED TOTALS > > >	1,052,201					

E-12

93

MACS-P07A

OPTION NO.:

USAID / PAKISTAN
COMPREHENSIVE PIPELINE REPORT BY PROJECT
AS OF 06/31/87

DATE : 08/04/87
REPORT PAGE NO.: 93
MISSION PAGE NO.: 78

OFFICE CODE: [illegible] OFFICE NAME : AG & RURAL DEVELOPMENT (ARD)
PROJECT NO.: 391-0481.00 PROJECT TITLE: FORESTRY PLANNING DEVELOPMENT PROJECT OFFICER: ALBERT L MERKEL

EARMARK DOC. NO	EARMARK CNTL. NO.	BUDGET PLAN CODE/ EARMARKED DESC.	OBLIGATED/ EARMARKED	COMMITTED	DISBURSED	UNLIQUIDATED OBLIGATION	ACCRUED	UNEXPENDED OBLIGATION
ELEMENT NO. : 5								
ELEMENT NAME: EVALUATION			114,000	0	0	114,000	0	114,000
PIOT#3910481340454		0431007 HESA-84-27391-KG13 MID TERM EVALUATION	0	0	0	0	0	0
PIOT#3910481360254		0431004 HESA-86-27391-KG13 MED-TERM EVALUATION	0	0	0	0	0	0
		UNEARMARKED BALANCE	114,000	0	0	114,000	0	114,000
	EARMARKED	TOTALS > > >	0					
ELEMENT NO. : 6								
ELEMENT NAME: CONTINGENCY			1,187,000	0	0	1,187,000	0	1,187,000
		UNEARMARKED BALANCE	1,187,000	0	0	1,187,000	0	1,187,000
	EARMARKED	TOTALS > > >	0					
		PROJECT TOTALS > > >	18,000,000	7,743,180	2,723,475	15,276,525	0	15,276,525
	EARMARKED	TOTALS > > >	[illegible],412,884					

E-3

ANNEX F

Issues - Roles and Responsibilities

This annex has been prepared specifically at the request of the Inspector-General of Forests. It is intended as an indicative list of the confusion of roles and responsibilities existing among members of the staff of the Forestry Planning and Development project, including GOP, TAT and USAID personnel. The purpose of this list is not to draw inferences about blame in these cases but rather to illustrate the level of misunderstandings still existing and the need to further elaborate project implementation modalities and procedures and continue training of staff.

Examples of issues:

- Confusion over name and goals of the project and overall responsibilities at the provincial level, e.g., in project titles "Social Forestry Project" in NWFP and the "Farm Energy Forestry Project" in Punjab.

- Insistence in the Punjab that "Farm Energy Forestry Project is the operational phase of Forestry Planning and Development Project of the Government of Pakistan which is aided by the USAID." Confusion drives from the fact that provinces, in the original design, are also expected to participate fully in the two other components of the FPD project, namely Institutional and Manpower Development, and Farm and Energy Forestry Research.

- Wholesale confusion over budget allocation and release processes, including the agreed split between GOP local currency budget responsibilities and expenditures eligible for reimbursement by USAID.

- Continued assertions and belief that budget/funding problems could be solved by direct USAID advance funding to the O/IGF.

- Belief among members of GOP field staff that TAT staff members represent USAID.

- Insistence by Provincial and PFI authorities that USAID should carry out the reimbursable, FAR-based building construction program directly.

- Additional confusion that PC-1 sanctions building PFI or provincial forestry research substations.

- Inability to calculate from PC-1, the annual GOP funding levels required in the ADP.

- Total confusion by all concerned (GOP, USAID, TAT) of the meaning of FAR-based private nurseries.

- Lack of clarity regarding whether USAID funding of tuition for B.Sc. or M.Sc. provincial participants also includes their salary or stipends.

- Definition and place of demonstration tree-planting in the field operational activities, and whether GOP or TAT is responsible for implementing this program.

- Lack of clarity regarding field implementation modalities, e.g.:

  --need to require participating farmers to plant predetermined, fixed number of trees;

  --absolute sanctity of project area boundaries; and

  --need to increase subsidies to farmers as other projects do, i.e., provide fencing, all labor, protection by Forest Department.

- Feelings among project staff that doing extension work is akin to being "beggars" or "missionaries" with little power or status.

- Misunderstanding about phasing of project activities and claims that socio-cultural baseline studies are going too slow and not yielding data, when in fact, this component of the project is probably the most successful element to date.

- Confusion over actual implementation year of the project, Year One or Year Two, etc.; or GOP FY 1986-87 or 1987-88, etc.

- Need to clarify popular participation strategy; staff not using motivators or farmer advisory groups, and question of whether these are necessary.

- Lack of definition of counterpart relationships between TAT and GOP staff.

- Belief expressed in Punjab that project budget was 34 percent GOP and 66 percent USAID, and all activities could be broken down along similar lines.

- Stated differences in price per seedling to be paid to private farmers: NWFP--.95 Rps/seedling; Punjab--1.25 Rps/seedling. Assertion that USAID has minimized rates of payment as Forest Department usually costs seedlings at Rps 2.0 each.

- Project assisting farmers by giving free seedlings, but in effect, undermining potential market for private nursery operators.

- Belief among TAT that computers fundamental to planning work.

- Confusion at provincial level over nominations procedures for B.Sc./M.Sc. project-funded training at PFI.

- Belief that Section 38 (Pakistan Forests Code) was social forestry taking over private lands for rehabilitation.

- Belief that "entire training component should be responsibility of TAT."

- Wide divergencies in understanding among field staff regarding operational decisions already taken.

ANNEX G

Evaluation of Socio-Cultural Analysis (SCA) Component of Forestry Planning and Development (FPD) Project

Kerry J. Byrnes, Ph.D.

I. INTRODUCTION

A. Evaluation Objective

The objective of this report as per the scope of work for the Forestry Planning and Development (FPD) project mid-term evaluation team's development specialist, is to assess the progress of the FPD project's socio-cultural analysis (SCA) component (i.e., baseline socio-cultural studies) and its appropriateness to identifying strategies for enhancing farmer and private sector participation in the FPD project.

The reader should note that only the provinces of Baluchistan and Sind refer to the FPD project by the same name, while the FPD project is called the Farm Energy Forestry (FEF) project in Punjab and the Social Forestry project in the NWF province. The present paper will, despite these provincial differences, refer to the project as the FPD project. Similarly, the paper will refer to foresters working on the FEP or Social Forestry projects as FPD project foresters.

A closely related issue is the matter of whether this variation in the names used to refer to the project implies radically different concepts of the project, its goals and its implementation strategy.

B. Evaluation Methodology

This report was prepared pursuant to the Evaluation Plan prepared by the FPD evaluation team leader. The document is based on the author's review of available project documentation; meetings with officials within the Office of the Inspector-General for Forests (O/IGF), the Offices of the Provincial Chief Conservator of Forests (O/PCCFs), and the Pakistan Forest Institute (PFI); meetings with foresters assigned by the O/PCCFs to the FPD project; meetings with members of the technical assistance team (TAT) and the team's SCA group; meetings with staff of USAID/Pakistan;s Office of Agriculture and Rural Development; field visits in Punjab and NWF provinces to see FPD project sites and SCA study areas; and interviews with project participants, including farmers who have established nurseries/planted trees, and FPD project foresters.

The report also benefited from ongoing discussions and exchange of views with the evaluation team's two other members (Mr. Tom Catterson and Dr. Joe Hoffman). Finally, the evaluation team had the benefit of interaction with two other groups bringing unique interests and perspectives to their assessment of the project. The first group was represented by a USAID auditor who was conducting a preliminary audit of the project; the second

group was comprised of a Design Team that was exploring potential options for extending the FPD project.

II. RELATIONSHIP OF SOCIO-CULTURAL ANALYSIS TO FPD PROJECT

A number of factors are identified in the FPD Project Paper (PP) as constraints to improving farm forestry in Pakistan. One of the identified constraints is the lack of applied social science knowledge of how tree planting can be most effectively integrated into the largely subsistence-oriented cropping systems of Pakistan's small farmers. In this regard, the PP noted that Pakistan "has very little experience in the design and evaluation of alternative strategies to encourage farmers to plant and maintain trees" (p. 36) on privately-owned farm and range lands. Recognizing that success in afforestation of privately-owned lands will ultimately depend on farmers being able and willing to plant and maintain trees thereon, the FPD project provided a socio-cultural analysis component to assist the project in developing "sociologically-sound strategies to encourage farmers to plant and manage tree crops," (PP, p. 36).

The intent of including the SCA component in the FPD project was to equip the project with a means of assessing the "effectiveness of alternative approaches to involving farmers in the design and management of afforestation activities," (PP, p. 36). As the PP notes, the successful achievement of the FPD project's objectives will depend on the project's ability to "design the local participation organization . . . essential to develop programs that effectively meet the needs and secure the involvement of local farmers," (PP, p. 67). Such a "local participation organization" or mechanisms are essential since the GOP cannot afford the recurrent costs involved in supporting an outreach program in which foresters or even extension agents contact each and every farmer on a one-to-one basis.

A. Scope of Socio-Cultural Analysis Component

The FPD project's SCA component primarily consists of socio-cultural data collection, analysis and interpretation to be used in designing, implementing, and monitoring and evaluating the project's field operational activities. As stated in the Project Paper, SCA is to:

> be conducted during the initial...stage of the project to contribute to the detailed knowledge of local areas . . . necessary to achieve desired levels of farmer interest and participation. Subsequently, this type of research will contribute to the project monitoring effort and provide insights into adaptations necessary to keep this and future projects on track (PP, p. 71).

The priorities for SCA identified in the PP were as follows:

- land tenure patterns and their implications for the design of farm forestry programs;
- the social structure of agricultural production, i.e., the contribution of inputs, the allocation of farm outputs, and the role of women, children, and the landless in fuelwood production and use;
- baseline demographic, cultural, and socioeconomic characterizations of the project area; and
- the "identification of methods for organizing local farmers and involving them in project management that seem to have the best probability of achieving satisfactory rates of adoption of on-farm tree crop management by the target [i.e., clientele] population," (PP, p. 71).

Further, as the project proceeds, the PP calls for the progressive development of studies on:

- the acceptance and adoption of on-farm tree crop management by farmers; and
- the impact of the project on land tenure and use patterns and on the roles of women, tenants, and landless laborers.

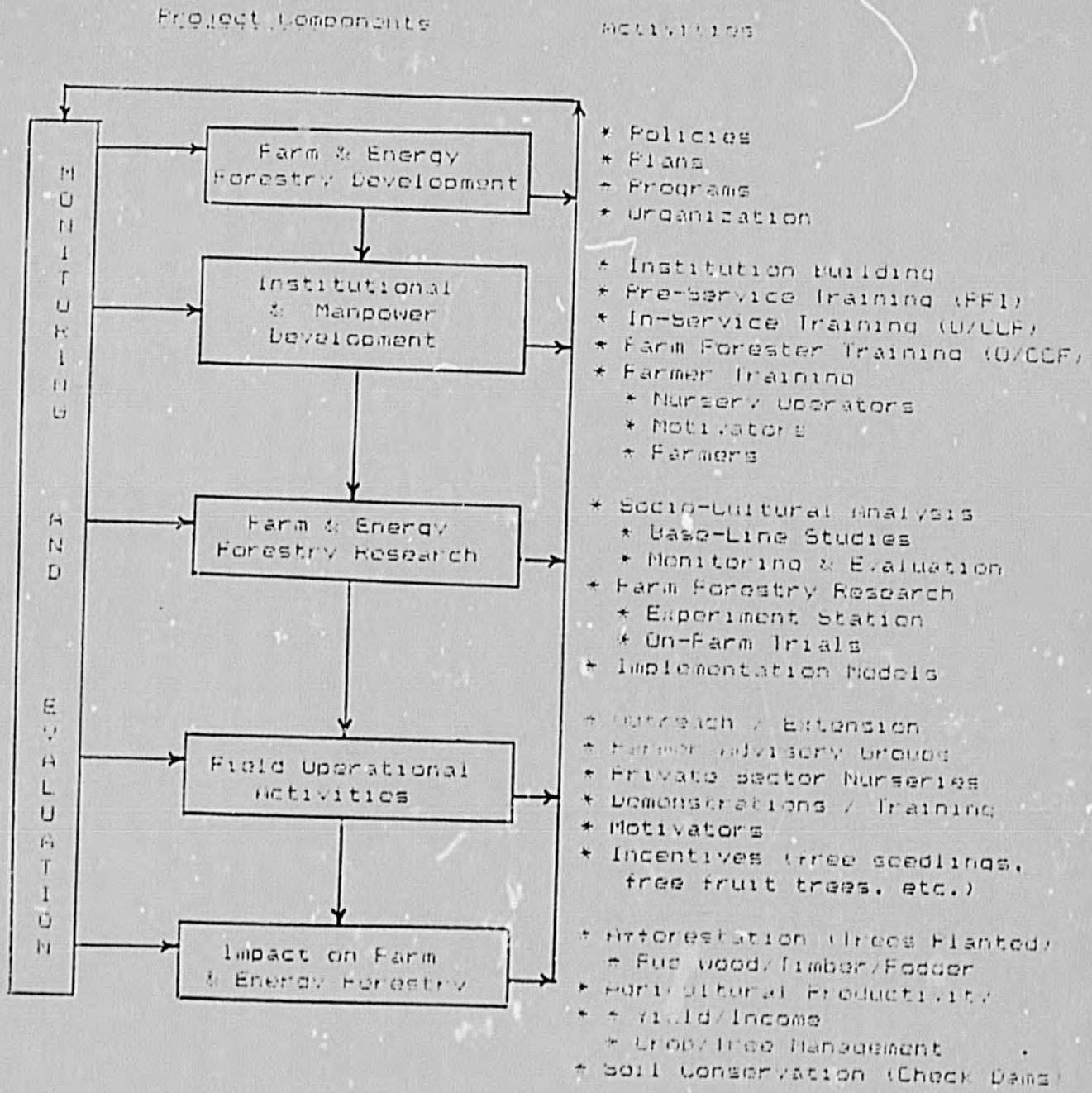
B. SCA in Relation to FPD project's Three Major Components

The PP does not conceive the SCA as an isolated activity that is unrelated to other FPD project components. The PP envisions that the data generated through SCA would "contribute in a coordinated and systematic manner" (PP, p. 58) to the sound implementation of the FPD project's three major components: institutional and manpower development, farm and energy forestry research, and field operational activities. A schematic representation of the interrelationship among these components and more specific FPD project activities are presented in Figure 1.

1. Institutional and Manpower Development

The objective of this project component is to strengthen the capability of the Office of the Inspector General of Forests in the Ministry of Food, Agriculture, and Cooperatives, the Offices of the Provincial Chief Conservator of Forests, and the Pakistan Forest Institute to:

Figure 1. Schematic Representation of Interrelationships among Key Components and Activities of Forestry Planning and Development Project.



Source: Based on project design concepts presented in Forestry Planning and Development Project Paper, United States Agency for International Development, 1983.

- develop sound afforestation and fuelwood policies that are adequately coordinated with the activities and approaches of the agriculture and energy sectors;

- design and implement cost-effective and coherent plans at the federal and provincial levels for the integrated development of farm and energy forestry and to monitor and evaluate ongoing programs in order to adapt subsequent plans to take advantage of successes and to avoid recurrent failures;

- design and administer effective and efficient programs to encourage the production of trees for fuelwood, fodder, timber and soil conservation on private lands;

- provide training for forestry officials to develop improved skills in the design, organization, and implementation of programs to encourage farmers to adopt afforestation practices on suitable lands; and

- broaden research capability in the natural and social science aspects of farm and energy forestry systems to build the basis for improving these systems and their management in the future.

2. Farm and Energy Forestry Research

The objective of this project component is to provide an improved scientific basis for the technical and socio-economic design of farm and energy forestry activities.

3. Field Operational Activities

This component's objective is to provide practical demonstrations of the feasible farm and energy development alternatives as well as an avenue for direct farmer involvement in the design of these activities.

4. Summary of Relation of SCA to FPD project Components

The specific contributions which SCA is expected to make to each of the FPD project's three components may be summarized as follows:

- Institutional and Manpower Development -- to assist in the design of sociologically-sound afforestation and fuelwood policies, plans, and programs; to

assist in the development of pre- and in-service training programs that provide farm forestry staff with the skills and attitudes necessary to assist farmers in planting trees to enhance agricultural productivity; and to assist in the development of applied social science research capability in farm and energy forestry.

- Farm and Energy Forestry Research -- to develop the socio-cultural and socioeconomic information needed to design "sociologically sound strategies to encourage farmers to plant and manage tree crops," (PP, p. 36) and "sociologically viable methods for organizing programs to meet the needs of farmers," (PP, p. 68).

- Field Operational Activities -- to assist in the design, implementation, and monitoring and evaluation of a field program to demonstrate the technical and economic feasibility of "tree crop management practices, particularly for the production of fuelwood in concert with other farm objectives," (PP, p. 74), and to evaluate the "effectiveness of alternative approaches to involving farmers in the design and management of afforestation activities," (PP, p. 36).

C. SCA in Relation to Project's Target Areas

Three target areas were identified in the PP for field operational activities: selected districts/tehsils in the barani (rainfed) areas of Punjab and NWFP, the irrigated farmlands of Nasirabad District, Baluchistan, and the irrigated forest plantations in Sind. The variability in the agricultural and socio-cultural makeup of these areas is discussed in detail in the PP. This variability has implications for the type of development assistance to be provided by the FPD project as well as the nature and level of involvement of SCA in the development of project activities in each area.

The SCA component is focused primarily on the barani area of Punjab and NWFP and the irrigated farms of Nasirabad District, Baluchistan. While the project's field operational component was to assist with the planting of trees on private land in these three areas, project activities in Sind were to focus exclusively on providing assistance to state-owned forests and were not to include participation of private sector farmers. The possibility of expanding the FPD project to include privately-owned small farms in Sind was being considered by USAID/Pakistan at the time this report was prepared. The following summary descriptions of the project's target area are drawn from the PP.

1..The Barani Areas of Punjab and NWFP

The project's target area, a subregion of the barani region, comprises some 8.7 million acres and contains about 4.4 million people living in rural villages. Population density in the area averages 300 persons per square kilometer. Only about 10 percent of the land is irrigated for arable crops, while a little less than 50 percent of the land is planted to barani crops, the remainder being degraded, gullied, or wildland used primarily for grazing. The vast majority of farms are worked either by the owner or by the owner in combination with one or more tenants; only 13 percent of the farms are worked exclusively by tenants. Average farm size is slightly less than 10 acres, although this figure is skewed upward by a small number of large landholdings. Because much of the region's farmland is of marginal quality, an above average percentage of the male population is working in urban centers and the Middle East. Thus, there is evidence that women are playing an increasingly important role in agricultural and fuelwood activities.

The barani, as the PP notes (pp. 76-77), is especially attractive for the FPD project's farm and energy forestry initiative. Table 1 lists the thirteen project sites (tehsils or groups of villages) identified in the PP.

The project's aim in the barani is primarily to encourage farmers to produce trees for on-farm purposes (fuelwood, fodder, farm construction timber) and soil enhancement. In view of the critical need for fuelwood to free up cow dung as a fertilizer and soil conditioner, the project was designed to help demonstrate the potential for each farm family to achieve a minimum self-sufficiency in fuelwood production. The afforestation target for the barani was to assist approximately 15,000 farmers in planting the equivalent of roughly 20,000 acres with tree species suitable for the on-farm uses cited above, with much of this acreage being on marginal lands. Planting designs included block plantations on abandoned fields or terraces as well as planting in rows along fences or paths, in gullied areas, and in other situations (e.g., scattered plantings).

2. Irrigated Lands in Nasirabad District, Baluchistan

With extremely limited rainfall (3"-8") and less than 3/10 of one percent of its land area covered by forests, Baluchistan is not particularly suited to the cultivation of tree crops on unirrigated farm and rangelands. However, farmers in the Nasirabad District have expressed great interest in planting trees in combination with irrigated farming to enhance soil quality, to rehabilitate saline and waterlogged soils, to

Table 1. FPD project Sites as Identified in FPD project Paper.

Province	District */	Tehsil
NWFP	Kohat	Kohat Hangu
	Karak	Karak
Punjab	Rawalpindi	Rawalpindi Gujar Khan Kahuta
	Attock	Attock Fateh Jang Pindi Gheb
	Jhelum	Jhelum Chakwal (now a District)
	Gujrat	Gujrat Kharian

*/ Districts added by GOP to project areas:
* D.I. Khan in NWFP
* Chakwal, Khushab, and Sialkot in Punjab

establish shelterbelts to protect crops, and to produce fuelwood and timber for both on-farm and commercial use.

The project's target area is comprised of three of Nasirabad's five tehsils (Jhat Pat, Usta Muhammad, and Dera Murad Jamali). Rainfall in the area averages about five inches annually and crop production is predominantly dependent on irrigation canals; farmers produce primarily rice and small quantities of wheat, sugar cane, and mango. There are approximately 290,000 persons and some 46,000 farms in the target area. Approximately 33 percent of the farms are operated by owners, 15 percent by owners and tenants, and 49 percent by tenants. While the 1972 Agricultural Census reported an average farm size of 55.6 acres, farm sizes vary by tenure status, as follows: owner (79.2 acres), owner/tenant (79.5 acres), and tenant (31.1 acres). Farm sizes range from a minimum of about 16 acres to a reported maximum of about 300 acres.

The afforestation objective in Nasirabad District was identified as that of helping each farm family to establish, at a minimum, the equivalent of one acre of trees. Further, as Baluchistan's total and per capita supplies of timber and fuelwood are the lowest in Pakistan and because of the strong market for mining timbers in this district, the project design envisaged that families wishing to market timber as a commercial crop could establish larger quantities of trees with project assistance.

The principal planting design for this area was to be single rows of trees along field margins, irrigation channels, and roads. While the project recognizes the potential for growing trees as a commercial crop, the PP states that: "Block plantations cannot be justified on these lands as a substitute for conventional agricultural crops except to improve moderately saline or excessively light soils," (PP, p. 82). However, block planting is a valid planting option where, for one reason or another (e.g., water shortages or fallowing needs), trees can and should be planted. Also, there may be socioeconomic reasons for block planting of trees (e.g., family labor shortage).

The target for this area was to encourage 3,130 farm families to plant the row equivalent of 3,130 acres of block plantation of fuelwood producing species and to encourage 210 farmers to each plant one acre of block plantation on soils needing reconditioning for use in high productivity agriculture.

3. Target Level of Farmer Participation

The PP defined the target level of farmer participation in the project as being 18,240 farmers planting the equivalent of an estimated 23,715 acres of trees on marginal farm and rangelands

(see Table 2). Subsequently, in the PC-1, higher target levels were set. This difference between the target levels defined in the PP and those defined in PC-1 is discussed in greater detail in the main report.

Table 2. Project Paper Estimates of Target Level of Farmer Participation (Number and Acres) During Life of FPD project in Barani Areas of Punjab and NWFP and Irrigated Areas of Nasirabad District, Baluchistan.

Year	Location			
	Barani		Irrigated	
	Farmers	Acres	Farmers	Acres
1				
2				
3	280	292	60	60
4	840	990	180	180
5	1680	2138	360	360
6	2520	3436	540	540
7	4620	6074	1050	1050
8	4960	7445	1150	1150
Total	14900	20375	3340	3340

Source: Project Paper, p. 85.

D. SCA in Relation to Implementation Strategy to Promote Farmer Adoption of Farm Forestry Practices

Field operational activities under the FPD project have been initiated in each of Pakistan's four provinces. To date, there is no common approach to implementing the field operational activities nor should there necessarily be a common approach, given the differences between provinces and the varied audiences which the project was intended to reach (i.e., small farmers, tenant farmers, women). However, the PP did provide, although not all that explicitly, a proposed model for how the project beneficiaries would be induced to take up farm forestry. This model is now briefly described.

The FPD project's basic idea or model for inducing farmers to adopt farm forestry practices is to create a "demonstration effect," whereby a well-selected sample of farmers in the target

beneficiary groups (i.e., small farmers, tenant farmers, women) would be provided initially, at little or no cost, seeds and technical guidance to establish nurseries. These project participants would nurse the seeds into seedlings at which time the project would purchase the seedlings from the nursery operators and distribute the seedlings to a carefully selected, larger sample of interested farmers representative of the target group to be reached by the project.

These farmers, in turn, would receive training in the care and nurturing of trees and, in due time, would begin to be able to harvest their investment of inputs (land, labor, capital) in the form of the fuelwood, fodder, timber, and even an occasional pole to sell when the farmer was in need of cash. In effect, trees, like livestock, could be a source of subsistence as well as cash income. Once these farmers' "tree appetite" had been whetted, in effect, once the project had created a "market demand" for growing farm forestry tree species, these farmers would begin to purchase the desired number and species of trees directly from private farmer nurseries, as the project phased out free distribution of trees and the subsidization of farmer nurseries.

The role of SCA in the project was to assist the in finding the optimal strategy to be followed in approaching and stimulating farmers to grow the trees needed to meet the demand for fuelwood and other tree products. The baseline studies were to generate the market reconnaissance data essential for identifying the key points of market penetration, i.e., locating the types of farmers who would become nursery operators as well as the larger number of farmers whose tree plantings would serve as a farm forestry role model (or demonstration) for even larger numbers of farmers in the surrounding villages. Further, the SCA component would assist in the design of the action strategy for implementing field operational activities.

In addition to the economic incentives implicit in this model, the model also provides for institutional and manpower development aimed at enhancing the forester's and the farmer's knowledge of farm forestry practices. An inductive approach, as outlined in the PP (p. 109) was proposed:

> Training of farmers in the target areas of the Barani and Nasirabad will be initiated as soon as field operations start in the second year. Training for farmers will be conducted at three levels. First, an intensive training series will be offered for village opinion leaders in combination with the local farm and energy forester. These individuals will provide the Forest Departments with guidance to help them organize local farm forestry programs that will effectively meet farmer needs. Additionally, these individuals will play a vital role as motivators

encouraging others in their villages to adopt farm forestry practices. These trainees will extend the efforts of the government farm forestry staffs and help define the local community's ownership of the program. Second, as an incentive to encourage these farmers' participation in the program and to expose them to experiences in other countries, Asian forestry tours will be organized for approximately 40 of these motivators. At the third level, extensive training programs will be offered to provide all interested farmers in project areas with knowledge about the advantages and disadvantages of farm forestry and to develop their skills in tree planting and management.

Further refinements on this combined "incentive" and "institutional development" model would be developed based on the baseline data generated by the SCA group. For example, the SCA group would seek to delineate how the project could make use of the biraderi (or lineage) system to the best advantage possible. In this respect, data generated by the baseline studies would be used:

> to identify the local individuals who serve as the informal opinion leaders within the village. Typically, these opinion leaders will be senior individuals in the village's important biraderi groups. The project will encourage these individuals to adopt the desired farm forestry practices and will, where possible, hire them as local motivators to encourage both the families of their biraderi and the senior members of additional biraderi to follow suit. Thus, outside change agents (i.e., the farm forester and the media materials prepared and distributed through the project) will make people aware of the opportunities of farm and energy forestry while an inside and respected opinion leader will help the people evaluate and subsequently adopt the desired practices (PP, p. 137).

An additional feature of the model was the idea of establishing "farmer advisory groups" at the provincial, district, and tehsil levels of the barani area. These groups would have the function of helping to "organize the project so that it effectively meets farmers needs," (PP, p. 78).

In the case of Nasirabad District, the PP indicated that the farmer advisory groups would "be established to ensure that the . . . the Forest Department staff and the project . . . effectively meet farmers' needs." This emphasis on the "farmer advisory groups" would appear to reflect the concern stated in the PP that AID and GOP funds would be used to "make it possible for farmers to be involved in the organization and supervision of the farm forestry programs," (PP, p. 78).

Finally, and perhaps the most appealing feature of the model is that the technology to be transferred by the project to the farmers offers them "relatively high advantages" (PP, p. 138) and is compatible:

> with many of their ways of life. The project will not only provide fuelwood for family use and timber that can be used on the farm or sold to bring in extra income, but it will also produce much needed fodder (both in the leaves of the trees themselves and also in increased grass production beneath the trees); free up cow dung for use as fertilizer; and slow the loss of agricultural land through erosion in the barani and through waterlogging in Nasirabad. These advantages are integral to the farm enterprise, and when fully realized, are likely to generate strong momentum for the project. This momentum will be enhanced by the ready visibility of the results and by the farmer's ability to plant a small number of trees on a trial basis to experiment with these activities, himself, before undertaking them more extensively (PP, p. 138).

E. Status of Field Operational Activities in Project Areas

The FPD project design called for SCA baseline studies to be initiated in early 1984, during the project's first two years, with the information generated being used to design the strategy to implement field operational activities during subsequent years. However, these baseline studies were not initiated until mid-1986, due to delayed project startup. Although these baseline studies were to provide the data for planning implementation strategy for field operational activities, the O/PCCFs proceeded to launch field operational activities in early 1986.

While these field operational activities were two years premature in terms of the project implementation schedule defined in the PP, foresters in the provincial-level forestry departments (O/PCCFs) took the position that the PC-1, originally drafted in early 1984 but not approved until September 1985, authorized or even required that field operational activities be initiated in 1986. Although the PC-1 recognizes that the third year of the project was not scheduled to occur until 1986, the approved PC-1 did not make any adjustments in the project's implementation schedule to compensate for the nearly two year delay in getting the PC-1 approved. Accordingly, it is important that the reader have an understanding of where the FPD project currently stands in terms of implementation of field operational activities.

There is a major difference between NWFP and Punjab in the way in which the O/PCCF staffs the FPD project. In NWFP, FPD project duties and responsibilities were added to the traditional

duties and responsibilities of the Conservator of Forests and the Divisional Forest Officers. Thus, for example, an NWFP Conservator of Forests is also the FPD Project Director but he is assigned to the FPD project only on a part-time basis. On the other hand, in Punjab, a limited number of existing forestry personnel were assigned on a full-time basis to the FPD project. Thus, in Punjab, there are DFOs assigned full-time to the project.

Descriptions of FPD project staffing, implementation strategy, and targets and achievements are now provided for Punjab and NWFP. No data are reported here for Baluchistan since it was not possible for the evaluation team to visit Nasirabad District.

1. Punjab

Project Staffing

The FPD project field teams are comprised of foresters from the following levels: Divisional Farm Energy Forestry Officer (DFO), District Farm Energy Forest Officer (SDFO), Range Forest Officer (RFO), and Field Forester.

Implementation Strategy

The 1986-87 FEF Project/Punjab Work Plan (pp. 5-7) outlines the strategy for implementing field operational activities:

- Introduction. Farmers are contacted through personal visits, meetings, public gatherings--e.g., Union Councils and District Councils, fairs (mela), juma bazaars, juma prayers at mosques, Eid prayers, and even marriage parties.

- Preparedness. A list is made of farmers who respond positively to initial contacts and indicate that they are prepared to participate in project activities.

- Training/Demonstration. Listed farmers are then to be contacted and trained on various aspects of on-farm planting and tree production.

- On Work. Farmers interested in planting seedlings or establishing nurseries are assisted in procuring planting materials (polythene bags, seeds for species preferred by farmers, or seedlings).

- Farmers are given incentives to encourage participation:

  --A nursery operator is promised that the project will buy the nursery's production of seedlings (up to a certain limit during the initial years of the project).

  --Other potential incentives:

  - cash (honoraria, work and time oriented awards, cash prizes for winning a competition);

  - kind (prizes in the form of free planting stock, token gifts of tools, seeds, polythene bags, etc.); and

  - recognition (certificates, letters of appreciation, sponsorship for participation in seminars, mass media coverage of activities of project participants).

- Youth are contacted through schools, colleges and universities, youth clubs, or newly organized Forestry Committees.

- Activities are to be coordinated with other organizations doing similar or identical work.

- Project activities are to be publicized through press articles, radio talks, and television programs.

- In selected villages, where large tracks of land become available, collective plantings through mangli/mangi, followed by collective entertainment, are to be organized.

- "All farmers in a given locality shall be treated alike. No preference shall be given to conventional landlords or otherwise extra influential persons." (Farm Energy Forestry Project/Punjab, Work Plan, 1986-87, p. 7).

Targets and Achievements

The original FPD life of project target of 20,375 acres in the barani area was based on an estimated participation of 3,315 farmers from two districts of NWFP and 11,585 farmers from four districts in Punjab, or an average of 1.37 acre/farmer, with the

actual acre/farmer varying depending on the area planted per plantation type.

These targets by province were increased by the GOP in the PC-1. In the case of Punjab, for example, two additional districts (Khushab and Sialkot) including five additional tehsils were added to the project. At the same time, the total target planted area was increased to 32,500 acres, nearly a 60 percent increase over the PP's original target planted area (20,375 acres) for the total barani area.

To date, the GOP has not released to the Punjab O/PCCF sufficient resources to meet yearly targets as defined in the PC-1. The Punjab O/PCCF has nevertheless maintained that "actual achievement [has] remained proportionate to [the] actual amount [of funds] released from time to time through the fiscal year," (Farm Energy Forestry Project/Punjab: Progress 1986-87, p. 1).

Thus, while the 1986-87 target, per the PC-1, was 2,500 acres, the Punjab FEF Project estimated, based on the actual funds released in 1986-87, that the Project would only be able to to plant 750 acres during 1987-88. Similarly, the estimated number of nurseries to be established during this same time period was reduced from 130 to 48. Data on the targets and achievements of the Punjab FPD project for 1985-88 are presented in Table 3.

As discussed in greater detail below, the FPD project provided the Punjab project staff with socio-cultural baseline data on the project's target areas. These data included the names of the farmers in the baseline samples who were interested in establishing nurseries or planting trees. There are few indications that the Punjab FPD project staff ever utilized this information as a tool for designing and guiding the implementation of field operational activities.

2. NWFP

Project Staffing

The 1986-87 Work Plan for the NWFP FPD project identifies project staff positions for:

- Farm Foresters -- to organize, arrange and provide technical help to the farmers through their field experience;

- Range Forest Officers -- to contact the farmers on the tehsil level and organize tehsil-level

Table 3. Targets and Achievements of the FPD project in Punjab (1985-1988).

PROJECT ACTIVITIES	1985--86	1986 -- 1987		1987-1988
	Achieved	Target	Achieved	Target d/
Forest Dept. Nurseries:				
No.	a/	8	8	25 e/
Seedlings (n)	886,500	450,000	452,500	1,260,000
Farmer Nurseries:				
No.	-	-	33	56 e/
Seedlings (n)	-	1,600,000	1,670,000	2,800,000
Total Seedlings	886,500	2,050,000	2,122,500	4,060,000
Farmer Contact:				
Introduction	830	6,000	8,587	40,000
Preparedness	486	b/	2,534	12,000
Training & Demonstration	200	b/	943	4,000
On Work	112	b/	802 c/	1,030
On Farm Planting:				
Planting Sites (ac)	112	900	761	4,000
Trees (n)	54,554	750,000	755,327	4,060,000 f/
Trees/Site (n)	487	833	993	1,015

a/ Distribution of seedlings began from O/PCCF nurseries in April 1986.
b/ No targets were defined.
c/ Includes the 41 farmer nurseries.
d/ Left over targets of 1985-86 and 1986-87 will not be met this year.
e/ Based on average of 50,000 seedlings per nursery.
f/ 15 percent additional seedlings to compensate for seedling failures.

Source: Farm Energy Forestry Project/Punjab: Work Plan 1986-87.
Farm Energy Forestry Project/Punjab: Progress 1986-87.
Farm Energy Forestry Project/Punjab: Work Plan 1987-88.

committees; also to supervise the field activities of the farmers and subordinate field staff; and

- Divisional Forest Officers -- to organize district-level committees for the proposal, implementation, etc. of the requirements of the project; also, to plan, monitor and evaluate the project activities in the project area.

The DFO only works part-time on the FPD project but RFOs and Farm Foresters are assigned full-time. (At least this was the pattern encountered during a field visit to Kohat, as described below.)

Additionally, in NWFP, the FPD project explicitly proposes a role for paid (remunerated) "motivators" "to motivate and organize the public through verbal discussions and propaganda in order to make the farmers forestry minded" (FPD project/NWFP Work Plan, 1986-87). Thirty persons have already been nominated to be "motivators."

Implementation Strategy

The key ideas in the project implementation strategy in NWFP, as identified in the 1986-87 Work Plan, are village opinion leaders (or "motivators"); farm forestry advisory committees; already existing local organization at the village level; incentives; mass media, fair (mela), and displays; and support of local administration.

Targets and Achievements

Table 4 summarizes the NWFP FPD project figures for 1986-87 and life of project targets for seven tehsils of Kohat and D.I. Khan Districts.

The evaluation team could not obtain complete data for the FPD project in NWFP, but a field visit to the DFO's office in Kohat provided some revealing data. Although this DFO is not assigned to the project full-time, he does supervise five full-time project staff (two range forest officers and three farm foresters). One RFO covers the tehsils of Kohat and Hangu, while the other RFO covers the tehsil of Karak.

During 1986-87 planting seasons (defined as including the Spring season of 1986, the monsoon season of 1986, and the Spring season of 1987), the FPD project in Kohat established four acres of government nurseries and six private nurseries (each .5 acres). The government nurseries have produced .94 million seedlings to date, including .4 million seedlings during the current season. Currently, the four private nurseries in Kohat

have 72,000 seedlings ready for distribution, while the two Karak private nurseries have 43,000 seedlings ready for distribution.

Table 4. Targets of FPD project/NWFP 1986-87.

Targets	1986-87	LOP
Government Nurseries	12	-
Private Nurseries	28	480
Motivators	30	100
Village-level Committees	20	60
Tehsil-level Committees	3	6
District-level Committees	2	3

Source: FPD project/NWFP 1986-87 Work Plan.

The FPD project staff have observed an interesting difference between Kohat and Hangu in the pattern of tree plantings. Farmers in Hangu tend to prefer subsidized block plantings. This stems from the presence since 1984 of a UNHCR income-generating project that hires labor (70 percent of the labor is Afghan and 30 percent is local) to plant trees in block plantations on private land. The amount of private land planted to date by the UNHCR project has, in some cases, been as high as 300 acres on a single farm. Further, the Forestry Department is responsible for maintaining the trees during the initial years. Thus, in Hangu, the FPD project faces greater difficulty in promoting farm forestry because the project only provides free seedlings, and does not provide any labor for planting or maintenance.

On the other hand, in Kohat, where farm sizes are small (a reported average of four to five acres), land scarce, and the small farmer heavily dependent on family labor, the participating farmers are planting trees in single lines (e.g., along field borders).

Overall, it would appear that the FPD project in Kohat is reaching the project's intended clientele. During 1986-87, seedlings were distributed to 1,117 farmers (936 farmers in Kohat and 181 farmers in Karak). These seedlings, in turn, were planted on a total of 582 acres, or an average of .52 acres per household. Based on the rule of thumb of 1,000 trees per acre, each household received about 500 seedlings. Thus, the number of trees planted per acre per average farm size (four to five acres in Kohat) would be approximately 100-125 trees. This would indicate that the small farmers of Kohat are planting "trees on farms" as distinct from a "forest on farm" pattern.

Further, the RFO for Kohat reported that he used the baseline study data on farmers interested in planting to help in identifying potential farmers to collaborate in the FPD project.

III. IMPLEMENTATION OF SOCIO-CULTURAL ANALYSIS

A. Implementation Schedule

The PP envisioned FPD project activities being implemented during an eight-year period beginning in October 1983 and ending in September 1991. The PP provided that: "Implementation of project components will be phased to ensure a high degree of complementarity among the institution-building, research, and operational activities," (p. 86). The "Illustrative Implementation Schedule" (PP, p. 91) programmed the "socio-cultural baseline and follow-up studies" to begin in early 1984, continuing through mid-1986, with subsequent monitoring and evaluation followup studies being done in mid-1987, mid-1989, and mid-1991.

The project, however, as previously noted above, encountered a nearly two-year delay in getting started. The project technical assistance contract (initially with the International Agricultural Development Service; subsequently renamed the Winrock International Institute for Agricultural Development) was not signed until 24 April 1985. The GOP project planning and implementation document (the PC-1) was not approved until September 1985. Approval of the final members of the long-term, expatriate technical assistance team was not given until December 1985. With this delay, the baseline studies that were to be completed by mid-1986 were rescheduled for completion by mid-1988. However, the data collection for these studies had been largely completed and initial working reports written and distributed to FPD project foresters by mid-1987. The first monitoring and evaluation follow-up is now scheduled for early 1988.

B. Staffing

The FPD project provided a long-term expatriate Anthropologist/Rural Sociologist to conduct "the socio-cultural baseline assessment of the target areas in the operational component" during the project's first year (PP, Annex J, p.4). Additionally, the project provided for expatriate short-term technical assistance, a long-term Pakistani Rural Sociologist to assist in implementing the SCA component, and field personnel to assist in survey data collection, coding, analysis, and report writing.

The level of effort for the SCA component of the FPD project provided in the project contract and modification no. 002 to same is presented in Table 5.

The expatriate Anthropologist/Rural Sociologist (hereafter, Anthropologist) arrived in-country 4 December 1985. The long-term, Pakistani Socio-cultural Analyst (hereafter, Rural Sociologist) was hired in March 1986 as a member of the otherwise expatriate technical assistance team. Together, the Anthropologist and the Rural Sociologist (or SCA group) were the last members to join the TAT.

Table 5. Level of Effort for the SCA Component in FPD Project

Months	Staffing Requirement
41	Long-term, expatriate Anthropologist/Rural Sociologist
18	Short-term, Rural Sociologist/Applied Anthropologist
40	Pakistani Socio-cultural Analyst (Rural Sociologist)
20	Local Socio-cultural Analysis Services
112	Field Social Survey Assistants
231	Total

Source: FPD project Contract and Modification No. 002 to same.

None of the short-term consultant time (18 months) for the Rural Sociologist/Applied Anthropologist staffing requirement has been utilized to date.

C. Scopes of Work

The scopes of work of the Anthropologist and Rural Sociologist, as set forth in the project contract, are presented in Annexes A and B as they appear in the project contract.

It should be noted that these scopes of work do not explicitly break down the various SCA position duties and responsibilities in terms of the project's three major components (i.e., institutional and manpower development, farm and energy forestry research and field operational activities). Such a breakdown, prepared by the evaluation team's development specialist, is provided in Annexes C and D. Nor do the scopes of work (Annexes A and B) make explicit how the activities of the Anthropologist and Rural Sociologist are to be coordinated, sequenced, and integrated with ongoing activities that are the responsibility of other TAT members or FPD project foresters in the O/IGF, O/PCCFs, and PFI.

These observations are made here to point out that one should recognized, in an innovative project such as FPD, there are not pre-defined norms about how project members such as the team "Anthropologist" should relate to the team "Senior Farm and Energy Forestry Specialist." Thus, team members will likely struggle with the following question: "What is the role of an Anthropologist or a Rural Sociologist in a farm forestry project?" At the same time, other team members may ask: "Why can't the foresters see that the problem in farm forestry is not trees but rather the behavior of foresters as well as farmers?"

D. SCA Activities and Outputs as Input to FPD project Components

Annexes E and F provide summaries of the activities and outputs of the SCA group. This information as well as key informant interviews indicate that the FPD project, to date, has been very successful in implementing the socio-cultural data collection and analysis phases of its assigned task. However, the SCA group, as discussed in greater detail further below, has had varying degrees of success in getting the baseline study findings understood, accepted and utilized by FPD project foresters.

The SCA team's Rural Sociologist reports that the Baluchistan FPD project staff in Nasirabad District have utilized the baseline study findings as a means of identifying potential farmer contracts and project participants. And, as previously noted, the RFO in Kohat reported that he uses the baseline study data on farmers interested in planting as a tool in identifying potential farmers to collaborate in the project. However, in Punjab, no comparable pattern of interest in using the SCA baseline study data was detected. Indeed, the evaluation team found that FPD project foresters in Punjab were openly skeptical of the validity and utility of the findings emerging from the baseline studies conducted in Punjab.

Nevertheless, review of the documentation on the baseline studies (i.e., field trip reports, proposals, interviewer training materials, interim reports, working papers, etc.) indicates that the research methodology utilized in conducting these studies has been appropriate to the task, systematically implemented, and thoroughly supervised.

1. Farm and Energy Forestry Research

Socio-cultural analysis was intended to gather baseline data on farm and energy forestry in the FPD project's target areas. This data was to serve not only as a benchmark for subsequent monitoring and evaluation data collection and analysis but also

to provide a data and knowledge base for designing sociologically-sound strategy for implementing field operational activities.

Baseline Studies. SCA (data collection, analysis and interpretation) are still ongoing. Initial baseline studies have been completed for Punjab, NWFP and Baluchistan. The SCA group has also begun daily farmer record keeping in these provinces, undertaken preparation for a baseline study in Sind, and submitted a proposal for and undertaken some preparation to conduct a Women's Study.

These studies have provided data relevant to project implementation (i.e., names of farmers interested in establishing nurseries and planting trees, numbers and species of trees desired, etc.). Further, the studies have generated preliminary information characterizing the variation in farmer interest in farm forestry (i.e., variation among different types of farmers and villages).

Data Analysis/Report Writing. The SCA group has completed initial tabulation and simple analysis of baseline data; prepared a series of village-level, district-level and provincial-level reports on farmer interest in planting trees and establishing nurseries; prepared working papers on household-level determinants of interest in planting trees/establishing nurseries; prepared a working paper on village-level determinants of interest in planting trees; and prepared a draft working paper on traditional use of tree fodder. Copies of all written documents were systematically shared with Pakistan's forestry sector organizations and USAID/Pakistan.

Taking into account that the Anthropologist did not arrive on post until December 1985 and, subsequently from April to June 1986, was advised not to travel to the field until FPD project foresters could accompany him, the baseline studies were still expeditiously implemented, in a manner consistent with the timetable envisioned by the PP for their execution (i.e., during the first project year). Other than the advisory against travel in FPD project areas during several months since the first half of 1986, and that all research data had to be tabulated manually (owing to delays in receipt and setting up of the TAT's computer facilities), the SCA group encountered no significant constraints in executing the baseline studies.

It should be noted that the SCA group submitted a proposal for a Women's Study to USAID/Pakistan in mid-1986. The study has not yet been implemented. The evaluation team was not able to determine a clear cut reason why this study has not been conducted. As the SCA group has not utilized any of the 18 months available for contracting short-term consultants, it cannot be the case that the project lacks sufficient resources to

conduct the study. However, based on the evaluation team's discussions with various parties, it is clear that some parties doubt whether the proposed study would produce any information o value.

2. Field Operational Activities

The SCA baseline studies were to be partially completed by the end of the FPD project's first year, with the findings from the studies being utilized to design a sociologically sound strategy for implementing field operational activities. But the FPD project foresters started field operational activities in early 1986, even before the socio-cultural baseline studies had a chance to get underway. This disjuncture placed field operational activities at least one year ahead of the baseline studies that the PP envisioned would play an important role in helping to design field operational strategy.

As the reader may observe by reviewing the titles of the documents listed in Annex F, the FPD project's SCA group has generated a great amount of data potentially useful for designing operational strategy for reaching the project's intended beneficiaries (i.e., small farmers, tenant farmers, women, etc.) and evaluating the effectiveness of field operational strategy. As noted, however, FPD project foresters moved ahead, perhaps most aggressively in Punjab, to implement field operational activities. Indeed, unlike the other provincial FPD projects, the Punjab FPD project has practically disregarded the potential of utilizing the available socio-cultural baseline data as a resource for design, implementation, and evaluation of field operational strategy.

This disjuncture in the sequencing of project activities that were supposed to be linked, one leading into the other, has increased the pressure on the SCA group to assist in translating baseline study finding into field operational strategy and activities. However, while the TAT has been in a position of trying to "catch up" with the field operational activities being implemented by FPD project foresters, the record is clear that the SCA group provided early and timely feedback on implications of baseline findings for operational activities. This is confirmed by the evaluation team's review of the SCA group's field trip reports, beginning in June 1986, which the SCA group systematically wrote and routinely distributed to FPD project foresters at the federal and provincial levels as well as to the USAID/Pakistan FPD project officer and program specialist.

For over a year, from 3 June 1986 to 12 July 1987, the SCA group kept the various forestry sector organizations apprised of SCA activities through the field trip reports. These reports indicate that, from the start, the SCA group was in contact with

the Divisional Forest Officers, Sub-Divisional Forest Officers, and Range Forest Officers having jurisdictional responsibility for the areas in which the SCA group was conducting its baseline studies. As the team began to generate baseline data (e.g., lists of villages and farmers interviewed at various phases of the data collection process) and prepare preliminary reports, this information was shared with FPD project foresters. Further, the SCA group would meet with FPD project foresters to review the written documents and discuss their potential implications for project implementation.

Unfortunately, and despite such meetings, it is not clear that these reports were widely read, understood and favorably perceived. It was learned, for example, that the DFO in Rawalpindi had received some of the SCA group's reports through "proper channels" (i.e., from a superior). However, another report sent to the DFO in Kohat through the Project Director in Peshawar never reached the DFO. Similarly, it was learned that one SCA report--"Guidelines for Implementation, and Special Issues" (28 November 1986)--apparently got no further than the desk of a former acting IGF.

The relationships between the SCA group and FPD project foresters were reported by the TAT Anthropologist and Rural Sociologist to be good at the field and provincial levels in Baluchistan and NWFP. Because of travel restrictions, the evaluation team was not able to verify these reports for Baluchistan. However, the evaluation team's visit to Kohat confirmed that the SCA group has established a good working relationship with FPD project foresters in NWFP.

On the other hand, the SCA group has experienced a very difficult time in establishing effective working relationships with FPD project foresters in Punjab. A major indication of this difficulty has been a continual stream of negative feedback from the Punjab FPD project foresters. Examples of such negative feedback include assertions to the effect that Anthropologist and Rural Sociologist travelled so much that they could not possibly be getting anything done, that the Rural Sociologist was promising farmers that the FPD project would give them ornamental plants, that the SCA group was promising to give farmers Suzuki cars, that the baseline study field assistants were collecting data from persons who were not even farmers, that the SCA group was failing to respect going through proper channels by writing thank you letters to the DFOs who had assisted the team in the field, that the team was obtaining totally useless information (e.g., that farmers were interested in planting only a few trees), that the SCA group was not producing any information on a timely basis (e.g, that the baseline studies should have been conducted two years ago), that the SCA group was not circulating any of its reports, etc.

It probably does not matter that much that there is ample evidence to refute such accusations. What does matter, however, is that such charges or perceptions, as invalid as they may be, are indicative that some of the Punjab FPD project foresters still do not understand, or if they understand do not accept, the sociocultural baseline studies as an important and needed component of the FPD project.

Of course, it is the provincial-level FPD project foresters who give the "marching orders" to their subordinate field officers. Thus, the field forester's ability to make effective and systematic use of SCA baseline data and findings depends to a great extent on how well the SCA group is able to collaborate with and assist the provincial forestry leadership in translating SCA baseline study findings into more effective strategies to reach the project's clientele.

Indeed, as findings, conclusions and field operational implications begin to emerge from the baseline studies, the need increases for more systematic, planned interaction between the SCA group and FPD project foresters at the federal, provincial and field levels. The extensive SCA data base already generated indicates that the time has arrived when the TAT, including the Anthropologist and Rural Sociologist, must begin to work more directly with FPD project foresters, and vice-versa, in designing, implementing and evaluating field operational strategy and activities for farmer participation in farm forestry.

3. Institutional and Manpower Development

The SCA group has provided preservice training to the field survey team members (four, two-person teams). The Rural Sociologist and the Anthropologist provided each team with one week of interviewer training which included training in the field (e.g., testing of draft interview schedules). The field survey team members also received ongoing in-service training through their interaction with the Rural Sociologist and the Anthropologist.

The Anthropologist assisted the TAT in revising the sociology-related curricula at PFI. This included the development of the sociology portion of the syllabi for the B.Sc.- and M.Sc.-level courses on "Sociology, Public Administration and Extension." Also, the Anthropologist developed a syllabus for an M.Sc.-level course on rural sociology but this course has never been taught.

The Anthropologist assisted the TAT in teaching the sociology portion of the "Sociology, Public Administration and Extension" course at the M.Sc. level when it was offered in 1986. While the TAT offered to assist the PFI faculty in teaching this

course in 1987, PFI did not request the TAT's assistance when the course was offered the next time. Further, as the evaluation team also learned, the PFI instructor handling the sociology portion of this course dropped the revised sociology curriculum and reverted to the previous curriculum.

To date, the Anthropologist and Rural Sociologist have not participated in designing or conducting any in-service training programs for FPD project foresters on farmers. And such training programs have yet to be conducted by the FPD project. However, the SCA group did participate in occasional orientation sessions or implementation workshops to introduce the FPD project to various audiences.

IV. INTERPRETIVE ANALYSIS

A. Impact of SCA

1. Institutional and Manpower Development

The PP makes reference to the need, as appropriate, to strengthen applied social science teaching/research/outreach support capability within Pakistan's forestry sector organizations (i.e., PFI, O/PCCF, and O/IGF). This need is currently being partially met through the participation of the SCA group in the teaching of sociology curricula at PFI. Further, one could envision that the SCA baseline studies could easily have been implemented as a more integral part of PFI's forestry research program.

However, the current arrangements for staffing the SCA group (e.g., the Rural Sociologist as an employee of Winrock International rather than PFI) and managing the SCA baseline studies (i.e., the SCA group based in Islamabad rather than at PFI) probably do not serve to increase the likelihood of applied social science support capability being institutionalized at PFI at any time in the near future.

This is an important observation in that the PP specifically states that the FPD project will "broaden research capability in the natural and social science aspects of farm and energy forestry systems [emphasis added]" (PP, p. 59). For example, with respect to the O/IGF, the PP (p. 63) proposes that:

> long-term overseas training will be provided for three qualified professionals who will . . . support the AIGF. It is expected that [one] of these individuals will participate in training programs emphasizing . . . the natural and social sciences essential to the design and management of farm and energy forestry programs [emphasis added].

Further, with respect to PFI, the PP (p. 68) states:

> Current knowledge regarding . . . the design of sociologically viable methods for organizing programs to meet the needs of farmers . . . does not provide an adequate base to sustain a long-term farm and energy forestry program in Pakistan. To develop further the improved skills and increased knowledge and experience that the project will provide, this component will offer . . . training to assist the Pakistan Forest Institute in developing and

implementing curricula and research in these subjects [emphasis added].

Here the reference to "these subjects" includes "the social and anthropological aspects of working with and organizing farmers to design and implement programs that meet their needs," (PP, p. 68). Further, the PP (p. 69) proposes that:

> four people will be trained who will assume research duties in the Provincial Forest Departments. Three of these . . . individuals will return to work in farm and energy forestry research at the Punjab Forestry Department in the research center at Gatwala. They will be charged with developing a collaborative program of research with agriculturalists at the nearby Faisalabad University. Likely areas of training for these individuals include . . . socioeconomic analysis for the design of farm forestry programs [emphasis added].

These statements indicate that FPD project Paper envisioned applied social scientists (Rural Sociologists and Anthropologists) or foresters trained in applied social science as having a role to play in assisting Pakistani forestry sector organizations such as PFI in developing farm and energy forestry.

However, PFI staff are currently all gazetted foresters hired in accordance with GOP/Public Service Commission qualifications which are explicitly written for professional (PFI-trained) forestry personnel. There currently are no Rural Sociologists or Anthropologists hired as such by PFI, although it was reported that the PFI has one "Watershed Sociologist" who is employed as a research officer.

The current situation does not need to continue. Indeed, the FPD project could provide professional social science training to one or two Pakistanis. On completing their training, a Ph.D.-level social scientist could be posted to PFI, while an M.S.-level social scientist could be posted at a provincial forestry research center such as Gatwala. Also, some of the Pakistanis receiving M.S. or Ph.D. training in other technical areas related to farm forestry could be encouraged to take selected courses in sociology or anthropology.

The SCA group is in a better position than the original project design team or the current evaluation team to assist in identifying current and projected needs for social science expertise and in formulating a training plan that will ensure an adequate number of Pakistanis receive the needed social science training. Issues that need to be addressed may be stated in the form of questions, as follows:

130

- How should an applied social scientist's time be allocated between teaching and research to support farm forestry in Pakistan?

- How many applied social scientists are needed and in which organizations (O/IGF, PFI, O/PCCF) should they be posted?

- Should the time and workload of one or more applied social scientists be split between two or more organizations?

- By what date will or can the required number of posts be established in these organizations, adequately budgeted, and fully funded?

- How will the required candidates for training be recruited?

- What modifications in the current training plan are needed to ensure opportunity to send at least a core number of Pakistanis for professional or applied social science training at the M.S. and/or Ph.D. levels?

- What kind of education and experience should candidates for applied social science graduate training have? Should they already have a B.Sc. or M.Sc. in forestry? Or, if lacking a forestry background, could the candidate supplement his (her) social science graduate training program with a minor in farm forestry?

2. Farm and Energy Forestry Research

The SCA baseline studies generally indicate that the FPD project, at least in design, is on target in terms of being the right kind of project to meet the needs of its intended clientele or beneficiary group (i.e., the small farmer). It is interesting to note in this respect, that questions have frequently been raised concerning differences between the responses given by farmers in the baseline studies and the responses which FPD project foresters in Punjab report receiving from farmers, particularly regarding the numbers and types of trees desired. For example, while the predominant request in the baseline study sample was for 50-100 seedlings of shisham and kiker, FEF project field staff have reported that farmers mainly ask for 1000s of Eucalyptus. Further, while the baseline studies indicate that 54 percent of Punjab farmers are interested in planting trees, the Punjab FPD project foresters have maintained that only 10 percent of the farmers are interested in planting trees.

The data generated by the SCA group easily explain this difference, namely, that both perceptions of farmer interest accurately represent the particular group of farmers with whom FPD project foresters and the SCA group interact. The perceptions are different because the groups of farmers are, at least in part, different. As the SCA group noted in their Sialkot (Punjab) trip report (2 February 1987):

> The group . . . in the baseline studies is a largely random sampling of the village population, which is intended to be representative of the <u>average</u> farmer. The average landholding . . . is 13.7 acres. In contrast, the holdings of the groups being reported on by the field staff are often above this average (in the case under discussion, the minimum holding was 45 acres). Such farmers are included in the baseline study sample, but they are in a minority--e.g., four farmers in the sample of 113 have holdings of 50 acres or more--just as they are in the minority in the population as a whole.

Thus, the difference in the size of landholding between the two groups is highly correlated with the difference in the numbers and types of trees desired the by farmers in each group. The 14-acre farmers in the baseline study group follow a <u>subsistence</u> pattern; they want a few shisham and kiker largely for use by their own households. On the other hand, the 45-plus acre farmers in the baseline study group follow a market-oriented pattern: they want thousands of eucalyptus to raise, not for consumption in their own households, but largely for market sale.

Further, as the SCA group points out, the aforementioned differences also stem from the fact that the SCA group asks farmers if they are interested in farm forestry, with no minimum amount of trees or land to be planted, while the Punjab FPD project foresters essentially ask farmers if they are interested in commercial forestry, with high minimum amounts of trees and land involved. As the baseline study findings suggest (relevant data therefrom presented in Annex G), most farmers are interested in farm forestry (i.e., trees on farms), but most are <u>not</u> interested in commercial forestry (i.e., forests on farms), hence the differences in the reported rates of interest.

The SCA group also examined data on the first farmers receiving seedlings in three of the FPD project districts in Punjab (again, see Annex G). The data indicate:

- that FPD project foresters have tended to give a large number of seedlings to farmers with large holdings, while giving few, if any, seedlings to interested farmers with smaller holdings; and

- the number of seedlings given to those farmers who do receive seedlings is three times as many as the number of seedlings requested by the average household in these districts.

These baseline study findings help to explain the 90 percent rejection rate that the Punjab FPD project foresters report they are encountering. But if these foresters were to refocus their field activities on the fuelwood, fodder, and timber needs of small farmer households, this could quickly begin to bring the acceptance rate more in line with the 54 percent level of interest in tree-planting found in the baseline studies.

At the same time, one could argue that the FPD project could support both patterns of tree planting, the subsistence one and the market-oriented one. However, as the SCA group notes, the FPD project faces a question of determining what amount of project resources should be devoted to one pattern versus the other (e.g., what amount of nursery space should be allotted to shisham and kiker versus Eucalyptus). The baseline data generated by the SCA group provide one way to make this determination, namely, using as a guide the proportion of each group/pattern within the rural population.

According to the 1980 Pakistan Census of Agriculture (1980, p. 5), 85 percent of all farms in Sialkot District are less than 12.5 acres, and over 99 percent are less than 50 acres. Thus, only one percent of the farms are 50 acres or larger. The small farmer/large farmer ratio of 99 to one need not be adhered to strictly, since a greater percentage of large farmers may show interest in the project than the small ones, and the average number of trees requested by each large farmer is likely to be greater than the number requested by the small farmer. However, the FPD project's objective is not to achieve a small number of large farmers growing large numbers of trees but rather to achieve a large number of small farmers each year planting a small number of trees as well as maintaining those which they planted in previous years.

Some FPD project foresters would maintain, that early demonstrations by larger farmers will spin off impact among smaller ones. However, can the large-scale, market-oriented farmer's acres of block plantation of Eucalyptus serve as a role model for the many smaller farmers who are primarily interested in species that will help them to meet household subsistence needs for fuelwood, fodder, and farm construction timber? This, of course, can be put to an empirical test by ensuring that FPD project foresters, in establishing demonstration plots, also work with small farmers and include those tree species of greatest interest to small farmers. Further, based on the SCA baseline studies, it is clear that farmers with small landholdings should

constitute the majority of participants in the project and should be the primary target of the project's outreach effort.

And, one might add, the baseline studies and follow-up monitoring and evaluation studies provide the only objective means to measure whether the FPD project is, in fact, reaching its target audience. Further, the socio-cultural data being collected in these studies can provide the first line of attack in designing a strategy to ensure that the project reaches its target audience rather than larger, market-oriented farmers. The FPD project was not designed for this latter group of farmers and, accordingly, is not well-suited to their needs, since they expect more assistance than the project has to offer, even though they have the least need for assistance. Further, the absentee status of many large farmers, coupled with the scale of their operations, makes protection of large plantings of trees costly for them.

Thus, the baseline studies have shown that there are large numbers of small farmers interested in planting trees and that the barani small farmers are potentially receptive to FPD project assistance, as long as the project assists them in meeting their fuelwood, fodder, and timber needs. Where farmers may at first be cautious about participating in the project, the SCA group suggests this can be remedied in most cases by outreach efforts to reduce suspicion of the Forest Department; use of incentives (e.g., providing some fruit trees along with other tree species); and research and demonstrations to reduce negative and increase positive impacts of trees on crops. This, of course, cannot be accomplished overnight, the process will take time but will likely move forward much more slowly if FPD project resources are skewed to larger farmers.

A weakness in the design of the SCA baseline studies, in the view of this writer, is that the study design did not provide for the collection of information about the farmer's agricultural (i.e., non-tree) cropping system and the relationship of this system to the farmer's farm forestry activities. Data on this area could contribute significantly to the design of a farm forestry research and extension (outreach) program. Potentially the FPD project could generate more information in this regard as part of the SCA's follow-up monitoring and evaluation studies.

3. Field Operational Activities

The major problems experienced by the FPD project have to do not with the project's clientele (i.e., small farmers), but rather with the project's administration and staffing. FPD project foresters have been expected, based on the PC-1, to meet target levels (number and acres of trees planted) which are considerably above the original targets set in the PP. Second,

the GOP has not released sufficient funds to support the level of field operational activities required to meet these targets. Third, the PC-1 defines the FPD project's objectives in terms of meeting physical targets (number and acres of trees planted) rather than in terms of assisting large numbers of small farmer households to change their behavior (i.e., attitudes, knowledge, understanding, skills and practices) with regard to planting trees.

Further, there is considerable and continuing confusion about actual operational models and procedures. The field operational activities being followed by FPD project foresters are based on an ad hoc strategy that:

- remains largely ignorant of the available baseline, socio-cultural data (e.g., the project is trying to get each collaborating farmer in Punjab to plant 1,015 trees in the first year, while the Punjab baseline study found that 86 percent of sampled households would request less than 1,000 seedlings to plant during the first year, with the average request being 420);

- relies on traditional, if not outdated, extension models, while failing to take advantage of the potential of state-of the-art methodologies for behavioral change drawn from farming systems research, development communication, and social marketing (e.g., the technology transfer methodology being used by the USAID/S&T-funded Communication for Technology Transfer in Agriculture Project); and

- depends on extension/outreach techniques that are largely based on subsidies which, in addition to being of dubious value as an operational strategy (in terms of benefit/cost ratios), also directly contradict the FPD project's farm forestry approach.

Additionally, the field operational activities being implemented by FPD project foresters are largely dependent for their implementation on field staff who:

- have received little, if any, orientation and training regarding the FPD project's intended objectives and approach to farm forestry;

- believe that they know how to implement a farm forestry program and that they did not need to wait for the FPD project's TA Team to provide assistance in this respect; and

- perceive that the FPD project's socio-cultural baseline studies either will not provide, or are taking too long to provide, information useful for implementing field operational activities.

Further, FPD project foresters:

- lack an adequate number of vehicles to reach the areas away from roads where the project's intended beneficiaries reside;
- are assigned to positions that do not afford them the same supplementary income-earning opportunities and benefits traditionally available to foresters in Pakistan;
- feel demotivated given budgetary and resource limitations;
- sense a certain loss of status, authority, and power; and
- see themselves as effectively having been reduced to being quote "beggars" unquote.

Beyond these constraints, there is evidence that some FPD project foresters, particularly in Punjab, do not fully appreciate the urgency of the need to get this project into the hands of the small farmers who are concerned not with large-scale commercial forestry (i.e., forests on farms), but rather with producing fuelwood, fodder, and timber on small-scale scattered and linear tree plantings (i.e., trees on farms) for household consumption. Where this understanding is lacking, there will continue to be a tendency for FPD project foresters to think in terms of the traditional large-scale plantations and to perceive that farmers, at least those with whom they interact, are only interested in large-scale block plantings for market sale, and that farmers who are not so inclined (e.g., small farmers, tenant farmers and women) are simply not "tree minded." The FPD project must work to change this tendency over time.

B. Effectiveness in Establishing Working Relationships

The effectiveness of the Anthropologist and Rural Sociologist in establishing working relationships with FPD project participants is crucial in determining the extent to which the TAT can contribute to the project's successful implementation. The SCA group's effectiveness in establishing working relationships with various FPD project participants is now briefly reviewed.

1. Within the SCA Group

The PP originally envisioned that the expatriate Anthropologist would be based in-country for six months at the project's outset. However, this position was later expanded to a 41-month assignment. Also, the project provided for a Pakistani Socio-Cultural Analyst (Rural Sociologist) for 40 months. The individuals hired for these two positions joined the TAT within three months of each other. The SCA group is based in the TAT office in Islamabad.

All evidence indicates that the Anthropologist and Sociologist have established a close and productive working relationship that has been mutually beneficial; the Pakistani Rural Sociologist gaining valuable on-the-job professional guidance from the Anthropologist, and the Rural Sociologist, in turn, assisting the Anthropologist in gaining practical knowledge of the social terrain and in learning Urdu. Further, the presence of the two full-time Social Scientists has greatly facilitated maintaining proper supervision of field data collection in three different provinces.

The SCA group should be commended on their excellent field trip reports. These reports indicate that the SCA group closely supervised their field survey interviewers. Interestingly, the notes never mention data collection problems nor interviewer errors. If such problems occurred, it would be helpful to know their nature, frequency and measures taken to correct them. The Anthropologist, however, indicated that few such problems or errors occurred due to the training the field assistants received.

One exception was reported in the SCA group's 23 January 1987 report on a field trip to Nasirabad, as follows:

> Some of the farmers participating in our baseline studies are beginning to say that all that the project consists of is the studies, with no 'practical activities' of benefit to them. This winter season's seedling distribution should lay this problem to rest. Some project personnel suggested that it would have been preferable to have carried out the baseline studies two years before field operations ever began. The kind of farmer reaction that is described above, however, suggests that this much of a time lag between field studies and field operations would, at least in some parts of the country, have increased the difficulty of the former.

2. Between the Anthropologist/Rural Sociologist and Other TAT Members

The SCA group has a generally good working relationship with the balance of the TAT. The individual in the Chief of Party/ Senior Farm and Energy Forestry Advisor position was changed once. The current incumbent has been working in this position since early 1987. Discussions with the Anthropologist and the Chief of Party indicate that they are working together to ensure that the SCA component continues to develop in the direction of supporting farm and energy forestry research, training, and field operational activities.

The SCA group does not work directly with the TAT's Forestry Research Advisor based at PFI in Peshawar. However, as data analysis proceeds, the team should alert the Forestry Research Advisor of farm forestry problems, identified in the baseline studies, that merit study by the project's farm and energy forestry research component. The SCA group has generally responded to this need by noting possible research problems in their field trip reports. Additionally, the SCA group has made presentations at project research committee meetings at PFI, reporting on past activities and future plans.

The TAT will increasingly face a challenge to assist FPD project foresters in using the SCA baseline data in the design of field operational strategy and activities. This task has not been made any easier by the earlier cancellation of the FPD project's Farm and Energy Forester position. The TAT's staffing pattern will be curtailed even further once the Farm Forestry Outreach Specialist position ends in September 1987. If the Agroforester position proposed by the TAT were to be filled, this would greatly strengthen the TAT's ability to assist FPD project foresters in developing field operational strategy and activities.

These reductions in force make it imperative that all TAT members establish effective working relationships with FPD project foresters. The COP/Senior Farm and Energy Forestry Advisor must play a leadership role in helping to establish this needed working relationship between the TAT members and the FPD project foresters.

The FPD project is scheduled to bring on board a Training Specialist. This individual will have the primary responsibility of assisting FPD project foresters in designing and implementing an effective in-service an program to train foresters and farmers in outreach/extension techniques and methodologies.

Training is a primary input to an effective change strategy. However, training is only one of the needed inputs. The TAT

needs to play a more effective role in assisting the FPD project foresters to conceptualize the potentially feasible strategies for implementing field operational activities effective in reaching the FPD project's clientele. The field operational model currently being used by FPD project foresters is not the only model and in all likelihood is probably not the most effective model that could be utilized given scarce resources.

Leadership for developing a more effective model should come from the TAT. The Anthropologist and Rural Sociologist should actively participate in the process of developing alternate models but should pay particular attention to whether these models are sociologically-sound. For example, the Anthropologist and Rural Sociologist should probably be the first to question whether signing up large farmers as nursery operators is a sociologically sound strategy for the FPD project to follow. What other design options for operational field strategy could be tried? Which of these, from the standpoint of being sociologically viable, stands the greatest chance of success?

3. With O/IGF

The SCA group has kept the O/IGF fully apprised of the baseline studies through various written reports. While briefing meetings are occasionally held with the IGF and the DIGFs, the IGF indicated to the evaluation team that he would like the SCA reports to be written in a manner that facilitates the reader's ability to follow the material being presented, understand the conclusions being drawn, and see the implications the report's recommendations have for the way in which farm forestry programs are organized and conducted.

No matter how clearly written or well-packaged the SCA baseline study reports are, one must recognize that the message contained in these reports--that there are many small farmers who are interested in planting relatively small numbers of trees--is not necessarily a message that is readily accepted. Thus, it is essential that the TAT not distribute reports indiscriminately. Indeed, reports should be distributed as an integral part of the TAT's strategy for communicating to and working with FPD project foresters. This strategy should include scheduling and holding followup meetings to: (a) discuss the issues raised in the reports; (b) identify implications for FPD project management; (c) determine needed followup action; and (d) assign responsibility for implementing the required followup action.

It is incumbent on the TAT's COP to take the lead in envisioning the design of this communication strategy and in supervising the preparation of the needed reports and briefing documents. However, nobody knows the SCA baseline data better than the Anthropologist and Rural Sociologist, and they should

take the lead, in concert with other TAT members, in identifying the key issues that need to be addressed vis-a-vis the design of field operational strategy and activities, how these issues are illuminated by the available data, and the options for field operational strategy and activities suggested by the data as being most sociologically sound.

This leadership could take concrete form in the preparation of a discussion paper on the "Implications of Baseline Data for FPD Field Operational Strategy." This paper should, in turn, be the subject of a project planning workshop that would be attended by the full TAT and the other FPD project participants (O/IGF, O/PCCFs, PFI, and USAID/Pakistan).

4. With O/PCCF

Different provinces are following different models for staffing the FPD project (e.g., NWFP as compared with Punjab). And certain provinces (i.e., Punjab) have posed a greater challenge in terms of establishing effective working relationships. Indeed, housing the DIGFs, the Punjab FPD project staff, and the TAT all in the same building, each on a separate floor, has not proven to be a very successful strategy for improving inter-organizational communication.

This particular example, perhaps more clearly than any other, demonstrates that one of the FPD project's major problem is not that of inducing the small farmer to plant trees but rather inducing effective collaboration between the TAT and FPD project foresters.

While the Anthropologist/Rural Sociologist have been planning to initiate a baseline study in Sind, and are willing to be responsive to the field operational needs of Nasirabad District in Baluchistan, they must recognize certain limitations on their own resources and the attendant difficulty of stretching these resources too thinly (i.e., the great distance of Sind from Islamabad and the difficulties and risks associated with working in Baluchistan).

This, of course, does not mean that all TAT or Punjab FPD project foresters necessarily will agree with this recommendation. However, it does mean that if Punjab is the place for the Anthropologist and Rural Sociologist to begin to play a more active role in developing field operational activities, then this mandate needs to be agreed to by the O/IGF, Punjab O/PCCF, TAT, and USAID/Pakistan. The establishment of this mandate and of accountability for implementing the mandate is the first step toward achieving the mandate. If the mandate is not made clear to all concerned parties, the TAT will be able to rationalize that other activities are more important and

pressing or FPD project foresters will maintain that they do not have time to wait for the results of the baseline studies because the PC-1 requires that certain targets must be met during the present year.

5. With Pakistan Forest Institute

The SCA group has had limited interaction with PFI. As earlier noted, the Anthropologist revised the sociology curricula for several PFI courses and also assisted the TAT in teaching the sociology component of one of these courses. Now, the SCA group should be looking into ways in which the baseline study data which have been generated, the reports which have been written, and even the anecdotal material appearing in the SCA field trip reports can be incorporated into the sociology curricula at PFI.

Beyond this, there is little which the SCA group can do to strengthen PFI's social science teaching/research/outreach support capability. This will require a commitment on the part of the O/IGF, PFI, and USAID/Pakistan to establish an applied social science position within PFI and to ensure that an adequately trained Ph.D.-level Social Scientist (Rural Sociologist or Anthropologist) is hired to fill this position. Appropriate action also needs to be taken to ensure an open competition to fill this position; if it is envisioned that the current level of trained social science manpower is not sufficiently adequate, then opportunities for Ph.D. training in rural sociology or anthropology need to be arranged, with the understanding that the individual(s) receiving this training will be obligated to serve a minimum number of years in developing PFI's applied social science teaching/research/outreach support capability.

C. Development Issues

A number of other issues are pertinent to evaluating the contribution of the SCA component to the FPD project. These include the SCA group's effectiveness in: (1) designing and carrying out socio-cultural baseline studies appropriate to the task of developing a methodology to induce farmer and private sector participation in farm forestry; (2) providing timely and appropriate assistance to implementation of field operational activities; (3) establishing training programs that meet the project's requirements to train field foresters and farmers; and (4) involving small farmers and women in project activities.

1. Appropriateness of SCA Baseline Studies

The evaluation team recognizes the high quality of the socio-cultural baseline studies. These studies have required that the SCA group's research design encompasses variables (e.g., tree species farmers would like to plant) that go beyond those normally studied by social scientists. The evaluation team is also fully aware of the pioneering and, therefore, risky nature of this research endeavor; and that, until a more refined knowledge base and methodologies are developed, others will not understand why certain questions are being asked or types of data are being collected. In this regard, the SCA group has provided FPD project foresters with briefing reports that describe the rationale underlying each question being asked in the baseline interview schedules and the potential implications of farmers' answers to farm forestry.

Thus, the evaluation team finds that the Anthropologist and Rural Sociologist have valid reasons for the research approach that is being implemented. This initial approach to the sociology of farm forestry will provide the data base needed to identify the smaller set of variables most critical to the success of farm forestry in Pakistan such that future studies can be more sharply focused and rapidly executed.

However, the baseline data do not themselves shout out the precise strategy which FPD project foresters should be using to induce farmer and private sector participation in farm forestry. Indeed, the very data generated by the baseline studies may belie the foresters' reports that only large farmers are interested in planting trees or that small farmers are not tree-minded. Where this occurs, the forester may discount the validity of the report rather than question the validity of his own perceptions and beliefs. Further, FPD project foresters may simply find that the SCA reports take too much effort to interpret.

Thus, doing socio-cultural baseline studies and reporting on them is only half the requirement. The other half lies in assisting FPD project foresters in developing a field operational strategy based on and informed by the input which the baseline studies can provide. And while the baseline data can serve as a screen to check on how sociologically-sound a strategy is, the data themselves will not spell out what the strategy should be. However, the data can provide clues as to what some of the elements of the needed strategy might be.

What is required is the combined thinking of FPD project foresters and the TAT to generate the strategy itself and its component parts. As the SCA group begins to turn greater attention to the problem of translating the strategic implications of its baseline findings, and to work directly with FPD project foresters in developing this strategy, the FPD

project will become more effective in identifying improved models for field operational strategy.

Closer interaction between the FPD project and the farming systems research components of the USAID/Pakistan-funded Management of Agricultural Research and Technology (MART) Project also being implemented with technical assistance support provided by Winrock International, could serve as an effective avenue for strengthening adaptive research in farm forestry or agroforestry systems.

2. Timeliness of SCA Input to Field Operational Activities

A key question here arises in regard to the issue of the timeliness of the socio-cultural baseline studies in relation to the ongoing field operational program being implemented by FPD project foresters. This issue was adequately addressed, although not laid to rest, in the SCA group's 8 February 1987 Sialkot trip report. Specifically, can the baseline studies produce data on a true pre-project "baseline" if they are carried out after some project activities have already begun? Or, as the question may also be asked, will the "baseline" data that are being gathered be skewed by the prior carrying out of project activities?

Social science methodology provides well-established procedures for making allowances for such potential skewing. A simple technique and one utilized by the SCA group was to select at the study's outset a number of "control" villages, where FPD project foresters indicated that they planned no project activities for at least several years. Measurement of conditions in these "control" villages provides a basis for assessing the existence and magnitude of skewing that may be present due to field operational activities in other study villages.

However, the SCA group concluded on the basis of the data collected to that point, that there was no need to adjust their data collection, analyses, or findings to make allowances for bias. Specifically, in the Punjab, 63 villages were initially selected for baseline studies, with 12 being selected as controls, and the remaining 51 villages being targeted by the field staffs for field operational activities. A village census, carried out in all 63 of these villages, was completed in October 1986. A farmer census, subsequently carried out in 33 of these same villages, was completed in January 1987.

At the time of the completion of the two respective censuses, a total of 47 farmers in 18 of these villages had received seedlings under the project. These 47 farmers represent less than 1/10th of one percent of the total population of approximately 130,000 in the total sample of 62 villages. As the SCA group stated: "There is no possibility that the involvement

of this tiny fraction of the sample in the project skewed the baseline study of the remaining 99.99 percent." One might add that the potential for any such skewing would be reduced even further to the extent that the specific 47 farmers contacted by FPD project foresters were actually large farmers interested in planting eucalyptus rather than the tree species preferred by small farmers for household subsistence purposes.

If any question remains as to the timeliness of SCA input to field operations, it is that of how soon the Anthropologist and the Rural Sociologist will turn the lion's share of their attention to the problem of working with the other TAT members and FPD project foresters to design improved strategy for field operational activities.

3. Contribution to Field Forester and Farmer Training

The FPD project has assisted PFI in redesigning the sociology curricula of several of the Institute's B.Sc. and M.Sc. courses. However, the project is not currently, contrary to the FPD project concept described in the PP, developing the trained and institutionalized social science capability needed for effective social science research, training, and outreach support to farm forestry.

This need could be met by establishing an adequately budgeted and fully funded position in applied social science at PFI nd then ensuring that the right person is hired or, if an adequately trained person is lacking, that the right person is afforded the opportunity to go for applied social science (rural sociology or anthropology) training at the Ph.D level.

In the interim, the position could be filled by an experienced expatriate social scientist whose term of residency should be timed to allow at least a one-year overlap with the first year of employment of the Pakistani social scientist following completion of his doctoral program. If carefully planned, the student could do his dissertation on a farm forestry topic that could be analyzed using the extensive data base that will have been generated by the baseline studies.

As the FPD project turns to placing a greater emphasis on field operational activities, the SCA group must play a more active role in the design, execution, evaluation, and follow-up of in-service or on-the-job training programs for FPD project foresters and farmers.

Management communication is an important curriculum area in any training program geared at developing the forester's ability as an extension/outreach agent. Training in this area would raise the forester's level of awareness and knowledge of the role which perception plays in the communication process as well as

the many other factors impinging on communication effectiveness. An appropriately tailored course could be readily packaged by the Management Training and Development Institute (MTDI), located in Washington, D.C., whose affiliated faculty have been offering management communication training for nearly a quarter of a century in USAID-funded seminars for foreign students studying in U.S. colleges and universities. The TAT should explore the possibility of funding a short-term management communication training course for FPD project foresters.

4. Involving Project Beneficiaries in Project Activities

a. Small Farmers

The socio-cultural baseline studies are providing an immediate avenue for small farmers to begin to participate in the FPD project. As the TAT turns its attention to the task of assisting FPD project foresters to use the baseline data in designing field operational strategy, the Team should not be remiss in including potential avenues for farmers to continue participating in the process whereby decisions are made about how this project can most effectively reach and meet the farm forestry needs of its target clientele.

The possibilities for ensuring a successful program are limited only by one's imagination about how to involve farmers in the program planning process. If the FPD project does not find ways to involve farmers actively in this process, it will indicate that USAID/Pakistan was only paying lip service to the concept of "direct farmer involvement in the design of field operational activities," (PP, p. 58).

b. Farmer Advisory Groups

This concept was briefly mentioned in passing in the PP. Little, if anything, has been done by the SCA group to develop or refine the concept. Some of the SCA group's reports raise a concern as to why the project should seek to organize new groups, particularly at the village level, when farmers are already members of existing organizations which could potentially participate in the design and implementation of the project's field operational activities.

At the same time, the SCA group recognizes a potential role for "farmer advisory groups" at the teshil level or higher. However, it is not clear how such groups would be constituted or how they would function. This is in area that should merit the SCA group's constructive assessment. The reader should note in this respect that the SCA baseline studies investigated existing

village institutions as a basis for evaluating the prospects for village advisory groups.

It should be clear, however, that planting trees on privately-owned property does not guarantee that the trees will be respected by the community beyond the farmer's property line, especially if that community includes goats, cattle, etc. Thus, the individual farmer's problem of protecting trees planted on his privately-owned land has a common property element, namely, that of how a community's farmers ensure that the common good of every farmer's trees being protected is secured. In part, this issue entails the question of how well developed are the society's institutions to protect private property and whether these institutions apply to or can be easily extended to apply to trees.

Where adequate institutions are in place or can be established, to the extent that any one farmer's trees are protected, then the trees of all farmers are protected. Protection of a community's trees is a cost which must be minimized. Providing such a group or public good (e.g., individual farmers capturing greater benefits by collectively marketing their privately-produced fuelwood or timber rather than individually marketing these products) requires group or collective action that goes beyond the incentives motivating individual farmers to plant trees on privately-owned land. While incentives potentially could be devised to reward individuals for protecting trees planted on privately-owned property, what may be more effective is the development of institutions that are respected and which can be enforced by the community (i.e., the village) or the representatives thereof.

A farmer advisory group, tree growers' association, or a similar village-level organization of farmers could play an important role in securing the protection of the trees of the association's members as well as providing individual member farmers with improved access to group goods (e.g., agricultural credit at lower interest rates). This area merits the SCA group's constructive assessment.

Finally, if the FPD project is extended to irrigated areas of NWFP and Punjab, the SCA group should explore the potential which the existing Water Users' Associations could play in fostering farm forestry on the nearly 89,000 watercourses that dot the Pakistani landscape.

c. Motivators

The SCA group paid close attention to the issue of "motivators" in the questions asked in the baseline study questionnaires. Further, the Team distributed lists of potential

motivators to FPD project foresters in each province. However, the data generated by these studies now need to be focused on a discussion of the feasibility of and potential ways and means of implementing the "motivator" concept, if it is still a valid concept for the FPD project.

The Farm Forestry Outreach Specialist, with SCA input, recently prepared a working paper, titled "The Concept of the Motivator in a Farm Forestry Program." This paper should provide a point of departure for a workshop aimed at assessing the validity of the "motivator" concept and, if valid, developing and refining the concept in the light of SCA baseline study data and the field operational experience of FPD project foresters.

Further, the "motivator" concept, if a useful concept for the FPD project, needs to be linked with the other elements that will make up the FPD project's field operational strategy. Other relevant strategy concepts meriting development and refinement might include whether it would be more effective if farmers paid a subsidized price for trees rather than obtaining them free, whether farmers should be paid a bounty on each tree surviving a given number of seasons, whether motivators should be "employed" by a locally-based organization as distinct from the FPD project itself, etc.

d. Women

The SCA group prepared a proposal for conducting a study on the role of women in farm and energy forestry. Given the important role women are said to play in providing fuelwood in Pakistan, this study should receive higher priority than initiating a baseline study in Sind. An appropriate short-term consultant (i.e., a female social scientist) should be contracted to conduct this study.

D. Constraints to SCA Component of FPD project

1. Impact of Two-Year Delay in Project Start-up

The start-up of FPD project field operational activities in early 1986, one to two years earlier than envisioned in the PP, constitutes a major change in the environment in which the project was to have been implemented. While this change has presented major obstacles to achieving an orderly, "coordinated and systematic" implementation of the project's components and activities, the FPD project is now in a position to translate the available socio-cultural baseline data into a more effective strategy for the ongoing field operational program.

However, the glimmer of this opportunity may soon fade. As the various concerned parties, including the O/IGF, PFI, O/PCCFs, TAT, and USAID/Pakistan, continue to talk past one another, never quite getting everyone on the same wavelength, the likelihood increases that the FPD project, like so many past development projects, will falter. If the available socio-cultural data is not used to design an improved implementation strategy for reaching the project's target audience, the project's level of success may be less than that desired.

Ironically, at the same time, there is also a very real possibility that the FPD project could succeed but without the FPD project's SCA component ever having made any identifiable contribution. Even then, however, the quality of the "success" may be debatable if success is being measured in terms of number of trees planted rather than number of households planting trees.

In either case, the risk is high that the FPD project, if it continues on its present course, will fail. None of the concerned parties, the O/IGF, PFI, O/PCCFs, TAT, or USAID/Pakistan, can afford or allow this potential failure to materialize.

Accordingly, it is essential that the TAT begin to play an active role in assisting FPD project foresters in using the socio-cultural baseline data to design field operational strategy and activities specifically targeted on reaching the FPD project's various clientele groups (i.e., small farmers, tenants, women, and landless laborers).

2. Current or Anticipated Constraints

a. Implementation of SCA Studies

The implementation of the Women's Study has been delayed more than a year, apparently due to a combination of factors including sensitivity about the timeliness of the subject study, limitations on the SCA group's time to provide adequate supervision of the study, etc. This situation needs to be reassessed.

The SCA group has already established good working relationships with villagers and farmers. Indeed, despite dire predictions and advice that SCA field workers risked being arrested, kidnapped, or worse, not one single instance occurred where any of the eight field workers, the Rural Sociologist, or the Anthropologist got into any difficulty in the countryside. Also, villagers and farmers were systematically questioned about their willingness to permit village women to be interviewed by a team of female scientists. As one or more villagers were

reported to have said, "Yes, we would like to see the lady scientists."

The methodology proposed by the Anthropologist for conducting this study appears sound. Further, discussions between the evaluation team and the Anthropologist confirm that he is fully cognizant of the importance of ensuring that the Women's Study is implemented in a way that fully respects local cultural norms regarding relationships between and among men and women. Accordingly, the study should be implemented without further delay.

The evaluation team, however, is concerned about the SCA group's plans to conduct a baseline study in Sind. The Anthropologist indicates that this study will not require more than 25 percent of his time to supervise. However, if this study is carried out, as well as the Women's Study and a proposed Foresters' Study, it is clear that a much larger percentage of the SCA group's time, perhaps more than 50 percent, will continue to be allocated to research. This, in the view of the evaluation team, is a potential constraint on the time available for the SCA group to concentrate its energy, initiative, expertise, and enthusiasm on the challenge of relating the baseline studies completed to date to the problem of designing more effective field operational strategy and activities.

Further, the evaluation team also believes that the potential benefit of the Sind study to the FPD project is not as great as that which could be achieved if the SCA group were to shift gears and allocate a significantly greater percentage of its time to working with other TAT members and FPD project foresters in designing:

- field operational strategy and activities geared to the challenge of reaching the FPD project's clientele, and
- training programs geared to providing FPD project foresters and farmers with the skills needed to implement field operational activities.

b. Utilization of SCA to Develop Field Operational Strategy/Activities

It is essential that the SCA group recognize that the experience to date of FPD project foresters represents an additional source of data for the SCA studies. This data source potentially can be more effectively tapped to the extent that the TAT works directly and actively with these foresters in designing, implementing, and evaluating field operational strategy and activities.

Review of FPD project foresters' documentation (work plans, progress reports), field visits, and interviews with FPD project participants indicate that FPD project foresters currently do not follow any systematic and objective approach to ensure that the project reaches and involves the target audiences identified in the PP (i.e., small farmers, tenant farmers, women).

Further, resource limitations (i.e., budget shortfalls against planned targets, inequities in benefits received by farm foresters as compared with traditional foresters, lack of vehicles, inadequate orientation and training, etc.) create an environment in which there is pressure to gear the project's resources toward serving the larger, commercially-oriented farmers who demand governmental assistance (barbed wire, that foresters plant the trees, etc.) that the project is not designed or intended to provide.

Yet the technical assistance team members could work directly with FPD project foresters to assist them in designing measures and procedures to ensure that the FPD project effectively reaches its intended clientele. There is, therefore, a need to accelerate SCA input to design, implementation, and evaluation of the FPD project's field operational activities. The key to achieving this acceleration is increased interaction of TAT members with FPD project foresters, for example:

- workshops to review findings and recommendations of baseline studies and to design field operational strategy to reach target audiences (e.g., tenant farmers); and

- joint participation of TAT members with FPD project foresters in preparing work plans and in implementing farm forestry field activities.

The point is that, regardless of what the baseline studies say or do not say about any particular strategy element (e.g., "motivators"), what is really needed is to get the array of potential farm forestry action strategy elements out on the table and to examine each one in the light of the SCA baseline study findings and the FPD project forester's field experience. Second, one cannot evaluate the validity of any one action strategy element (e.g., motivators) in isolation of the other elements involved in implementing the strategy. Third, it is the articulation of what that action strategy is or should be that is perhaps the greatest missing element in the FPD project and in the field operational activities already being implemented in Punjab, NWFP, and Baluchistan.

The adequacy of the field operational strategy currently being implemented by FPD project foresters is quickly brought into doubt if one asks a simple question. "How do we know that

the field operational strategy currently being implemented contains all the elements needed to make farm forestry take off in Pakistan?" This question can be readily answered: "We don't know!" For just as easily as any one element (e.g., free distribution of seedlings) may not be needed, other needed elements (e.g., institutions that provide incentives for farmers to protect trees beyond their property line) may be missing.

The problem of relying on an ad hoc strategy for implementing field operational activities could be remedied if the FPD project were to apply to the farm forestry problem an action model that systematically defines the elements or ingredients of an effective action strategy. One such action model which the FPD project may wish to explore is that provided by "social marketing."

The term "social marketing" refers to the systematic application of marketing tools--marketing research and product development, promotion, and pricing--to the design and implementation of action programs calculated to elicit socially beneficial responses in the behavior of the target audience.

Social marketing, as a model (strategy) for increasing the impact of development assistance efforts in the LDCs, has already proven itself in such problem areas as population and health. Examples of social marketing applications include contraceptive sales and oral dehydration therapy.

Indeed, successes achieved to date by social marketing in population and health prompted AID, beginning in 1985, to direct increased attention to the potential of applying social marketing to other problem areas in the Agency's development assistance programs. This increased attention to the potential applicability of social marketing to other problem areas was evidenced in a 1985 AID-sponsored workshop on social marketing and economic development. The conclusions of this workshop include a number of statements on the potential applicability of social marketing to the agricultural sector, as follows*:

- The technology and processes of agriculture are complex and the farmer is expected to make major investments in agricultural products in a high-risk environment. Social marketing must recognize this risk and take it into account as marketing strategies are developed.

---

*Keene, Monk and Associates, Inc. "Social Marketing and Economic Development: A Workshop Report," a paper prepared for USAID/PPC/PDPR, 1985, p. 17.

- Agriculture is a sector where governments often play a very direct and active role. If a social marketing approach is to be tried, it is especially important, therefore, for the roles of the private sector and government institutions to be carefully defined and firmly agreed upon.

- Specific opportunities do exist in the agricultural sector for social marketing of both products and services. Potential product applications include seeds, fertilizers and machinery, while service applications include technology and credit.

Clearly, to this list could be added tree seedlings. More detailed information relevant to the potential application of social marketing to farm forestry in Pakistan may be obtained from the Academy for Educational Development's Communication for Technology Transfer in Agriculture Project.

3. Institutional and Manpower Development in:

a. O/IGF

The level of manpower which the FPD PP envisioned the O/IGF providing this project has yet to materialize. The IGF position was vacant at times or filled by an acting director, while the A/IGF position has yet to be created. Two individuals have served in the DIGF positions provided for this project; however, one of these individuals apparently will soon retire. The current IGF is well-qualified and has taken a great interest in the project, within the constraints of other demands competing for his attention, time, and energy.

The O/IGF has never assigned or delegated either DIGF the task of identifying the policy-relevant findings in the socio-cultural baseline study reports and, based on these findings, formulating and/or revising options for farm and energy forestry policy at the federal and provincial levels.

As the O/IGF proceeds to implement a staffing pattern to support the FPD project, it is essential that a qualified individual be assigned responsibility to work with the SCA group in translating the SCA baseline study findings intc policy options for consideration and action by the appropriate governmental authorities.

The evaluation team recognizes that it may be difficult for the O/IGF to find the right person for this policy-related responsibility but this only reconfirms the need, identified in the PP, that the FPD project assist in providing training

opportunities to develop the cadre of trained manpower that will be needed to develop and implement federal policy, plans, and programs in farm and energy forestry.

b. O/PCCF

In farm forestry, a forester must be more than a forester. For he or she is not working only with trees, trying to protect the trees from the farmer. Rather the farm forester works with the farmer, trying to assist him or her to learn how the cultivation of trees can be used to enhance subsistence livelihood (e.g., fuelwood) and income-earning opportunities (e.g., poles).

As the FPD project is currently staffed, its personnel are foresters. The evaluation team does not recommend that any O/PCCF supplement its current staffing pattern by hiring social scientists. However, the evaluation team does feel that one of the major challenges of the TAT will be to assist FPD project foresters in designing in-service training programs that enhance the forester's knowledge of the target clientele and improve his (or her) skills to work with this clientele.

For this task, the TAT will need to devise interest-grabbing ways to involve foresters in the training process. For this purpose, lectures or readings are probably less preferred than discussion of case studies or field visits to interact with farmers. Problem-solving exercises requiring the foresters to do simple analyses of socio-cultural baseline data relevant to their own service area and using these findings to develop their work plan can only serve to enhance the practicality of the training as well as the forester's appreciation of the relevance of applied social science as an input to farm forestry.

Other training activities may also be utilized such as films or simulations, particularly relevant in the latter respect being such simulations as the Green Revolution Game and the Change Agent Game.

It should be emphasized that the initial experience of using and participating in such training simulations will provide the basis for modifying these exercises to incorporate features (e.g., decision variables) to enhance their relevance and applicability to farm and energy forestry in Pakistan.

Particularly relevant to the senior foresters, DFOs and above, would be management films such as "A Case of Working Smarter, Not Harder" (McGraw Hill) or "What is Marketing?". Indeed, much of what has been learned in the field of applying social marketing to developing country problems in such areas as family planning, contraceptive practices, oral dehydration

153

therapy, and other areas is potentially applicable and could be utilized as a framework or tool for designing field operational strategy and activities as well as the curricula of in-service training programs for field-level as well as senior farm foresters.

c. PFI

The education and training of foresters at PFI provides one of the earliest opportunities to recruit and prepare Pakistanis with the desire and ability to excel in farm and energy forestry. The SCA group has assisted PFI in developing sociology curricula for several of the institute's course offerings. However, the institute currently does not have sufficiently trained staff to teach the sociology components of these courses.

For the short run, there will continue to be a need for the SCA group to participate in the teaching of these courses. Also, PFI could potentially make greater utilization of social science expertise available in nearby universities (e.g. University of Peshawar). However, if such locally-available expertise is going to be used to meet PFI's applied social science teaching needs in the short- to medium-term, it would be advisable to have the FPD project's Rural Sociologist and Anthropologist continue to "team teach" the respective courses with the local Pakistanis who will be responsible for teaching the courses in subsequent years. The feasibility and attractiveness of this option is enhanced to the extent that such university-based social scientists can also receive FPD project funding support to conduct social science studies relevant to farm and energy forestry.

However, in the medium- to long-run, the option of using locally-based university social scientists to meet PFI's social science teaching, research, and outreach needs may prove to be impractical or unfeasible. Consequently, serious consideration needs to be given to the possibility of establishing (budgeting and funding) an applied social scientist position at PFI; the individual's duties and responsibilities would include teaching, research, and outreach in support of farm and energy forestry.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Conclusion 1

The findings emerging from the Socio-Cultural Analysis baseline studies studies indicate that the FPD project is on target in terms of being the right kind of project to meet the needs of the clientele or beneficiary group (i.e., the small farmer) identified in the Project Paper. Small farmers in Baluchistan, NWFP and Punjab are interested in planting trees, and they are potentially receptive to project assistance, as long as the project assists them in planting trees that meet their household consumption needs for fuelwood, fodder and timber.

Conclusion 2

However, FPD project foresters have had misgivings about the role of socio-cultural analysis (e.g., baseline studies) in this project. These misgivings have even degenerated into bickering with or about the SCA Anthropologist and Rural Sociologist (i.e., the SCA group). Possible reasons for these misgivings are:

- that foresters often have not understood the value of SCA, possibly because this project component has not yet been adequately explained to them;
- that the picture the baseline studies are painting is different than the foresters' reports about the type of farmer interested in planting trees and the interests and needs of the farmer; and/or
- that foresters are under pressure to "get on with the work."

This pressure is the result of a fixation with physical targets resulting form the problems of the PC-1. Accordingly, the foresters see the problem as one of planting trees rather than changing the tree planter's (i.e., the farmer's) behavior.

Conclusion 3

The SCA group is on schedule, per the original Project Paper, in developing the socio-cultural baseline studies. These studies are methodologically sound and have already provided project-relevant information on a timely basis. Follow-up

monitoring and evaluation studies are schedule. While resources were available to the technical assistance team (i.e., 18 months of social science short-term consultant support which have remained unused), the Women's Study proposed over a year ago has yet to be implemented.

Conclusion 4

The SCA group has, in the course of developing the baseline studies, interacted informally with FPD project foresters at all levels. However, the lack of implementing any forester or farmer training programs, which were to be fundamental to the orderly startup of sociologically sound field operations, has precluded a key forum for professional interaction between the SCA group and the foresters.

Conclusion 5

The analyses of data emerging from the SCA baseline studies provide indications that FPD project foresters tend, in some locations, to emphasize planting of large numbers of trees on large farms, a pattern that is a function of the traditional social, economic and political character of relations between the Forest Department and the rural populace. This pattern is congenial to the field officer's traditional standards of work and reward and is unlikely to change unless basic institutional changes occur (e.g., holding foresters accountable for the number of households planting trees rather than the number of trees planted, providing field staff with adequate transportation so that they can reach the small farmer in more remote areas, and compensating hard work with adequate salaries).

Conclusion 6

Yet, the baseline studies also show that small farmers are definitely interested in tree planting. The challenge is to design and implement field operations that tap this latent interest and help farmers to play a more active role in planting and protecting trees. However, the technical assistance team has not been working, in any systematic way, to assist the foresters in utilizing this information to design field operational strategy and activities or to train foresters.

Conclusion 7

FPD project foresters are moving ahead, at least in their work plans, to talk about using such mechanisms as "incentives," "motivators," and "farmer advisory councils" to support field

operations. The baseline studies have produced information relevant to evaluating the potential utility of these mechanisms in achieving the goals of the FPD project. However, the technical assistance team has yet to take nay firm stand, one way or the other, on whether these mechanisms are necessary or what other mechanisms might be more effective.

Conclusion 8

The SCA group is at an important crossroad. While limited resources could be allocated to new studies (e.g., initiating a baseline study in Sind), the need is much greater for the Anthropologist and the Rural Sociologist to now begin working more closely with the technical assistance team on the problem of assisting the FPD project foresters to design field operation strategy, models and activities that will be sociologically sound, that is, effective in helping the project's intended clientele (small farmers) to adopt farm forestry practices. Here, the Anthropologist, Rural Sociologist and other technical assistance team members need to focus their energy, expertise and enthusiasm on strengthening their working relationships with project staff at the provincial as well as field levels.

Conclusion 9

The FPD project Paper envisioned the project as playing a role in strengthening social science support capability within Pakistan's forestry sector organizations. The project, to date, has not provided any opportunities for advanced degree training that is the basis for developing the needed social science support capability. Further, Pakistan's forestry sector organizations (e.g., PFI) currently provide few, if any, positions that require professional training in the social science. Unless the FPD project addresses this issue i.e, by providing social science training opportunities and creating employment opportunities for Farm Forestry Sociologists or Anthropologists, Pakistan's forestry sector will continue to have to rely on expatriate social scientists for provision of research, teaching and outreach support capability.

Conclusion 10

The value of the baseline studies could be strengthened if they produced more information about the farming systems in which tree cultivation is practiced or is to be practiced. SCA follow-up studies could develop this line of inquiry, especially if they are coordinated with the Management of Agricultural Research and Technology (MART) project's farming systems research program (e.g., carrying out follow-up baseline studies in the same

tehsils, if any, where the MART Project is conducting on-farm adaptive research). Closer collaboration of these two projects would facilitate the identification of improved crop/tree technologies. Further, on-farm adaptive research trials and demonstration plots could play a major role in developing the forester and farmer training programs in farm forestry as well as in accelerating the process of technology transfer to farmers (i.e., outreach and extension).

B. Recommendations

The following are the major recommendations proposed in response to the conclusions presented above. Elaboration on these ideas as well as other potential avenues for project modification are discussed in greater detail in this report's section IV.

Recommendation 1

The intended emphasis of the FPD project to assist small farmers in meeting household needs for fuelwood, fodder, timber and cash, not to assist large farmers in establishing commercial tree plantations, should be supported by revising the PC-1 yearly provincial targets (PC-1, p. 39, Appendix 3) in terms of the number of households planting trees, not acres or numbers of trees planted. The technical assistance team's Anthropologist, Rural Sociologist and farm forestry training specialist should participate in the PC-1 revision process, to ensure that the revised PC-1 takes advantage of the available SCA baseline data on farmer interest in planting trees and sets forth realistic targets for households to be reached by the project. Other areas needing revision in the PC-1 are discussed in the main report.

Recommendation 2

The SCA group should prepare a synthesis report that explains the role of socio-cultural analysis (SCA) in the FPD project, identifies the kinds of issues or problems addressed by SCA, summarizes the key findings that have emerged to date from the baseline studies, and identifies the implications of these findings for FPD project field operational strategy and activities. This report should address the issue of the potential utility of "incentives," "motivators," and "farmer advisory groups" as mechanisms to encourage and facilitate farmer adoption of farm forestry practices.

This report should be circulated to FPD project foresters and be the subject of a project planning workshop involving the technical assistance team and the foresters. The aim of this

workshop would be to increase the forester's knowledge and understanding of the FPD project and SCA's role in the project.

Recommendation 3

The SCA group should continue to develop the needed analyses of the baseline data collected to date. However, the SCA group should not at this time embark on any new baseline studies such as that which is currently being planned for Sind. Rather, the SCA group should devote the lion's share of its attention to working more closely with the technical assistance team on the problem of assisting FPD project foresters to design field operational strategy, models, and activities that will be sociologically sound, that is, effective in helping the FPD project's clientele (small farmers) to adopt farm forestry practices.

Given the SCA group's proximity to the FPD project foresters in Punjab, this province would be a logical place for the technical assistance team to begin working with project foresters to design and implement a sociologically sound field operational strategy. As project personnel gain experience in this area, the experience can then be shared with FPD project personnel in NWFP and Baluchistan (e.g., by bringing project personnel from these provinces to observe and participate in the design and implementation of field operational strategy in Punjab).

Recommendation 4

The technical assistance team should begin to plan the forester and farmer training programs, ensuring that the team Anthropologist and Rural Sociologist play an active role in identifying ways in which SCA baseline data can be utilized to define training needs, subject matter and methodology.

Recommendation 5

The technical assistance team's SCA group (Anthropologist and Rural Sociologist) should proceed to implement the proposed women's study, using available short-term consultant time to contract a female social scientist to lead the study's field work.

The information that this study will provide, as well as the entree and rapport established with male and female villagers by SCA field teams (female social scientists) could provide the basis for a major breakthrough in farm forestry in Pakistan, i.e., involvement of women in establishing nurseries and planting and protecting trees.

Recommendation 6

The technical assistance team should explore the potential for the FPD project to collaborate with the farming systems research component of the Management of Agricultural Research and Technology (MART) project. There may be, where the two projects are working in common tehsils, a significant opportunity to share data bases (e.g., the SCA baseline studies and farming systems research data) and plan field activities (e.g., on-farm adaptive research trials) that are of mutual interest and benefit.

Recommendation 7

PFI should seize the opportunity to invite the SCA group to teach the sociology curricula of PFI courses. The SCA baseline study experience should be incorporated into this curricula. Further, ways should be explored to develop the ability of PFI staff, social scientists from the University of Peshawar, or Rural Sociologists from Pakistan's agricultural universities, to teach this curricula.

Recommendation 8

The GOP and USAID/Pakistan should utilize the FPD project as a means of providing one or two Pakistanis with professional training in a forestry-relevant social science such a rural sociology or anthropology. Further, the GOP and USAID/Pakistan should explore means of creating employment opportunities for farm forestry sociologists or Anthropologists within an appropriate institutional base (e.g., PFI and/or a provincial-level research center such as Gatwala).

This issue is of sufficient importance to the FPD project and the future of farm forestry in Pakistan that USAID/Pakistan should seriously consider the possibility of funding an applied social science position at PPI for the duration of the life of project. The following is one possible scenario of how this might be developed.

The applied social science position would initially be filled under a defined period contract by a qualified Pakistani social scientist. This person should minimally hold an M.S. in rural sociology or anthropology, preferably with a minor in farm forestry or social forestry. During the period of this individual's contract, he would collaborate with the technical assistance team's Anthropologist and Rural Sociologist in teaching PFI's sociology curricula and in developing a research project that is supportive of the FPD project's program in NWPP.

During the interim, the FPD project should also send one Pakistani to earn a Ph.D. in an applied social science (either rural sociology or anthropology), with a minor in farm forestry. This individual, on completion of his (her) degree, would return to Pakistan to continue the work of developing PFI's applied social science support capability. At this time, the FPD project could move the M.S.-level person already working at PFI to another position (e.g., a provincial research center such as Gatwala) or send this person for advanced social science training.

Annex A. Scope of Work of Expatriate anthropologist/rural sociologist in Socio-Cultural Analysis Component of FPD Project (Source: Project Contract).

*Assume primary responsibility for directing and overseeing all socio- cultural and operational participatory aspects of technical assistance support to the project.

*Oversee and direct the activities of the local socio-cultural analysis team in baseline data collection, design and monitoring.

*Provide support and assist in design and implementation of sociological aspects of forestry research program and ensure a research focus on solving motivational/participatory issues of direct relevance to the operational field program.

*Work with local team and Provincial forestry cadre to identify effective motivators at the village level and to monitor their active role in field work.

*Identify and help to arrange participation of local organizations/institutions and coordinate with other rural development institutions to maximize farmer involvement.

*Oversee, manage and participate in development of practical organizational strategies for farmer participation, tree management, training and benefits distribution.

*Work with local team to train and direct Pakistani graduate student in practical field data gathering and analysis.

*Organize and implement a special program to identify and test workable landless inhabitant participation strategies amenable to implementation.

*Supervise all local sociological field work and ensure its practical relevance to meeting and achieving project targets in tree planting and farmers' participation.

*Support local farmer training and motivation activities.

*Interact with provincial project directors and farm and energy foresters to evolve and test successful participatory strategies and incentive options.

*Plan and organize activities so as to turn over responsibilities to local socio-cultural analyst prior to departure.

*Identify a small number of representative villages for special baseline data and monitoring evaluation.

*Contribute to PFI curriculum development and supplement short courses and PFI degree teaching capabilities with a practical social perspective that increases likelihood of field achievements by participants and graduates.

Annex B. Scope of Work of Local rural sociologist in Socio-Cultural Analysis Component of FPD Project (Source: Project Contract).

*Works closely with the expatriate, long-term anthropologist in completing project baseline survey.

*Helps to identify individuals who are opinion leaders at the village and tehsil (group of villages) levels able and willing to serve as effective farm forestry participation motivators.

*Helps to identify local institutions whose participation in the project will be necessary or could contribute to the project's practical and operational field success.

*Assists in developing effective organizational strategies at the local level for involving farmers and local leaders in the design and oversight of the farm forestry field activities.

*Conducts a short program to train Pakistani graduate students to conduct the necessary field work in support of baseline surveys.

*Supervises and directs Pakistani graduate students involved in baseline survey field work.

*Compiles and interprets field work results.

*Prepares baseline socio-cultural profiles for each project locale.

*Contributes to developing and recommending organizational strategies for involving farmers in the design and oversight of the project's field operational activities.

*Helps to examine the need for incentives to encourage local participation in the project's activities and recommends an appropriate incentive strategy.

*Participates periodically in review of the strategies employed in project implementation to determine which projects are working most successfully and recommends modifications in approach where necessary.

*Contributes to efforts to develop and recommend additional project strategies to provide for participation and benefits of the landless and for women within locally acceptable religious and cultural norms.

Annex C. Scope of Work of Expatriate anthropologist in Socio-Cultural Analysis Component of FPD Project (Adapted from Annex A).

Institutional and Manpower Development

*Plan and organize activities so as to turn over responsibilities to local socio-cultural analyst prior to departure.

*Contribute to PFI curriculum development and supplement short courses and PFI degree teaching capabilities with a practical social perspective that increases likelihood of field achievements by participants and graduates.

Farm and Energy Forestry Research

*Provide support and assist in design and implementation of sociological aspects of forestry research program and ensure a research focus on solving motivational/participatory issues of direct relevance to the operational field program.

*Oversee and direct the activities of the local socio-cultural analysis team in baseline data collection, design and monitoring.

*Work with local team to train and direct Pakistani graduate students in practical field data gathering and analysis.

*Supervise all local sociological field work and ensure its practical relevance to meeting and achieving project targets in tree planting and farmers' participation.

*Identify a small number of representative villages for special baseline data and monitoring evaluation.

Field Operational Activities

*Assume primary responsibility for directing and overseeing all socio-cultural and operational participatory aspects of technical assistance to the project.

*Interact with provincial project directors and farm and energy foresters to evolve and test successful participatory strategies and incentive options.

*Oversee, manage and participate in development of practical organizational strategies for farmer participation, tree management, training and benefits distribution.

*Identify and help to arrange participation of local organizations/institutions and coordinate with other rural development institutions to maximize farmer involvement.

*Work with local team and Provincial forestry cadre to identify effective motivators at the village level and to monitor their active role in field work.

*Support local farmer training and motivation activities.

*Organize and implement a special program to identify and test workable landless inhabitant participation strategies amenable to implementation.

Annex D. Scope of Work of Local rural sociologist in Socio-Cultural Analysis Component of FPD Project (Adapted from Annex B).

Farm and Energy Forestry Research

*Works closely with the expatriate, long-term anthropologist in completing project baseline survey.

*Supervises and directs Pakistani graduate students involved in baseline survey field work.

*Conducts a short program to train Pakistani graduate students to conduct the necessary field work in support of baseline surveys.

*Compiles and interprets field work results.

*Prepares baseline socio-cultural profiles for each project locale.

Field Operational Activities

*Helps to identify local institutions whose participation in the project will be necessary or could contribute to the project's practical and operational field success.

*Contributes to developing and recommending organizational strategies for involving farmers in the design and oversight of the project's field operational activities.

*Assists in developing effective organizational strategies at the local level for involving farmers and local leaders in the design and oversight of the farm forestry field activities.

*Helps to examine the need for incentives to encourage local participation in the project's activities and recommends an appropriate incentive strategy.

*Helps to identify individuals who are opinion leaders at the village and tehsil (group of villages) levels able and willing to serve as effective farm forestry participation motivators.

*Participates periodically in review of the strategies employed in project implementation to determine which projects are working most successfully and recommends modifications in approach where necessary.

*Contributes to efforts to develop and recommend additional project strategies to provide for participation and benefits of the landless and for women within locally acceptable religious and cultural norms.

Annex E. Flow of Socio-Cultural Analysis Activities and Outputs in Forestry Planning and Development Project (Source: TAT Anthropologist).

I. Field Research (#1-5 Completed)

1. Rapid Rural Appraisal 925 tehsils).
2. Village Census (119 villages).
3. Farmer Census (59 villages, 1,150 farm households).
4. Farmer In-Depth Interviews (41 villages, 600 farm households).
5. Village In-Depth Interviews (41 villages).
6. Farmer daily Records (13 villages, 13 households).

II. Data Analysis (Partially Completed)

III. Data Write-Up (Partially Completed)

1. Village Reports (119 1st series, 59 2nd series).
   Circulation: district, province.
2. District Reports (11 1st series, 11 2nd series).
   Circulation: district, province.
3. Provincial Reports (3 1st series, 3 2nd series, 3rd series proposed).
   Circulation: district, province, federal, PFI, USAID.
4. National Reports (1 1st series, 2nd series proposed).
   Circulation: province, federal, PFI, USAID.
5. Farmer/Outreach Reports (proposed).
   Circulation: farmers (also district, province, federal, USAID).

IV. Utilization of Data (Partially in Progress)

1. By Farmers, for (Proposed):
   i. Biological characteristics, economic uses different tree species.
   ii. Procedures for effectively soliciting services of Forest Department.
2. By District Level FD, for (In Progress):
   i. Selection of interested villages, farmers, nursery operators, motivators.
   ii. Selection of species, planting patterns, and planting times appropriate for farmers.
3. By Provincial Level FD, for (Partially in Progress):
   i. Support for and clarification of project focus on household needs of small farmers.
   ii. Identification and elimination of constraints on farmers' participation in farm forestry.
   iii. Identification and satisfaction of farmer needs and preferences (as regards farm forestry).

iv. Identification and utilization of traditional farmer knowledge and practices regarding farm forestry.
v. Design of appropriate outreach strategies for assisting small farmers to develop farm forestry.
vi. Design of appropriate monitoring and evaluation techniques for ensuring focus on project's true goals and clientele.

4. By Federal Level FD, for (Partially in Progress):
   i. Support for and clarification of project focus on household needs of small farmers.
   ii. Design of appropriate monitoring and evaluation techniques for ensuring focus on project's true goals and clientele.
   iii. Identifying the clientele and goals of a national forestry extension service.
   iv. Identifying the changes required in FD reward structure by shift from forestry on state lands to forestry on small private lands.
5. By PFI, for (Partially in Progress):
   i. Redesign of rural sociological component in teaching.
   ii. Development of capacity to carry out rural sociological research relevant to the implementation of forestry programs on private as well as public lands.
6. By USAID, for (In Progress):
   i. Support for and clarification of project focus on household needs of small farmers.
   ii. Explanation of project to other USAID/US/GOP offices.
7. By TAT, for (Partially in Progress):
   i. COP - in formulating policy.
   ii. Training advisor - developing training materials to enable FD staff to better communicate with small farmers, identify their needs and constraints, and then provide the appropriate services.
   iii. Research advisor - designing on-farm research to overcome constraints on farm forestry as identified by the farmers themselves.

Annex F. Activities and Output of Socio-Cultural Component of Forestry Planning and Development Project (compiled by FPD Project Evaluation Team Development Specialist).

The following list does not include reference to the excellent field trip notes prepared by the FPD Project Anthropologist and Rural Sociologist.

I. Institutional and Manpower Development
   A. Office of Inspector-General of Forests (O/IGF)
      1. In-service training of Pakistani Rural Sociologist
      2. Pre-service training of eight field workers (four two-person field teams) hired by TAT to collect baseline data
   B. Office of Provincial Chief Conservator of Forests (O/CCF)
      1. Participation of forestry officers as baseline study field teams contacted district/ tehsil/village-level officials and farmers
      2. Participation of forestry officers in FPD Implementation Workshops
   C. Pakistan Forest Institute
      1. Development of Curriculum
         a. Syllabus for Sociology, Public Administration and Extension: Part I Sociology, B.Sc. Level, PFI, 3/87)
         b. Syllabus for Sociology, Public Administration and Extension: Part I Sociology, M.Sc. Level, PFI 4/87)
         c. Syllabus for Rural Sociology, M.Sc. Level, 5/87)
      2. Participation in Teaching of Sociology, Public Administration and Extension: Part I Sociology,

II. Farm and Energy Forestry Research
   A. Socio-Cultural Research as Input to Agroforestry Research Memo Re: Farmer-Related Project Research (7/13/87)
   B. Socio-Cultural Research as Input to Field Operation Activities
      1. Overview of Research Phases
         a. Phase I
            (1) Village Census
            (2) Farmer Census
         b. Phase II
            (1) Farmer In-Depth Interview
            (2) Women's Baseline Study
            (3) Foresters Baseline Study
            (4) Topical Studies
         c. Phase III (Daily Record Keeping)
         d. Phase IV (Monitoring and Evaluation)

2. Proposals
   a. FPD Baseline Studies--Working Paper (n.d.)
   b. Baseline Studies Field Assistants (Task Order no. WI-03) (9/1/86)
   c. Proposal for Consultancy by Anthropologist to Carry Out a Women's Study (6/4/86)
3. Methodology
   a. Outline of Field Methods--Baseline Study, Phase I, (9/13/86)
   b. Field Researchers' Orientation--Baseline Study, Phase I (Schedules 1 & 2) (9/12/86)
   c. Field Researchers' Guide--Baseline Study, Phase I (guideline on use of interview schedules) (n.d.)
   d. Interview Schedules for Baseline Studies
      (a) #1: Ad Hoc Data (Phase I)
      (b) #2: Village Census (Phase I)
      (c) #3: Farmer Census (Phase I)
      (d) #4: Farmer In-Depth Interview (Phase II)
      (e) #5a: Village Interview: Maolvi (Phase I)
      (f) #5b: Village Interview: Group (Phase I)
      (g) #6: Farm Household Daily Record (Phase III)
4. Utilization of Socio-Cultural Research in Design, Implementation, and Evaluation of Field operational Activities (see III below).

III. Field Operational Activities
   A. Distribution of Interim Reports to O/PCCF (by province)
      1. Site Selection
         a. List of Village Survey Sites
         b. List of Farmer Survey Sites
         c. List of Farmer In-Depth Interview Sites
      2. Field Reports
         a. Provincial Level: Statistical Summary of Village Profiles, Baseline Study, Phase I (e.g., a sample of 32 villages in NWFP)
         b. District Level: Statistical Summary of Village Profiles, Baseline Study, Phase I (e.g., a sample of nine villages in D.I. Khan District, NWFP)
         c. Village Level: Village Profile, Baseline Study, Phase I (e.g., Zarkani Village, Kulach Tehsil, D.I. Khan District, NWFP).
         d. Farmer Interest in FPD
         e. District Level: Farmer Interest in Participating in FPD, District (e.g., D.I. Khan)
         f. Village Level: Baseline Study Farmers Interested in Participating in FPD (e.g., Saggu Shumali Village, D.I. Khan Tehsil, D.I. Khan District)

B. In-Depth Technical Reports
   1. Punjab
      a. Farmer Interest in Planting Trees and Operating Nurseries/The Punjab: Provincial Report (5/6/87)
      b. Farm Interest in Planting Trees and Operating Nurseries/The Punjab: Village and District Reports (5/6/87)
   2. The NWFP
      a. Farmer Interest in Planting Trees and Operating Nurseries/The NWFP: Provincial Report (6/6/87)
      b. Farmer Interest in Planting Trees and Operating Nurseries/The NWFP: Village and District Reports (6/6/87).
   3. Baluchistan
      a. Farmer Interest in Planting Trees and Operating Nurseries/Baluchistan: Provincial Report (7/6/87)
      b. Farmer Interest in Planting Trees and Operating Nurseries/Baluchistan: Village Reports (7/6/87)
   4. Determinants of Interest in Farm Forestry/National Report (draft) (7/22/87)

C. Utilizing SCC Research for Implementation of Field Operational Activities.
   1. Forester-Farmer Relationships: A Working Paper, prepared for FPD project Implementation Workshop I, May 3-4, 1986, Quetta. Note the following appendices to this paper:
      a. #3: Memorandum of Understanding between the Baluchistan Forestry Department and the Farmer (example)
      b. #4: Memorandum of Understanding between the NWFP Forestry Department and Farmers Permitting FPD Experiments on Their Land (example)
      c. #5-7: Checklists (examples)
         (1) #5: Checklist for Initial Forester-Farmer Contact (example)
         (2) #6: Checklist at Planting Time (example)
         (3) #7: Checklist for Each Follow-Up Contact (example)
      d. #8: Statistical Monitoring of FPD Using Data Gathered by Foresters (illustrative examples):
         (1) Survival Ratio of Trees after One Year Compared with Land Planted by FPD is cultivated by land owner or tenant
         (2) Survival Ration of Seedlings after one year Compared with Number of Seedlings provided per Farmer
         (3) Survival Ratio of Seedlings after One year Compared with Number of Forester-Farmer Visits Per Year

2. Baseline Study Villages (maps indicating location of villages in each district: maps identify type of interview conducted in each village and type of information available for each village) (n.d.)
3. Analysis of Nursery Needs Per 1000 Households: Analysis of Maximum Seedling Transport Distances: List of Farmers Interested In Establishing Project Nurseries (n.d.)
4. Guidelines for Implementation of the FPD Field Operations: Public Relations, Project Implementation, and Special Issues (11/28/86).
5. Workshop Papers; e.g., M.P. Dove, "Social Forestry and Livestock Systems: Part 1--Traditional Use of Tree Fodder," presented at the NARC-Livestock in Farming Systems Workshop, April 8-15, 1987, Islamabad.

Annex G

MEMO

8/8/87

To: K. Byrnes, Evaluation Team Sociologist

From: M. K. Dove, Project Anthropologist

Re: Degree of Farmer interest in Punjab.

(1) DFO (M&E) Afzal Chaudhry reports that only 10 percent of the farmers that they contact are interested in participating in planting trees under the FPD project, whereas our surveys show an interest rate of 54 percent for the Punjab. This difference is due to the fact that we ask farmers if they are interested in farm forestry--with no minimum amount of trees or land to be planted--whereas the Punjab team is essentially asking if they are interested in commercial forestry--with high minimum amounts of trees and land involved. Most farmers are interested in farm forestry, but most are <u>not</u> interested in commercial forestry--hence the difference in the reported rates of interest.

(2) The emphasis of the Punjab team on larger plantings than most farmers desire is evident from the following data on the first farmers to be given trees in three of the Punjab's project districts. The number of trees that the Punjab team gave out was consistently higher than the number of trees requested by the average farmer:

	Number of Trees Requested by Farmers	Given by Forest Dept.
< 100 trees	57 hh (37%)	2 hh (8%)
100-999 trees	83 hh (54%)	10 hh (40%)
1000-2000 trees	10 hh (6%)	12 hh (48%)
> 2000 trees	4 hh (3%)	1 hh (4%)
Totals	154 hh (100%)	25 hh (100%)

n = 179 farm households interested in planting trees or already having planted trees.

$x^2 = 31.7$, $P < .001$.

(3) The emphasis of the Punjab team on larger number of trees and amounts of land is evident from the following summary of its field contacts:

	Amount of Land Owned	No. of Trees Requested/Given
All Farm Households	16 Acres	--
All hh wanting trees	22 Acres	319 requested
All hh given trees	34 Acres	968 given

(4) The fact that the Punjab team is giving out more than three times as many trees as the average household is requesting in these districts largely explains the reported 90 percent rejection rate. Refocusing their field activities on the household needs of the small farmer would immediately raise this rate to the 54 percent that we report. After one successful season, moreover, we expect that demonstration effects would raise this rate to near 100 percent. While there is no evidence to suggest that most of Pakistan's farmers are interested in raising block plantations of trees for the market, there is excellent evidence to suggest that most of them <u>are</u> interested in planting small numbers of multi-purpose trees to meet their household needs for fuel, fodder, timber and cash.

(5) The emphasis of the Punjab field team on large tree plantings on large farms is not accidental. It is <u>not</u> the result of poor field methods or lack of information (consequently it will not be remedied solely by focusing on their methods of data collection). It is a function of the traditional social, political and economic character of relations between the Forest Department and the rural public. This emphasis is congenial to the field officers' current pattern of work and reward. It is unlikely to be changed, therefore, without support and indeed arm-twisting from the highest levels of administration.

cc: H. E. Ostmark
A. L. Merkel

List of Contacts

USAID/Pakistan
Albert L. Merkel, Project Manager, FFD Project
K. Hameed Ullah, Program Officer, FFD Project
Harold Dickherber, Project Manager, MART Project

Technical Assistance Team (Winrock International)
Eugene H. Ustmark, Chief of Party
Michael Dove, Anthropologist
Jamil A. Qureshi, Rural Sociologist
William J. Hart, Farm Forestry Outreach Specialist

Shamsul Hamar, SUA base-line study interviewer

Office of Inspector General for Forests (O/IGF)
Abdullah Jan, Inspector General for Forests
Hasrullah Khan Aziz, Deputy Inspector General Forests

Punjab (Office of Provincial Chief Conservator of Forests)

Forestry Planning and Development Project (Farm and Energy Forestry)

Mian Ajmal Hussain, Conservator of Forests and Project Director Dr.
Muhammad Afzal Chaudhry, Monitoring & Evaluation Officer
Mehmood Nasir, DFO, Rawalpindi
Mumtaz Babul, DFO, Sialkot

NWFP (Office of Provincial Chief Conservator of Forests)
Yar Muhammad Khan, Chief Conservator of Forests

Forestry Planning and Development Project (Social Forestry Project)

Mumtaz Khan, Conservator of Forests, Project Direct
Ehsan Ullah Wazir, DFO, Kohat District
Abdul Rahman, RFO, Hangu and Kohat Tehsils, Kohat District

Taibali, Farmer in Alizai village, Kohat District

Pakistan Forest Institute
Mehmood Iqbal Sheikh, Director General
Khalid Mahmood Siddiqui, Director, Forest Products Research
[illegible] Hussain, Director, Forestry Research
[illegible] Khan, Director, Forest Education

Evaluation Team
Tom Catterson, Team Leader
Jon Hoffman, Training Specialist
Hameed Ahmed, Senior Pakistani Forester

Design Team
Dr. George Bell, Team Leader
Dr. G. Schreuder, Economist

177