

A.I.D. EVALUATION SUMMARY - PART I

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS
 2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit: Mission or AID/W Office <u>Islamabad</u> (ES# <u>FY88-2</u>)		B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan? Yes <input checked="" type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY88 <u>Q2</u>		C. Evaluation Timing Interim <input checked="" type="checkbox"/> Final <input type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>	
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
391-0491	Food Security Management	84	June 1990	\$35,000	\$27,000

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director	Name of Officer Responsible for Action	Date Action to be Completed
Action(s) Required 1. Continue dialogue with GOP on the formal institutionalization of the Directorate of Agricultural Policy headed by Director General under the direct supervision of Additional Secretary MINFA; including a fully staffed economic section on the GOP pay roll with sufficient funds to carry out development and research activities. This is a CP negotiated under ASSP. This requires continued improvement and quality, relevance and timeliness of EAN/DAP studies.	FSM Project Officer/ Contractor	Dec. 1988
2. Review procedures and workplans under the Agricultural Data Collection component with a view toward speeding completion of the pilot project and starting discussions with GOP on Phase II for ASF construction for the country as a whole.	FSM Project Officer	July 1988
3. Meet CP 4.5 and provide adequate funds to rehabilitate godowns under a single agency (PASSCO) and assist in development of a long range storage policy to encourage the private sector.	FSM Project Officer	June 1988
4. Implement the revised workplan for storage technology research and training.	Contractor/ GOP	Ongoing

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: (Month) May (Day) 31 (Year) 1988

G. Approvals of Evaluation Summary And Action Decisions:

Name (Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
	Thomas M. Olson	Sh. Akhul Rauf	Jonathan Addleton	Paul Guedet (A)
Signature	<i>Thomas M. Olson</i>	<i>Sh. Akhul Rauf</i>	<i>Jonathan Addleton</i>	<i>Paul Guedet</i>
Date	5/31/88	6/3/88	6/1/88	6/2/88

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The Food Security Management Project (FSMP) consists of three components: Economic Policy Analysis (EPA) to assist the Government of Pakistan (GOP) to establish and institutionalize an Economic Analysis Network (EAN) for agriculture policy analysis; Agricultural Data Collection (ADC) to provide an improved agricultural data collection system based on area sampling frame methodology; and Post Harvest Management (PHM) to assist the GOP in improving the management of the public grain storage network.

Progress in implementation started slowly. The Project Agreement was signed on 8/27/84 while the GOP's PC-1 document, needed before implementation could begin, was not signed until September, 1985 largely due to delays in the GOP clearance process. Progress varies among the components and sub-components, with EPA realizing more success than the ADC and PHM components. The EPA and ADC components have made significant progress towards institutionalization, but PHM is just getting started on this aspect.

EPA has registered significant accomplishments in terms of the strengthening the policy analysis capability within MINFA and establishing an Economic Analysis Network of local research economists and organizations. While institutionalization is not complete, the GOP has appointed a Project Director and a Deputy Director who report directly to the Additional Secretary, MINFA without going through intermediate level steps.

Progress in the ADC component was delayed significantly because the CP did not specify where and how photo and mapping materials would be used in the program. Consequently, Ministry of Defence (MOD) security restrictions caused long delays in obtaining necessary aerial photo and mapping materials. Future MOD clearance delays should be manageable. Increased staffing and streamlined procedures are needed if the ASF is to be completed with at least one nation-wide survey by the end of FSM. ASF survey results thus far are promising with timeliness and good levels of reliability for the major crops.

The PHM Component has faced the most serious problems in getting GOP clearance on CPs and staffing for its research and training component. However, PHM has been instrumental in bringing about a major change in fiscal policy which will ensure adequate financing for repair and maintenance of public storage facilities. PHM has also completely redesigned its research and training plans to circumvent staffing restrictions but still obtain project objectives. Finally, the last CP should be met soon to allow for the rehabilitation (\$7.546 million) of storage godowns.

C O S T S

I. Evaluation Costs				
1. Evaluation Team		Contract Number OR	Contract Cost OR	Source of Funds
Name	Affiliation	TDY Person Days	TDY Cost (U.S. \$)	
Haris Jafri	Robert R. Nathan Associates	5 weeks		PIO/T # 391-0491-3- 60274 as amended.
Dan C. Tucker	Robert R. Nathan Associates	5 weeks		
Norman R. Beller	Robert R. Nathan Associates	5 weeks		
Mian Mumtaz Ali	Local Ag. Expert	5 weeks		
2. Mission/Office Professional Staff		3. Borrower/Grantee Professional		
Person-Days (Estimate) <u>10 days</u>		Staff Person-Days (Estimate) <u>10 days</u>		

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)

Address the following items:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Purpose of evaluation and methodology used • Purpose of activity(ies) evaluated • Findings and conclusions (relate to questions) | <ul style="list-style-type: none"> • Principal recommendations • Lessons learned |
|--|--|

Mission or Office: USAID/Islamabad	Date This Summary Prepared: May 31, 1988	Title And Date Of Full Evaluation Report: Evaluation of Food Security Management Project (March 1988)
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BACKGROUND: The purpose of this evaluation was to assess the effectiveness of the FSM at the mid-term. As such, it focused more on inputs and process than on outputs or accomplishments, emphasizing the institutional processes and analytical capacities being developed by the project. It also looked at the impact FSM has had on specific GOP agricultural policy reforms. Given this purpose, the methodology included interviewing key actors in the project, assessing important documents such as the project paper, the PC-1, quarterly progress reports, correspondence and files, etc, and field visits. The four-member team consisted of two economists (one a local Pakistani) and two statisticians hired through Robert R. Nathan Associates.

The purpose of the FSM is to improve the analytical and policy formulation framework, the managerial capabilities and the physical capacity of the GOP to manage the national food security system efficiently and effectively through three related components: Economic Policy Analysis (EPA) to assist the Government of Pakistan (GOP) to establish and institutionalize an Economic Analysis Network (EAN) for agriculture policy analysis; Agricultural Data Collection (ADC) to provide an improved agricultural data collection system based on area sampling frame methodology; and Post Harvest Management (PHM), to assist the GOP in improving the management of the public grain storage network.

The EPA component consists of the sub components, EAN and Special Studies. The Special Studies on wheat pricing and rationing policies, conducted by International Food Policy Research Institute (IFPRI), have been completed. Under the EAN sub component, several analytical and policy studies have been completed and other studies are in progress. Several well-attended workshops and seminars have been conducted, which have proved useful for training as well as policy analysis. These studies and policy seminars have been among the factors that have influenced policy reform in the direction of deregulation and liberalization, such as the recent GOP decisions on wheat derationing, the deregulation of wheat movement within the country, partial deregulation of oilseeds trade, removal of price controls on edible oils and liberalized distribution of imported fertilizer.

The de facto installation of Economic Analysis Network/Directorate of Agricultural Policy (EAN/DAP) organization within the GOP institutional structure, though short of formal institutionalization, is a major accomplishment. The Project Director, EPA (the head of the EAN/DAP organization) reports directly to Additional Secretary, Ministry of Food, Agriculture and Cooperatives (MINFA), who is the Project Coordinator for FSMP. The expatriate and local professional staff are working closely together and the local professional staff of economists is receiving valuable training. A high level Advisory Committee on Policy Analysis in Agriculture has been set up to provide policy guidelines to EAN/DAP.

As a rather novel feature for Pakistan, EAN/DAP has awarded contracts to several private consulting firms to undertake policy research studies. EAN/DAP has also completed (or almost completed) several commissioned studies, undertaken at the request of ECC or MINFA. In order to bring recognition to Pakistani agricultural economists, EAN has actively sought members (individuals or institutions), has published a Directory of EAN members and produces a bi-monthly newsletter.

S U M M A R Y (Continued)

The ADC component is expected to provide a more timely and reliable data system than the existing one based on Area Sampling Frame methodology to support improved economic analysis, planning and decision making for the benefit of Pakistan food security and for the whole economy. Additionally, reliable objective yield and production forecasts will be available a month or more prior to harvest for several major crops. ADC is also making a positive technology transfer of training and experience and commodities in microcomputer use in overall data processing, editing, summarization and time efficiency using consistent standards to maintain integrity of survey data and results. The ADC Component has completed the area sample frame (ASF) and conducted surveys in two districts, one in the Punjab and one in Sind.

The PIM component consists of 3 sub components: Storage Rehabilitation; Storage Technology Development and Transfer; and Vertebrate Pest Control. Progress in these sub components, with the exception of Vertebrate Pest Control, has been much less than anticipated. The primary reason for slow progress has been the GOP's administrative difficulty in responding to conditions precedent in a timely fashion. A study of recurrent storage costs was completed in the Storage Rehabilitation sub component. The Storage Technology Development and Transfer sub component has obtained laboratory equipment, conducted a review of bulk storage studies, and developed a proposal for a bulk storage pilot. The Vertebrate Pest Control sub component has surveyed most of the public storage sector. They found losses due to vertebrate pests were minimal and to a large extent can be controlled with proper maintenance of storage structures. Emphasis is currently divided equally between post-harvest and pre-harvest losses.

FINDINGS: Progress in the implementation of FSMP started slowly. The project started more than a year later than planned largely because of delays in the GOP PC-1 clearance process. Further delays occurred during the implementation of the project because of administrative difficulties related to the Personal Ledger Account (PLA), delays in key appointments and non-fulfillment of CPs.

Progress has varied among the three components, with the achievement factor being the highest in the case of EPA, followed by ADC, then PIM. The EPA and ADC Components have made progress towards institutionalization. Not much progress has been registered so far in the case of the PIM, but significant progress is expected in the near future.

EPA has registered significant accomplishments in terms of strengthening the policy analysis capability within MINFA. Progress will be more lasting if DAP is formally institutionalized, that is, integrated into the GOP institutional structure, included in the MINFA organization chart with a recurrent budgetary provision for all of the existing EAN/DAP staff, including the staff economists in the contractor-oriented EAN organization. In order to ensure high-level attention to policy analysis, the present system in which Project Director, EPA (the head of DAP) reports directly to Additional Secretary, MINFA, without having to go through an intermediate level of authority should be maintained by the end of the FSM project at the latest. There is urgent need for a meeting of the Advisory Committee on Policy Analysis in Agriculture to review the work of EAN/DAP and provide guidance on future work on policy analysis. It must be stressed that the key ingredient for the future success of DAP would be the high quality, policy relevance and timeliness of its studies, workshops, and seminars.

Progress in the ADC component has been substantially less than envisioned in the PP. The ADC CP was not specific on the use of photos and mapping materials needed for

S U M M A R Y (Continued)

ASF construction and survey. This resulted in lengthy delays and is one reason that the ASF program is significantly behind schedule. Development and technology transfer of ASF methodology is the main thrust of ADC. Extra effort, increased staffing and streamlined ASF construction procedure must be implemented as soon as possible to ensure that the area sampling frame is completed throughout Pakistan as originally planned under FSMP. Too little time remains to develop and transfer many additional ASF uses, such as early season objective yield forecasting for major crops, cost of production, farm management, livestock, poultry and price surveys to support FAN and other users in economic and policy analysis and decision making.

ASF survey results thus far are promising with good levels of reliability for major crops. ASF will work well in Pakistan because of high quality photo and mapping materials, and early transfer of ASF survey concepts to provincial data collectors, especially in the agriculturally significant districts. If the decision is made on the basis of the pilot project evaluation to extend ASF methodology throughout the country, the ASF construction and development of the full ASF survey capability must proceed as rapidly as practical or that portion of ASF development that is not completed in FSMP should be extended into ASSP.

The ADC component has been unusually active and productive in training, providing micro-computers and transferring data processing software and technology through FDS to Provincial Departments of Agriculture. This new data handling capability will be especially useful to assist implementing ASF survey nation wide.

The PIM Component has been instrumental in bringing about a major change in fiscal policy in regard to financing repair and maintenance of the public storage sector. Timely information provided by the project helped the GOP make a decision to end the ration shop system for wheat and to consider instituting a price differential between the purchase and selling price of wheat thereby providing an incentive for the private sector to invest in storage facilities.

While progress in PIM has been slow several obstacles have been overcome and the project is now poised to make substantial progress and achieve the desired objectives. Consideration should be given to extending the training program into ASSP.

The evaluations of EPA, ADC and PIM have mentioned specific activities which should be incorporated into the ASSP, after the end of the FSM project.

MAJOR RECOMMENDATIONS

1. Implement formal institutionalization of DAP within MINFA, with recurrent budgetary provisions.
2. Convene a meeting of the Advisory Committee on Policy Analysis in Agriculture.
3. Ensure continued improvement in the quality, policy relevance and timeliness of FAN/DAP studies, workshops and seminars.
4. Conduct a review of the procedures, work plan etc. with the purpose of streamlining the ASF construction and sampling procedures resulting in a more efficient process. Develop a long range work plan with appropriate milestones against which progress can be measured.
5. Prepare the approval process and work plan to obtain a Phase-II decision using January 1989 ASF survey results. Work plan to be developed by July 1, 1988.
6. Develop a revised work plan for an overall storage training program with greater emphasis on management training.
7. Assist the GOP in developing an overall policy strategy and subsequent long range plan for the storage sector.
8. Consider incorporation into ASSP, after the end of the FSM project, of specific activities of EPA, ADC and PIM, as recommended in the evaluations of the three components.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

The evaluation team was comprised of highly competent individuals in the field of economic/policy analysis and statistics. However, lack of expertise in storage engineering was a missing link in the chain and this particular part of the evaluation was perhaps not as fully developed as it might have been. The final document is well written, reflects the current status of the project and provides a helpful course for future action. The process of evaluation, involving GOP representations as well as USAID, was an important aspect and helpful in terms of elevating certain aspects of the project to high levels of concern with the GOP. Vital issues such as the need for institutionalization of DAP, slow movement of the ADC component and limited progress in implementing the PIM sub components are well reflected in the report. Project management and the Mission are aware of these problems and are working with the GOP to resolve them. Several of the recommendations including a calling of a meeting of the Advisory Committee on Policy Analysis in agriculture and a review of ASF procedures and workplans have already taken place.

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EVALUATION OF
FOOD SECURITY MANAGEMENT PROJECT
IN PAKISTAN

A REPORT PREPARED FOR
USAID - PAKISTAN

BY

EVALUATION TEAM
FIELDDED BY

ROBERT R. NATHAN ASSOCIATES
WASHINGTON D.C.

PREPARED AT ISLAMABAD
FEBRUARY, 1988

FSM PROJECT EVALUATION

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Any opinions expressed in this study are those of the Evaluation Team and do not necessarily represent the views of AID or of Robert R. Nathan Associates.

LIST OF ACRONYMS

ACPAA	Advisory Committee on Policy Analysis in Agriculture
ADC	Agricultural Data Collection
AERC	Applied Economic Research Center
APCOM	Agricultural Prices Commission
AS	Additional Secretary
ASF	Area Sampling Frame
ASSP	Agriculture Sector Support Program
CAPES	Center for Applied Economic Studies
CP	Conditions Precedent
C&W	Communication and Works
DAP	Directorate of Agricultural Policy
DFA	Provincial Department of Food & Agriculture
DG	Director General
EAD	Economic Affairs Division
EAN	Economic Analysis Network
ECC	Economic Coordination Committee
ECNEC	Executive Committee of the National Economic Council
EI	Experience Incorporated
EOPS	End of Project Status
EPA	Economic Policy Analysis
FBS	Federal Bureau of Statistics
FD	Finance Division
FFGI	Food and Feed Grain Institute
FSMP	Food Security Management Project
GOP	Government of Pakistan
IFPRI	International Food Policy Research Institute
LOP	Life of Project
LT	Long-Term
MINFA	Ministry of Food, Agriculture and Cooperatives
MOD	Ministry of Defence
MOF	Ministry of Finance

LIST OF ACRONYMS (Cont'd)

NARC	National Agricultural Research Center
NASS	National Agricultural Statistics Service
O&M	Operations and Maintenance
PARC	Pakistan Agricultural Research Council
PASSCO	Pakistan Agricultural Storage and Services Corporation
PC-1	Planning Commission Proforma-1
PDA	Provincial Department of Agriculture
PERI	Punjab Economic Research Institute
PIDE	Pakistan Institute of Development Economics
PLA	Personal Ledger Account
PP	Project Paper
SAPM	Special Assistant to Prime Minister
SOP	Survey of Pakistan
ST	Short-term
STDT	Storage Technology Development and Transfer
TA	Technical Assistance
TDY	Temporary Duty
TOEFL	Test of English as Foreign Language
TOR	Terms of Reference
USDA	United State Department of Agriculture
VPC	Vertebrate Pest Control
VPCL	Vertebrate Pest Control Laboratory (Karachi)

EXECUTIVE SUMMARY

The Food Security Management Project (FSMP) comprises three components: Economic Policy Analysis (EPA), which will assist the Government of Pakistan (GOP) to establish and institutionalize an Economic Analysis Network (EAN) composed of public and private institutions that produce or utilize agricultural analysis; Agricultural Data Collection (ADC), which will provide an improved agricultural data collection system based on area sampling frame methodology; and Post Harvest Management (PHM), which will assist the GOP in improving the management of the public grain storage network.

The EPA component consists of the sub-components, EAN and Special Studies. The Special Studies on wheat pricing and rationing policies, conducted by International Food Policy Research Institute (IFPRI), have been completed. Under the EAN sub-component, several analytical and policy studies have been completed and other studies are in progress. Several well-attended workshops and seminars have been conducted, which have proved useful for training as well as policy analysis. These studies and policy seminars have been among the factors that have influenced policy reform in the direction of deregulation and liberalization, such as the recent GOP decisions on wheat derationing, the deregulation of wheat movement within the country, partial deregulation of oilseeds trade, removal of price controls on edible oils and liberalized distribution of imported fertilizer.

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MAJOR CONCLUSIONS

Progress in the implementation of FSMP has been rather slow. The project started more than a year later than programmed because GOP did not approve PC-1 until September 1985 because of internal clearance procedures. Further delays occurred during the implementation of the project because of administrative difficulties related to the PLA, delays in key appointments, non-fulfillment of CPs, etc.

Progress has been uneven among the three components, with the achievement factor being the highest in the case of EPA, followed by ADC, then by PHM. The EPA and ADC Components have made progress towards institutionalization. Not much progress has been registered so far in the case of the PHM, but significant progress is expected in the near future.

In spite of a slow start in the first year of the project, EPA has registered significant accomplishments in terms of the strengthening of the policy analysis capability within MINFA. Progress in this direction will be more solidly based if DAP is formally institutionalized, that is, integrated into the GOP institutional structure and included in the MINFA organization chart. As part of this institutionalization and in order to ensure high-level attention to policy analysis, it would be important to maintain the present system in which Project Director, EPA (the head of

(x)

DAP) reports directly to Additional Secretary, MINFA, without having to go through an intermediate level of authority. By the end of the FSM project at the latest, recurrent budgetary provision should be made for all of the existing EAN/DAP staff, including the staff economists in the Chemonics EAN organization. There is urgent need for a meeting of the Advisory Committee on Policy Analysis in Agriculture to review the work of EAN/DAP and provide guidance on future work on policy analysis. It must be stressed that the key ingredient for the future success of DAP would be the high quality, policy relevance and timeliness of its studies, workshops, and seminars.

Progress in the ADC component has also been substantially less than envisioned in the PP. The ADC CP was not specific on the use of photos and mapping materials needed for ASF construction and survey. This resulted in lengthy delays and is one reason that ASF program is significantly behind schedule. Development and technology transfer of ASF methodology is the main thrust of ADC. Extra effort, increased staffing and streamlined ASF construction procedure must be implemented as soon as possible to ensure that the area sampling frame is completed throughout Pakistan as originally planned under FSMP. Too little time remains to develop and transfer many additional ASF uses, such as early season objective yield forecasting for major crops, cost of production, farm management, livestock, poultry and price surveys to support EAN and other users in economic and policy analysis and decision making.

ASF survey results thus far are promising with good levels of reliability for major crops. ASF will work well in Pakistan because of high quality photo and mapping materials, and early transfer of ASF survey concepts to provincial data collectors, especially in the agriculturally significant districts. If the decision is made on the basis of the pilot project evaluation to extend ASF methodology throughout the country, the ASF construction and development of the full ASF survey capability must proceed as rapidly as practical or that portion of ASF development that is not completed in FSMP should be extended into ASSP.

The ADC component has been unusually active and productive in training, providing micro-computers and transferring data processing software and technology through FBS to Provincial Departments of Agriculture. This new data handling capability will be especially useful to assist implementing ASF survey nation wide.

The PHM Component has been instrumental in bringing about a major change in fiscal policy in regard to financing repair and maintenance of the public storage sector. Timely information provided by the project helped the GOP make a decision to end the ration shop system for wheat and to consider instituting a price differential between the purchase and selling price of wheat thereby providing an incentive for the private sector to invest in storage facilities.

While progress in PHM has been slow several obstacles have been overcome and the project is now poised to make substantial progress and achieve the desired objectives. Consideration should be given to extending the training program into ASSP.

The evaluations of EPA, ADC and PHM have mentioned specific activities which should be incorporated into the ASSP, after the end of the FSM project.

MAJOR RECOMMENDATIONS

1. Implement formal institutionalization of DAP within MINFA, with recurrent budgetary provisions.
2. Convene a meeting of the Advisory Committee on Policy Analysis in Agriculture.
3. Ensure continued improvement in the quality, policy relevance and timeliness of EAN/DAP studies, workshops and seminars.
4. Conduct a review of the procedures, work plan etc. with the purpose of streamlining the ASF construction and sampling procedures resulting in a more efficient process. Develop a long range work plan with appropriate milestones against which progress can be measured.
5. Prepare the approval process and work plan to obtain a Phase-II decision using January 1989 ASF survey results. Work plan to be developed by July 1, 1988.
6. Develop a revised work plan for an overall storage training program with greater emphasis on management training.
7. Assist the GOP in developing an overall policy strategy and subsequent long range plan for the storage sector.
8. Consider incorporation into ASSP, after the end of the FSM project, of specific activities of EPA, ADC and PHM, as recommended in the evaluations of the three components.

I. INTRODUCTION

A. BACKGROUND

"Food Security is the ability of a country to assure a nutritionally adequate food supply for its population on a continuing basis. Its essential elements are the availability of food and the ability to acquire it". ^{1/}

The above quotation sums up the importance of the objective of food security within the gamut of economic policy objectives. A high priority policy objective of the GOP, with which AID has been in agreement, has been to provide food security for the country's rapidly growing population.

In this policy context, the FSMP "is designed to achieve the food security objectives in a manner consistent with the rational and efficient use of national resources, the overall economic development of the country, and an improved standard of living for farm families and the population at large". ^{2/}

For the attainment of the above objectives, the modus operandi of the FSMP is to "improve the analytical and policy formulation framework, the managerial capabilities and the physical capacity of the GOP to manage the national food security system efficiently and effectively through three related components: EPA; ADC; and PHM. ^{1/} The FSMP organization is shown in Chart 1. A summary description of the 3 components is given below, while a more detailed description is included in the evaluation of each component.

As for economic and policy analysis, MINFA had traditionally turned to the Planning Unit (PU) to undertake some rough-and-ready, ad hoc economic studies. However, with the increasing complexity of agricultural policy challenges, the GOP felt the need for more sophisticated policy analysis which was beyond the capacity of the PU to deliver because of its institutional limitations. The EPA component is designed to build up the analytical and policy formulation framework, both within the GOP and outside. The major sub-component of EPA aims at assisting the GOP to establish and institutionalize an EAN composed of public and private institutions in Pakistan that produce or utilize economic and policy analysis in agriculture. The other related sub-component involves the implementation of a Special Studies Program on selected topics to be carried out by IFPRI in collaboration with Pakistani researchers.

Under the ADC component an improved system for the collection of agricultural data is envisaged. At present crop estimates are issued by

^{1/} USAID/Islamabad/ARD, Agricultural Strategy for Post FY 1987 Program, P.13

^{2/} AID/Washington, Project Paper: Pakistan Food Security Management, p.2

MINFA based on the information that is supplied by the Provincial Govts. where different systems for data collection are being followed. It is planned to improve the existing methodology by using the technique of an ASF.

A major concern for the GOP has been the provision of adequate storage facilities and protection of the stored commodities from moisture and pest damage. In line with these policy objectives, GOP has been building storages and the current capacity is over five million tons. Private sector storages are confined to the market areas only. The physical condition of the storages and their maintenance is reported to be extremely poor resulting in food grain losses ranging from 5 to 6% per annum and even more under most unsatisfactory management conditions. By and large the management of storage facilities is unsatisfactory as persons responsible for treating food grains with pesticides are not fully conversant with the technologies which should be used under different sets of conditions.

With its 3 components, the FSMP addresses all four "generic challenges" identified by AID ^{1/} as extending across all problem areas in Pakistan: reform of the policy environment; rehabilitation and expansion of physical infrastructure; development of human capital; and improvement of institutional performance. The first challenge is addressed by EAN and Special Studies Program (the sub-component of EPA) as well as by an Experience, Inc. (EI) study conducted under the PHM component; the second, by PHM; the third, by the training activity included in all three components; and the fourth, by all three components.

In the policy strategy of the AID Mission in Pakistan, the basic mechanism to achieve policy reform (envisaged in the EPA and PHM) is the policy dialogue ^{2/} which, in the case of FSMP is oriented towards economic liberalization, market-related pricing, deregulation, and expanding the scope of private sector activity.

Through the policy dialogue, it is expected that FSMP would contribute to the achievement of the overall AID program objectives (in Pakistan) ^{1/} of increasing agricultural productivity, reducing the budget deficit and improving the balance of payments performance - for example, reducing the fiscal burden through wheat derationing and cutting the cost of wheat storage, saving foreign exchange by reducing the need for food imports, etc.

B. PURPOSE OF EVALUATION, SCOPE OF WORK

The purpose of this evaluation, simply stated, is to assess the effectiveness of FSMP. The assessment of effectiveness is to be based on an appraisal of the institutional processes and analytical capacities of

^{1/} AID/Washington, Country Development Strategy Statement, FY 1988 - FY 1993: Pakistan, p-34

^{2/} Ibid, p-35

GOP entities involved in project activities, and on a review of progress achieved in establishing the desired institutional framework within the GOP to reach policy conclusions on the basis of empirical data. In this context, the evaluation will assess the impact of FSMP on specific GOP agricultural policy reforms and on the analytical and policy making capability within the GOP.

The detailed scope of work is attached as Annex 1.

C. APPROACH AND METHODOLOGY

In accordance with briefings received by the Evaluation Team from AID/Washington (Asia and Near East Bureau) and from USAID/Islamabad/ARD, the approach of the evaluation team has been to focus on the institutional arrangements, policy aspects and the future mode of implementation. While the reason for stressing the future is obvious, the emphasis on institutional aspects is also well justified. While institutional arrangements are crucial to the functioning of the EAW (since many of the issues relate to the installation or institutionalization of the EAN), they play an important role in the implementation of ADC and PHM as well. The major reason for the importance of institutions in the evolution of FSMP is that a large number of institutions is involved - federal agencies, autonomous public sector institutions, provincial agencies and private sector institutions.

The approach determines the methodology. In order to understand the institutional context for the slow progress or low achievement rate of each component, the Evaluation Team had to rely heavily on interviews, in addition to assimilating a vast amount of reading material. The reading material consisted of GOP and AID policy documents, studies prepared by the expatriate contractors and by GOP organizations involved in the FSMP (such as DAP and FBS), periodic progress reports and work plans submitted to AID by the expatriate contractors for each component, and periodic internal evaluation reports prepared by AID on FSMP components. Interviews (often repeated interviews) were held with GOP officials; USAID/ARD, USAID/PRO and USAID/PDM staff; Agricultural Attache at the U.S. Embassy; and the World Bank Resident Mission. The readings and the interviews gave the Evaluation Team a good feel of the institutional aspects and form the basis for the conclusions.

The basic approach of this evaluation is more analytical than descriptive and is "forward-looking" (that is, comparing actual accomplishments with expectations, analyzing reasons for deviations and shortcomings, and drawing lessons for the future, with particular emphasis on the Pakistan institutional context). The evaluation looks to the future by focusing on the reasons for the shortcomings.

Further details of the methodology followed are given in the attached Outline and Work Plan (Annex 2), prepared in the first week of the Evaluation Team's stay in Islamabad.

D. TEAM COMPOSITION AND WORK PLAN

To conduct this evaluation, Robert R. Nathan Associates fielded a team consisting of M. Haris Jafri (Team Leader), Norman Beller and Dan Tucker. A fourth member, Mian Mumtaz Ali, was added to the team by USAID/Islamabad. The Evaluation Team started work in Islamabad on January 10, 1988. On February 10, 1988 the Evaluation Team finished its work and turned in the final Report to USAID/Islamabad.

The Work Plan is attached as Annex 2.

II. EVALUATION OF EPA COMPONENT

A. BACKGROUND AND DESCRIPTION

At the time of partition, MINFA inherited an Agricultural Economics and Statistics Section which had the responsibility of compiling agricultural statistics, and issuing crop estimates received from the provincial governments. In 1960, this Section was given the additional responsibility of undertaking farm management research and economic studies and, in 1968, it was converted into the Planning Unit of MINFA.

The Planning Unit at present comprises the following four Sections: Agricultural Economics and Statistics; Economic Studies; Farm Management; and Research and Crop Forecasting. However, no serious effort has been made to strengthen this Unit commensurately with its functions. With the passage of time, the Unit has continued to deteriorate in staff strength and capability because of lack of funds.

With the development of Pakistan agriculture from self sufficiency to modest surpluses, the policy issues have become more complex. The GOP felt the need for somewhat sophisticated analytical work to provide a solid basis for policy formulation. While the Planning Unit was the obvious candidate to perform this task, it was institutionally incapable of doing so. Occasional economic research in the field of agriculture had been conducted by the Planning Division, by some provincial government agencies and by autonomous public sector institutions, but the effort was not systematic nor tailored to the policy analysis requirements of GOP. This is the institutional context in which the EPA component was established - that is, in response to GOP's need for systematic and relevant policy analysis that was not being met by existing institutions.

The EPA component is intended to provide a well-defined and viable institutional framework for conducting economic analysis of agricultural policy issues, thereby strengthening the decision-making apparatus. The main objective of EAN (the principal sub-component) of EPA is to strengthen the analytical capabilities of MINFA/GOP by establishing a research network (named Economic Analysis Network) composed of public and private institutions in Pakistan, under the guidance of a high level Advisory Committee on Policy Analysis in Agriculture. This Committee is headed by the Minister of Agriculture and includes the heads of selected federal and provincial government agencies and autonomous institutions. The EAN research program included in-house studies and studies contracted out. EPA also contains provisions for training, both in-country and abroad, in order to strengthen the analytical capacity of MINFA and other institutions participating in the Network.

Another sub-component of EPA is the Special Studies Program conducted by the International Food Policy Research Institute (IFPRI). These studies include a basic study on historical supply/demand trends for Pakistan's major food commodities, a study on consumer behavior in response to price

changes and a policy study on the effects of GOP wheat/atta rationing policies and the implications of derationing, and a policy study on the fiscal cost of GOP wheat pricing policy and its effect on private seasonal storage. The Special Studies Program has been completed.

B. INSTALLATION OF EAN - ACTUAL ACCOMPLISHMENTS

The actual accomplishments so far in terms of the installation of the EAN, may be summarized as follows:

1. In real sense, the EPA/EAN Project and the Directorate of Agricultural Policy (DAP) has been installed within MINFA, with the appointment of a Project Director and a Deputy Director, who also act as Director and Deputy Director, respectively, of DAP and whose salaries are paid by GOP. However, as explained in II.E.1 below, this falls short of formal and full-fledged institutionalization.

2. Since DAP exists de facto pending its formal creation by GOP, this evaluation will portray and appraise the EAN/DAP organization as it exists at the moment. There are, in fact, two parallel organizations, the Chemonics/EAN project organization and the Pakistan EAN project counterpart organization (DAP).

The Chemonics/EAN project organization consists of the resident expatriate Chemonics team and Pakistani staff (see Chart 2). The expatriate team consists of the Team Leader, the DAP Advisor, and the administrative officer. The Pakistani staff includes 4 Staff Economists (3 Ph.D's and 1 MS from U.S. Universities), a Program Specialist (MS from U.S.) a Technical Editor (M.A. from U.S.) and a DP Specialist, in addition to the support staff. The Chemonics Team Leader arrived in Pakistan in September 1985 and was able, with the help of the EAN Coordinator (see below), to set up a functioning organization by November 1985. The recruitment of the Pakistani professional staff for the Chemonics/EAN project organization was delayed for some months because of funding problems (see below re: the PLA). Their recruitment was initiated when it became clear by March 1986 that their salaries would be paid by Chemonics out of project funds, and the Pakistani professional staff (particularly the Staff Economists) was largely in place by June 1986. The option (under the AID/Chemonics contract) to bring in a second long-term expatriate advisor was exercised by AID in mid-1986 in view of the progress achieved by that time, and the DAP Advisor was installed in July 1987. The Chemonics/EAN project organization has been assisted by several short-term expatriate consultants (see Table 1).

The Pakistani EAN project counterpart organization (DAP) consists of the Project Director (Director, DAP), Deputy Director, 4 Research Economists (with MA/MS from Pakistani universities), 1 Economist (Legal), an Assistant Director (Programs), and support staff (see Chart 3). The current full-time Project Director (who also has the title of "Director Agricultural Policy", see II.E.2) was appointed in June 1986. His predecessor held this position on "deputation" from the Planning Unit (MINFA), from September 1985 (the start of the project) to April 1986, but was able to work only part-time on the EAN project. After some

delays in the selection process, the full-time Deputy Director was finally appointed in December 1987. Earlier, during the term of the previous Project Director, there was a Deputy Director for a short period on secondment from MINFA, essentially on a part-time basis. The EAN Coordinator, whose selection was required under the AID contract with Chemonics, was appointed in October 1985 but he resigned in June 1986. With the appointment of the new Project Director on a full-time basis and the decision to bring in the second long-term expatriate advisor in mid-1986, MINFA felt that the appointment of a new EAN Coordinator was not needed. The new Research Coordinator, to be designated shortly, would perform many of the functions expected of the EAN Coordinator. The delay in the recruitment of the Research Coordinator may be ascribed to the search for a suitable candidate who would also be eligible under the GOP service rules. The DAP professional staff (BPS-16 and above) was hired by Chemonics in June 1987 on receipt of the appropriate authorization for Chemonics to pay their salaries out of project funds provided by AID. Some of this staff had worked intermittently in the start-up phase of the project in 1986-87 under short-term contracts financed by Chemonics out of project funds. All Research Economists (BPS-17/18) were first employed in June 1987.

3. It may be said that the Chemonics/EAN project organization began to function at full capacity from mid-1986 and that DAP, the Pakistani EAN project counterpart organization, really came into existence around mid-1986 and was functioning effectively by mid-1987.

4. The linkage between the Chemonics/EAN project organization and the Pakistani EAN project counterpart organization is illustrated graphically in Chart 4. The Chemonics Team Leader works closely with the Project Director (Director, DAP). The Chemonics DAP Advisor is at this time assisting the Director, DAP, but is expected to work closely with the Research Coordinator, once the latter is appointed. The Chemonics Staff Economists work in close coordination with and provide valuable training and advice to DAP Research Economists.

5. In terms of the installation of the EAN/DAP from the institutional point of view, possibly the most important development was the convening, by the Minister of Food and Agriculture, of a high level meeting of agricultural sector decision makers (approximately the same officials as those mentioned in the composition of ACPAA, see below) in February 1985 (before the EAN project was launched) to "finalize the program of research studies for policy analysis for agriculture". At this meeting, the following policy decisions were taken:

a. Two high level committees were established to provide policy guidance for the activities of EAN/DAP --namely, the Advisory Committee on Policy Analysis in Agriculture (ACPAA) and the Technical Sub-Committee for Economic and Policy Analysis (for the composition and the terms of reference of the Advisory Committee and the Technical Sub-Committee, see Tables 2, 3, 4, and 5).

b. Ad hoc Steering Groups normally consisting of 3 EAN/DAP staff members) would be designated for each contract study to facilitate

its implementation (see composition and terms of reference of Steering Groups, Tables 6 and 7).

c. The procedure for the award of contract studies was laid down.

d. A list of 13 research topics, plus two studies to be undertaken by IFPRI (Table 8), was approved.

The ACPAA whose Chairman is the Minister, Food and Agriculture and whose Vice Chairman is the Special Assistant to the Prime Minister (SAPM), is composed of 24 members who are in most cases the heads of the public sector entities at the federal and provincial levels concerned with food and agriculture (including Federal Ministries of Food & Agriculture and Planning & Development; the Agriculture and Planning & Development Departments of the 4 provinces (P&D Board in case of the Punjab); Agricultural Universities in 3 provinces; PARC; APCOM; PERI; AERC; CAPES; and PIDE. The Project Director, EPA, is the ex officio secretary. The ACPAA is "Advisory" only in the technical sense that it makes "recommendations" to the MINFA decision makers who also belong to this Committee. Given its high-level composition, ACPAA was really constituted to provide basic policy guidelines to EAN/DAP in the four areas mentioned in its terms of reference (Table 3). However, because of the large number and high level of its membership, it has proved extremely difficult to convene a meeting of ACPAA. There has been no meeting of ACPAA since the February 1985 high level meeting mentioned above. EAN/DAP has requested MINFA to convene a meeting of ACPAA in the early part of this year and has prepared a working paper for the meeting, summarizing the accomplishments of EAN/DAP in the first two years and the work plan for the third year.

The Technical Sub-Committee consists of 10 members at the technical level (i.e., not the top level as in ACPAA) drawn from MINFA, Federal P&D Division, and P&D Departments of the 4 provinces, with the Project Director, EPA, as the ex officio secretary. According to its terms of reference (Table 5), the Technical Sub-Committee's essential function is to implement the procedure established by the high-level committee in February 1985 for the award of the contract studies. The Technical Sub-Committee met in February 1985, February 1986 and January 1987. At its last meeting in January 1987, the Technical Sub-Committee completed its task of making recommendations for the award of contract studies related to the 13 research topics approved by the high-level committee in February 1985, for which 64 proposals had been received by July 1986. These recommendations were based on a review of these proposals by the ad hoc Steering Groups (see above). Pursuant to the recommendations of the Technical Sub-Committee, it was decided to award contract studies in the case of 9 out of the 13 research topics; one topic was dropped and three proposals were returned for further review, i.e., shelved. Of these 9 studies, 8 would be awarded to private consulting firms (including one to be awarded jointly to two firms), and 1 would be awarded jointly to 3 public sector research institutions, thus making a total of 12 approved proposals for the 9 topics. In March 1987, these proposals were reviewed

by a short-term expatriate consultant who recommended improvement in TORs and proposed methodologies.

6. Another important indicator of the installation of EAN is the designation of 22 "Cooperating Institutions" of EAN and the creation of broad-based EAN membership. The list of "Cooperating Institutions" is similar to the composition of ACPAA, with the deletion of MINFA agencies (which are more than mere "Cooperating Institutions" since EAN is located in MINFA itself) and with some additions (see Table 9). These "Cooperating Institutions" are expected to have a two-way relationship with the EAN, drawing on the research and policy capability of the EAN for their own work and assisting the EAN with the expertise at their disposal.

7. The EAN membership campaign, initiated in December 1985, is designed to build up the agricultural economics profession in Pakistan and to foster agricultural research and policy analysis capability in public and private sector institutions and among individual agricultural economists. The (first) 1987 EAN Membership Directory, distributed in April 1987, contains 315 members working in the above mentioned "Cooperating Institutions" or other organizations. The Directory provides information about EAN members, classified by alphabetical order, organization, province, academic degree, and research specialty. It is the first time that such information has been compiled in Pakistan. It is proposed to update the Directory periodically, say, every other year.

8. The EAN/DAP organization has produced, or is in the process of producing a number of research and policy studies. While some comment on the analytical and policy content of these studies will be made in II.E.3 in the context of their impact on policy reforms, a description of the EAN/DAP program of studies will be useful at this point. There are two main categories of studies, namely, contract studies and in-house studies. The contract studies (9 in number, see II.A.5) are to be awarded by EAN/DAP to outside entities (mainly private consulting firms) under procedures laid down by a high level official committee (see II.A.5). These contract studies basically respond to policy analysis needs suggested by public sector agencies (including research institutes and universities). Of the nine studies to be awarded (see Table 10 for their titles), contracts for three studies were awarded in June 1987. ^{1/} These three studies dealing with constraints on development of agricultural cooperatives, impact of mechanization on productivity and employment, and yield response to fertilizer application, are scheduled to be ready by mid-1988. Contracts for the next batch of three studies, dealing with marketing margins, policies for processing and marketing of perishable commodities, and farm productivity for major crops, are expected to be concluded in the first quarter of 1988. These three studies are expected to be completed before the end of 1988. The remaining three studies are expected to be contracted out later this year

^{1/} Contracts were signed for only 3 out of 9 studies, keeping in mind the monitoring capacity of EAN/DAP and the implementing capacity of the consulting firms.

and to be completed early in 1989. Payment for the contract studies is to be made by DAP out of project funds (also see PLA below). It is important to note that, in spite of the absence of tradition regarding the use of private consultants by the public sector in Pakistan, 24 ^{1/} private consulting firms (Table 11) have been registered with the EAN as an indication of their interest in undertaking the contract studies.

The in-house or staff studies, conducted within the EAN/DAP organization (sometimes with the assistance of short-term expatriate consultants) consist of "early guidance" studies, "base" studies, and occasional (theoretical and policy) studies. There were two early guidance studies, one prepared by two short-term expatriate consultants and the other by the Chemonics Team Leader. These two studies dealt with the role of policy research and analysis in agricultural development and have greatly influenced the evolution of the EAN policy research and analysis program.

The base studies are commodity studies or agribusiness analyses, intended to develop important information and policy issues associated with major farm commodities or agribusiness activities. Base studies have been completed (or are close to completion) on the poultry industry (including a Poultry Data Book compiling data from the FBS and the Poultry Producers Association), the sugar industry, the dairy industry, the wheat seed industry, and the marketing of wheat/atta ^{2/} (including the effects of wheat pricing policies and wheat rationing). The above studies may also be called commissioned studies in the sense that they (except the wheat seed industry study) have been prepared at the request of GOP agencies. The poultry study was prepared at the request of the Economic Coordination Committee (ECC) of the Federal Cabinet and the sugar and dairy industry studies as well as the wheat/atta marketing studies were undertaken at the request of MINFA. Every effort has been made in these base studies to draw policy conclusions, where appropriate, and to present these conclusions in such a way as to merit attention.

The topics of the occasional (theoretical and policy) studies, undertaken by EAN/DAP as commissioned studies or on its own initiative, are the privatization of tubewells; appraisal of EAN research program; appraisal of Planning Unit farm management studies; input-output modeling; appraisal of agricultural price statistics; water resources productivity (investment in irrigation O&M); agricultural supply response (supply model); and regional/national linear programming models. The first five of these studies are commissioned studies, undertaken at MINFA request. EAN/DAP has also prepared short policy briefing papers and summary

^{1/} Forty institutions asked to be registered, of which 33 prequalified. Of these, 24 are private firms, and 9 are public sector institutions.

^{2/} There are several of these wheat/atta studies and these are discussed separately in II.D below, since these belong to the series of Special Studies undertaken by the International Food Policy Research Institute (IFPRI) as part of the EPA component of FSM project.

statements (mostly on the commissioned studies in progress), in order to draw attention to the policy implications. Briefing papers have been produced on poultry industry development; poultry industry demand, supply and prices; poultry industry costs and returns; poultry feed situation; fertilizer policy (commissioned by MINFA); and wheat policy. Summary statements have been prepared for the sugar industry; the dairy industry; the fertilizer industry; the wheat economy ^{1/}; the effects of seasonal prices on government expenditures and private storage ^{1/}; and examples from the input-output analysis of the Pakistan economy. A list of the early guidance studies, base studies, occasional studies, policy briefing papers and summary statements, with observations regarding the status of completion, appears in Table 12. The impact of the commissioned and occasional studies on GOP policy is discussed in II.E.3.

9. Another important accomplishment that has helped the process of installation of EAN has been the convocation of workshops and seminars. The workshops have essentially been a teaching/training device. Seven 2-3 week workshops ^{2/}, attended by 142 participants from public sector institutions, have been held and their subject matter has covered economic and policy analysis in agriculture, economic research policy, agricultural marketing, technical writing, and micro-computer training. A high level of effort (103.4 person-months) went into the preparation and conduct of these workshops. The seminars have served the purpose of dissemination of the analytical and policy studies undertaken by EAN/DAP. Nine such seminars have been held, attended by 261 participants, mostly from the public sector. Their subject-matter has covered edible oils policy; agricultural supply modeling; input-output modeling; constraints on agricultural production; privatizing tubewells; dairy industry; and poultry industry. There was significant private sector representation in the poultry seminar. Since the seminars were based on studies already undertaken or in progress, the level of effort has been rather modest (7.3 persons-months) in comparison with the workshops. A list of workshops and seminars is presented in Table 13.

10. The EAN publications program is a rather modest one so far. The first newsletter, Econogram, was published in December 1985 as part of the initial EAN membership campaign. The Econogram, published regularly on a bi-monthly basis since August 1986, contains news about the activities of EAN and EAN members as well as articles of interest to the Pakistan agricultural economists. The publication of studies was delayed because of technical and procedural problems, but these seem to have been satisfactorily resolved (see V.E.1). The poultry study has been published and serious delays are not expected in the publication of further studies. The EAN has published 6 pamphlets in the Economic Experts series, dealing with input-output models, supply response estimation, farming system approach to research, research proposals, econometrics, and price supports and subsidies. These pamphlets are attractively presented and feature the expatriate consultants. A glossy pamphlet, "Introducing EAN" has also been published.

^{1/} Part of the series of Special Studies conducted by IFPRI.

^{2/} Only 5 days in the case of the second micro-computer workshop.

11. At the request of USAID/ARD, the Chemonics short-term expatriate consultants spent 4 person-months collaborating with other expatriate consultants in preparing the Project Paper for the ASSP.

12. The EAN Project has provided valuable training through the workshops and seminar programs. In addition, EAN project funds have been used to provide widely diversified training in the U.S. (Table 14) on an essentially short-term and ad hoc basis.

13. Important dates in the evolution of the EAN project are given in Table 15.

C. EAN WORK PLAN, 1987-88

The EAN/DAP Third Annual Work Plan for 1987-88 (Table 16), approved by MINFA, envisages the continuation and intensification of the activities described in II.B, as summarized below:

1. Close and effective monitoring of the 1986-87 contract studies, so that the first batch of three studies is of acceptable quality and is completed on time. Similar monitoring is intended for the second batch of three studies.

2. Completion of the staff studies that are currently in progress, namely, studies on dairy industry, sugar industry, and tubewells.

3. Implementation of new in-house analytical and policy studies, particularly the four studies commissioned by ECC and MINFA (see 4 below). The EAN/DAP plans to conduct new studies in the areas of: wheat policy; regional farm programming models; supply response; water pricing; food and fiber inter-industry relationships; agricultural policy simulation modeling; role of agriculture in Pakistan's development; agricultural trade policy issues; extension of the 1987 wheat seed industry study; updating existing edible oils studies; updating the 1987 fertilizer industry study; updating the input-output model for the Pakistan economy; constructing a national macroeconomic model; agricultural marketing manual; and agricultural policy manual.

4. For the 1987-88 EAN research program, five of the EAN cooperating institutions (AERC, PARC, National Fertilizer Development Center, Baluchistan Agriculture Department, and Faisalabad University of Agriculture) have suggested 62 topics, and two studies each have been commissioned by ECC and MINFA (Table 17). The number of the topics suggested by the cooperating institutions has been reduced from 62 to 45 by the deletion of 15 topics covered under existing or future contract studies and of two topics covered under the Special Studies of IFPRI.

5. The EAN/DAP workshop and seminar program will be continued in the third year. Two new workshops, on input-output analysis and econometrics, will be added and there will be a repeat performance of the workshops on agricultural policy and micro-computer training. The workshops will have a duration of 2-3 weeks except the micro-computer workshops which will last only 5 days. Special one- or two-day seminars

are planned on the policy aspects of poultry, sugar, and dairy industry studies.

6. As in previous years, EAN will provide training through the workshops and seminars. However, in view of the rather modest overseas training provided under the EAN (see B.11 above), EAN is contemplating the development of FSM/EAN overseas training plan based on the study of responses to planned surveys, questionnaires and interviews. The training program budgeted for 1987-88 is shown in Table 18.

D. IFPRI SPECIAL STUDIES

Between July and December 1987, the International Food Policy Research Institute (IFPRI) provided a number of policy-oriented studies on GOP's wheat procurement, pricing and rationing policies, as well as several policy briefing papers on these issues. The wheat economy study of November 1987 is a basic study of wheat cultivation in the Punjab and Sind, with historical supply-demand trends for major food commodities and policy implications. The policy studies include the effects of GOP wheat/atta rationing policies and the implication of derationing, and the fiscal cost of GOP wheat pricing policy and its effects on private seasonal storage. Also, there was a study on consumer behavior in response to price changes. Two policy seminars, attended by public sector officials, were held by IFPRI in August 1986 and December 1987 for the discussion of these policy studies. The main policy thrust of these studies was to show: that the rationing system was benefiting the poor in a very small way at a very high fiscal cost; that most of the benefits were reaped by the millers and the ration shop holders who had a vested interest in the system; and that wheat derationing and increasing the differential between procurement and release prices would reduce the fiscal cost of GOP wheat policy, stimulate increased wheat production and promote greater private sector participation in wheat storage over the medium term, which would moderate future increases in domestic wheat prices and/or in wheat imports. The role of these studies is influencing GOP policies is discussed in II.E.3.

E. EVALUATION ISSUES

1. INSTALLATION OF EAN - ACTUAL ACCOMPLISHMENTS VS. EXPECTATIONS

In comparing the actual accomplishments with the expectations (Project Paper, pp. 60-64), allowance has to be made for several factors. The implementation of EAN started a year later than scheduled, since the PC-I for the EPA component was approved by GOP in September 1985. While the Project Paper (PP) is the basic document regarding the FSMP as far as AID is concerned, the PC-I (Planning Commission Proforma No. 1) is the operational document for the implementation of the project, as agreed to by the GOP. The PC-I, required for all projects financed by external resources (loans or grants), is normally a concise document summarizing the essential features of the project such as: objective and purpose; economic justification, particularly with reference to the priorities of the Five Year Plan; activities to be undertaken; technical and financial requirements; external financing; GOP financial contribution and

administrative support; mode and timing of implementation, etc. Occasionally, the PC-I may become voluminous with the inclusion of appendices and annexes. The Executive Committee of the National Economic Council (ECNEC) bases its approval of an externally financed project on the information provided by the relevant PC-I. Amendment of the PC-I, once it is approved by the ECNEC, could turn out to be a cumbersome and time-consuming process. Hence, if an important detail has not been included in the PC-I as approved by ECNEC or if there has been a substantial delay in receiving ECNEC approval of the PC-I, this may have important implications for the mode and timing of implementation of the project.

Reference has already been made to the "PLA problem" as a factor that delayed the progress of EAN, particularly in the first year. It was agreed between AID and MINFA that, in order to ensure orderly and timely implementation, a "Personal Ledger Account" (PLA) for the EPA component would be opened in the Ministry of Finance (MOF), with an initial deposit by GOP of "seed money" or GOP contribution. This initial deposit would be replenished with additional deposits by GOP, as agreed. The local project expenditures included in PC-I would be met by drawing on the PLA, subject to established Ministry of Finance guidelines. Local expenditures to be financed by USAID under PC-I, would first be met out of the PLA, and the AID reimbursement would be deposited in the PLA.

Several problems were encountered before the PLA became operational in July 1986, largely because of the unfamiliarity of both AID and MINFA with the modalities of the PLA. For example:

- o While MINFA is the technical ministry accountable for the PLA and the Economic Affairs Division (EAD) of MOF is responsible for coordination with external donors, it is the Finance Division (FD) of MOF that has the authority to approve the creation of the PLA, to lay down the modalities of its operation, etc. It took time to get the approval of the PLA from the FD.
- o The normal practice of the FD is to provide for a "lapsable" PLA, which means that any moneys left in the Account lapse (i.e., are returned to GOP general funds) at the end of the fiscal year, to be re-authorized next fiscal year. The USAID Mission insisted on a "non-lapsable" PLA and finally got it. But it took time.
- o The GOP austerity policy, with respect to current expenditures was, in part, responsible for delays in the deposit of GOP contributions into the PLA. It is not admissible for this evaluation to criticise this fiscal austerity which is in line with the policy recommendations of USAID as well as of the IMF and WB. However, the delays in GOP deposits into the PLA have, to a great extent, been the result of administrative shortcomings, such as inadequate attention by MINFA to MOF requirements, and ineffective coordination among MINFA, MOF (EAD) and MOF (FD).

- o It has not been possible to use the PLA to pay for EAN publication programs, because of rules limiting the use of private printing facilities by a GOP agency. Apparently, getting the job done at the Government Printing Press (which the rules allow) would involve long delays and the printing quality could not be guaranteed. However, the problem has now been resolved because AID has agreed to pay Chemonics directly for printing costs out of project funds rather than reimbursement through the PLA. Also, EAN is in the process of installing a desktop publishing program with a laser printer that would allow routine production of camera-ready copies.

Other factors that have contributed to the slow implementation of the project in the first year have been mentioned earlier, such as rather rapid turnover at the top echelon of MINFA, delays in key appointments to the EAN project, assignment of essentially part-time Project Director and Deputy Director, etc. All these factors are attributable to one basic reason, namely, the "growing pains" of radically new activity represented by the EAN project, whose potential importance was not adequately recognized by GOP at the outset.

a. Findings

1) The Chemonics/EAN project organization got off to an early start amidst the difficulties mentioned in V.E.1 above and has maintained its productive and dynamic pace throughout. In the early phase, the Chemonics Team Leader was able to get the project off the ground virtually single handedly, mainly with the help of the EAN Coordinator (since the Project Director and Deputy Director worked only part-time).

2) The Pakistani EAN project organization (DAP) was slow in getting started. By May 1986 (almost the end of the first year), DAP was lagging seriously behind expectations. However, with the appointment of the current full-time DAP Director in June 1986 and the recruitment of the Research Economists in June 1987, the pace of DAP accomplishments quickened. The progress is expected to be more rapid in the remainder of the third year with the appointment of the Deputy Director in December 1987. At this time (almost the mid-point of the third year), the accomplishments are more or less in line with the expectations.

3) The Chemonics/EAN project organization as well as the Pakistani EAN counterpart organization have been built up to an adequate level and are functioning effectively. What is equally important, the coordination between the two organizations is close and their working relations are good. It is, therefore, legitimate to consider the two organizations as a single functioning entity and to think in terms of the accomplishments of one EAN/DAP organization.

4) The contract studies program has proceeded much more slowly than expected. Every conceivable delay seems to have occurred in organizing the Steering Groups for each study, in convening meetings of the Technical Sub-Committee, etc. But the basic reason for the delays at

every stage is that the involvement of private consulting firms (and even public sector research institutes) in policy analysis in Pakistan is a departure from tradition. It needed quite an act of faith on the part of everybody concerned to initiate this program. The pay-off is not far off, since the first batch of 3 contract studies would be ready by mid-1988. For the success of EAN, it is vitally important to ensure the high quality of these studies. Given the lack of experience of the private consulting firms in conducting high level research and analysis, and the need for these firms to recruit specialized staff for this purpose, the progress of these studies has needed, and will continue to need close monitoring by EAN/DAP staff, which takes time.

5) As for the commissioned studies, the overall quality (analytical and policy content) has been good. But efforts must be made to improve the quality and to reduce the time lag between the request for and delivery of these studies. There needs to be a follow-through process (which is discussed in the next evaluation issue). Also, EAN/DAP must show its interest in and capacity for undertaking ad hoc "quick and dirty" policy analysis for GOP.

6) As for the policy briefing papers and other staff studies undertaken at its own initiative by EAN/DAP, their evolution during the past few months has been satisfactory and this pace should be maintained, by updating existing studies and conducting new ones, on topics which would be responsive to GOP policy needs. The comments in (5) above regarding quality and timeliness apply to these studies as well.

7) The workshop and seminar program has been well done and has proved effective in providing training to public sector officials, and in projecting a good image of the EAN/DAP capability with respect to analytical methods and policy analysis. The program must be continued and diversified.

8) EAN project funds have financed diversified but essentially short-term and ad hoc training. This is an appropriate time for EAN/DAP to make a systematic study of Pakistan's need for overseas training in agricultural economics using questionnaires, surveys and interviews, if necessary, and to formulate a training plan.

9) The financial and technical problems affecting the publications program seem to have been resolved for the time being as a result of arrangements for providing direct AID financing of printing costs to Chemonics and the acquisition by EAN of a desktop publishing program (see II.E.1). There should be a pick-up in this activity soon. There is need to find a viable solution by making possible the use of PLA funds to have EAN/DAP studies printed at private printing presses.

10) The EAN membership campaign has shown good results and the publication of the Directory and the Econogram are positive developments. However, more is needed to promote active participation by EAN members. This would be an opportune time to organize a Conference of EAN members (like a meeting of the American Economic Association), as envisaged in the Project Paper. While this would be a good public

relations move, it would also have a substantive aspect. Participants would be asked to prepare papers for presentation, discussion sessions would be organized, and the ST EAN consultants would be invited. If enough members show interest, it may be made an annual event. This would create a "constituency" for EAN and would strengthen the position of DAP in the GOP institutional structure.

11) In EAN/DAP, there is a modest representation of women in the professional staff and a fair sprinkling in support roles.

b. Conclusions

1) Credit is due to the Chemonics Team Leader for an excellent performance, particularly in organizing the EAN in the first year (up to June 1986).

2) After a slow start, the pace of implementation picked up, after the appointment in June 1986 of the present full-time Project Director, EPA (Director, DAP) who has put in an outstanding performance in building up EAN/DAP and getting it increased recognition. At this time, the EAN/DAP accomplishments are approximately in accordance with the programmed level.

3) Both the Chemonics/EAN team and the DAP organization are functioning effectively and are working well together, almost like one EAN/DAP organization. The experience is important, since the two organizations would need to be merged on the departure of the Chemonics expatriate team towards the end of the project.

4) It will be important for the EAN/DAP to ensure the high quality of the contract studies, through intensive monitoring of the first batch of 3 studies which will be ready by mid-1988 after a long delay. While not sacrificing quality, there is room for EAN/DAP to reduce the preparation time of the next batch of 3 studies, without sacrificing their quality, by strengthening its monitoring capability.

5) The analytical and policy content of the commissioned studies has been good, but they have taken too long a time. There is room for EAN/DAP to do some "quick and dirty" policy analysis for the GOP.

6) The quality of the policy briefing papers and other staff studies undertaken at its own initiative by EAN/DAP has been good, but some reduction should be possible in their preparation time.

7) The EAN/DAP workshop and seminar program has been effective and deserves to be continued and diversified.

8) There is need for EAN/DAP to prepare a training plan based on a systematic study of Pakistan's need for overseas training in agricultural economics.

9) The financial and technical problems delaying EAN/DAP publications have been resolved for the present, but a more viable

solution would be to use PLA funds to have the printing done at private printing presses.

10) The success of the membership campaign and the publication of the EAN Membership Directory and the Econogram have been worthwhile. There is need to build on this by convening an EAN Conference, where papers would be presented and discussions organized and which (if successful) may be held annually, which would build an EAN "constituency".

11) The modest representation of women at EAN/DAP in both professional and support roles essentially reflects the limited availability of qualified women candidates.

c. Recommendations

1) No recommendation needed.

2) No recommendation needed.

3) No change is recommended

4) - EAN/DAP should intensively monitor the 3 contract studies due mid-1988, so as to ensure their high quality. (EAN/DAP)

- EAN/DAP should strengthen its monitoring capability in order to reduce the preparation time of the next three studies without sacrificing their quality. (EAN/DAP)

5) - EAN/DAP should reduce the preparation time of its commissioned studies without prejudice to their quality. (EAN/DAP)

- EAN/DAP should undertake some "quick and dirty" policy analysis for the GOP. (EAN/DAP)

6) EAN/DAP should update the policy briefing papers and other staff studies undertaken at its own initiative and should initiate new ones in line with GOP policy needs. (EAN/DAP)

7) EAN/DAP should continue its workshop and seminar program on a more diversified basis. (EAN/DAP)

8) EAN/DAP should prepare a training plan on the basis of Pakistan's need for training in agricultural economics. (EAN/DAP)

9) EAN/DAP should persist in its efforts to use the PLA funds for the printing of its studies at private printing presses. (EAN/DAP)

10) EAN/DAP should convene an EAN Conference, which may, if successful, be made an annual event. (EAN/DAP)

11) EAN/DAP should make more diligent efforts to increase the representation of women in both professional and support roles. (EAN/DAP)

2. EXTENT OF "INSTITUTIONALIZATION" OF EAN AND ITS VIABILITY IN GOP POLICY MAKING STRUCTURE

While the EAN/DAP organization exists de facto and is functioning well, its installation does not connote formal and definitive "institutionalization", as explained in the paragraphs that follow.

GOP has not yet formally created DAP, even though the appointment letter of the present Project Director (issued by GOP Planning and Development Division on June 4, 1986 - see Annex 3) also designates him as "Director Agricultural Policy". Hence, the organization chart of MINFA shows only the Project Director, EPA, and not DAP (see Chart 5).

Under the PC-I, GOP is committed to the payment of the salaries of the Project Director and Deputy Director only to the end of the EPA Project and not beyond. Hence in the absence of a deliberate and affirmative decision by GOP to provide adequate funding, the EAN/DAP organization would have to be disbanded on termination of current AID funding.

In addition to the payment of salaries of the Project Director and Deputy Director, GOP pays the salaries of the support staff only (secretaries, clerks, chauffeurs, messengers), and will pay these salaries till the end of the project, while the salaries of the professional staff (Research Coordinator, soon to be appointed, and Research Economists) are paid by USAID through Chemonics out of EPA project funds (see Chart No. 6).

The Project Director (who is also the Director Agricultural Policy, see above), reports directly to the Additional Secretary, MINFA (see Chart 5) who is also the GOP Coordinator for FSM project. In terms of the GOP hierarchy, this is a distinct improvement over the configuration envisaged in PP according which the Director, DAP, would have reported to the Head of PU (namely, the Economic Consultant), as shown in the evolution of the place of DAP within MINFA (see Chart 7).

In order to resolve the problems encountered in the institutionalization of EAN/DAP, it is necessary to understand the institutional context in which EAN/DAP was created. The basic fact is that EAN/DAP is a newcomer on the scene where other institutional players have been active for some time. To mix metaphors a little, this has given rise to a "turf" problem. Hence, until it clearly proves its usefulness, EAN/DAP will encounter resistance from the established institutions and departments. This is not peculiar to GOP; it is a "natural phenomenon" of all bureaucracies.

The Planning Unit (PU) has had a long tradition within MINFA, not only of disseminating agricultural statistics but also of undertaking some rough-and-ready, ad hoc, policy studies. However, with the increasing complexity of agricultural policy challenges, GOP felt the need for more sophisticated policy analysis which was beyond the capacity of PU. For

this reason, both the PP and the PC-1 refer to the proposed reorganization of the PU, including the creation of a well-endowed Directorate of Agricultural Policy which would be able to undertake the systematic and comprehensive policy analysis needed. As events have unfolded in the past three years, while the EAN/DAP organization has been built up (largely with external resources), the institutional capacity of PU has been debilitated because of budgetary constraints. Apart from the PU, certain autonomous public sector institutions, such as PARC (through its Social Sciences Division), APCOM, PERI, AERC and CAPES, undertake some economic research (including policy analysis) in agriculture. But the actual work of the above institutions in policy analysis has been rather limited, and has fallen short of the above mentioned need for a well-planned program of policy analysis in agriculture.

a. Findings

1) Every effort has to be made to ensure that DAP is formally "institutionalized". The most important step would be for GOP to make DAP formally a part of MINFA (to be shown in its organization chart) with recurring annual budgetary provision. DAP would be headed by a Director General (BPS 20) and a Deputy Director General (BPS 19). The budgetary provision should include not only the D.G. and the Deputy D.G. (as at present with the titles of Project Director and Deputy Director) but all the Pakistani professional and support staff in the EAN/DAP organization. Specifically, this would include the EAN Staff Economists and the DAP Research Economists. It is true that the EAN Staff Economists would have to accept a cut in nominal salary (even if they are offered BPS 18) as a trade-off for a permanent appointment but their real income may not be seriously affected if the substantial GOP fringe benefits are taken into account. The annual work plan of EAN/DAP would continue to be approved by MINFA, as at present.

2) Under the set-up after its formal institutionalization, it would be important for the new D.G. of DAP to have direct access to the Additional Secretary(AS), MINFA, without having to go through an intermediate level of authority. At present, the Project Director, EPA, reports directly to the AS, MINFA. The original plan (mentioned in the PP and the PC-1) of placing DAP within the Planning Unit has now been overtaken by events. If any intermediate level of authority is now placed between the proposed DG, DAP and AS, MINFA, it would be a retrograde step and would do harm to the EAN/DAP organization that has been so strenuously built up over the last three years.

3) The Advisory Committee on Policy Analysis in Agriculture (ACPAA) has not met even once since its creation by a high-level agricultural policy analysis committee in February 1985. DAP has requested MINFA to convene a meeting of ACPAA in early 1988 and has prepared a working paper for the meeting. Apparently, it has not been possible to secure a consensus on a meeting date because of its large membership (24) and its high-level composition (top decision makers of public sector institutions in the field of agriculture). This reluctance to meet may also be due to a misunderstanding among some members about the agenda - namely, that it would consist largely of organizational

matters and the contract studies program as in the case of the high-level committee meeting of February 1985. Two urgent actions are called for:

- A meeting of ACPAA should be convened very shortly. The meeting is important and urgent not only in view of the need to review the work of EAN/DAP and to issue policy guidelines, but also because it would be a gesture of GOP recognition of the importance of policy analysis and a symbol of support for the work of EAN/DAP. Thereafter, every effort should be made to have a meeting of ACPAA once a year.

- It should be clearly spelled out that the agenda would include important topics, such as: review of the work of EAN/DAP organization since its inception in the field of policy analysis; assessment of the policy analysis needs of the public agricultural sector (represented by the 24 members of ACPAA) in the coming year, including a review of the 45 research topics proposed to EAN/DAP by its "cooperating institutions"; and issuance of policy guidelines to the Technical Sub-Committee and to EAN/DAP. Specific recommendations to implement the policy guidelines would be formulated by the Technical Sub-Committee, with staff support from EAN/DAP which would serve as the secretariat of ACPAA and the Technical Sub-Committee.

4) The Technical Sub-Committee met once a year during 1985 to 1987 and its functions mainly had to do with the award of the contract studies. The TOR of the Technical Sub-Committee should be broadened to include the formulation of specific recommendations for the implementation of the policy guidelines issued by ACPAA. The Technical Sub-Committee would thus become a sort of executive committee of ACPAA and should meet at least twice a year.

5) With respect to the relationship of EAN/DAP with the "cooperating institutions", it is natural to expect, in the initial stages, a certain degree of resentment of a newcomer on the part of existing public sector institutions. This resentment (or coolness) wears off in time provided that the newcomer convinces the existing institutions that it is not out to encroach on somebody else's "turf". The EAN/DAP organization has to convince the "cooperating institutions" that it has been created to fill a vacuum and to supply a felt need, and that its role is to supplement their work, not to compete with them. The proper relationship, which seems to be gradually evolving, would be that of two-way communication and collaboration, with the EAN/DAP providing services to the "cooperating institutions" and at the same learning from the expertise of "cooperating institutions" such as PARC and APCOM. It is a fact of life that the onus is on EAN/DAP as a newcomer to make the first move in this process of improving communication and collaboration and to do so with full attention to the sensibilities of the GOP institutional structure. While EAN/DAP has had considerable success in developing good relations with the "cooperating institutions", it has to persist in these efforts until it is fully integrated in the governmental structure. It would greatly help if the GOP makes it clear that it considers policy analysis to be an important activity. The implementation of the above recommendations regarding ACPAA would go a long way in this respect.

b. Conclusions

1) The formal "institutionalization" of DAP, which means making DAP (headed by a Director General) formally a part of MINFA with recurring annual budgetary provision, is urgently needed.

2) It is important for the new Director General of DAP to report directly to the Additional Secretary, MINFA, without having to go through an intermediate level of authority.

3) No consensus has been reached on convening a meeting of the Advisory Committee on Policy Analysis in Agriculture in early 1988, as requested by DAP. There is urgent need for such a meeting to make recommendations on a broad agenda.

4) There is need to broaden the role of the Technical Sub-Committee to include the formulation of specific recommendations for the implementation of the policy guidelines issued by ACPAA.

5) The onus is on EAN/DAP as a newcomer to improve communication and collaboration with the "cooperating institutions".

c. Recommendations

1) GOP should urgently take the following steps for formal "institutionalization" of DAP:

- Make DAP formally a part of MINFA (to be shown in its organization chart) with recurring annual budgetary provision. (GOP)

- DAP should be headed by a Director General (BPS-20) and a Deputy Director General (BPS-19). (GOP)

- The budgetary provision should provide funds not only for the Director General and the Deputy Director General, but for all the Pakistani professional and support staff in the EAN/DAP organization, including EAN Staff Economists and the DAP Research Economists. (GOP)

2) The new Director General should report directly to the Additional Secretary, MINFA, without having to go through an intermediate level of authority. (GOP)

3) A meeting of ACPAA should be convened urgently. (GOP)

- There should be a meeting of ACPAA once a year henceforth. (GOP)

- The agenda for the ACPAA should be broadened to include: review of the work of the EAN/DAP organization; assessment of the policy analysis needs of the public agricultural sector; and issuance of policy guidelines. (GOP)

4) The TOR of the Technical Sub-Committee should include the making of specific recommendations to implement the policy guidelines issued by ACPAA. (GOP)

- The Technical Sub-Committee should meet at least twice a year. (GOP)

5) EAN/DAP should persist in its efforts to improve communication and collaboration with the "cooperating institutions". (EAN/DAP)

3. ROLE OF EAN AND SPECIAL STUDIES IN INFLUENCING GOP POLICY REFORM

The policy studies undertaken by EAN and the policy thrust of the IFPRI Special Studies have been described in II.B and II.D. The general policy orientation of these studies may be summarized as realistic and flexible pricing policies, deregulation, and incentives for greater private sector participation.

a. Findings

1) It can safely be stated that the EAN and IFPRI studies have influenced GOP policy reform in various areas. It is, however, not possible to gauge the extent of such influence, since similar policy recommendations have been made to GOP by USAID (in other programs such as PL-480), by the World Bank, by the Asian Development Bank, and by GOP policy analysts and advisors (in addition to EAN/DAP).

2) Specific examples of this influence on GOP policy reform can be cited, such as: wheat derationing; deregulation of wheat movement within the country; partial deregulation of oilseeds trade by allowing private sector imports and by removing controls on wholesale and retail prices for edible oils; and increased private sector allocation in the distribution of imported fertilizer.

3) The above experience demonstrates that the impact of policy analysis can be effective in generating policy reform if it is of good technical quality and was prepared at the right time and at the request of the government. All these conditions were present in the case of wheat derationing where GOP was on the brink of decision and the IFPRI studies tilted the balance in favor of wheat derationing decision.

b. Conclusion

Policy analysis can be effective in generating policy reform if it is of good technical quality, and is prepared at the right time and at the request of the government. Those EAN/DAP and IFPRI studies that met these criteria have influenced GOP policy reform in various areas.

c. Recommendation

No recommendation needed.

4. FUTURE ROLE OF EPA, INCLUDING POSSIBLE INCORPORATION INTO ASSP

a. Findings

1) To sum up, the EAN/DAP organization has matured considerably and is ready to take on new challenges. However, EAN/DAP is still "on probation" and must "prove" itself as far as the GOP is concerned. It has to earn GOP confidence through its accomplishments. Hence, EAN/DAP must make every effort to be responsive to GOP needs for policy analysis, must be prompt in meeting these needs, and must, above all, produce studies of high quality. At the same time, it is vitally important that GOP policy makers believe in the need for systematic and institutionalized policy analysis. The GOP may give much needed encouragement to EAN/DAP by showing its confidence. The best way for GOP to do so is to "institutionalize" EAN/DAP formally and to give it more policy analysis assignments, including some urgent assignments that have to be completed in a matter of days. Given more time and continued efforts to improve EAN/DAP performance, there is every likelihood that the GOP will associate it more closely with analysis of agricultural sector policies and will accord formal institutionalization to EAN/DAP.

2) EAN/DAP has less than two years, until Chemonics winds up its operations, to establish a solid reputation for itself and to stand on its own two feet. Its activities over this period have to be shaped by a continuing awareness of this deadline. Establishment of a solid reputation would also help EAN/DAP attract high-quality staff.

3) Assuming that GOP has implemented the formal "institutionalization" of DAP by the end of project, the question arises whether the level of funding by GOP would be adequate to keep EAN/DAP functioning effectively. It is important, as an indication of its commitment to this program, for GOP to make recurrent budgetary provision (see II.E.2.c) in an amount sufficient to meet the payroll of professional and support staff currently employed in both EAN and DAP organizations. However, given the uncertain economic and budgetary outlook over the next 2-3 years, it is possible that, amidst competing demands for scarce fiscal resources, the GOP budgetary allocations to support EAN/DAP at full strength may fall short of the amount needed. To anticipate such an outcome, it may be prudent to make provisions in ASSP to support EAN/DAP activity up to a certain percentage, say 40%, of its ordinary or recurring annual expenditures, which would decrease by, say, 10% each year. In addition, ASSP may contain an allocation for certain extraordinary or non-recurring expenditures, such as the cost of short-term expatriate technical assistance for specific studies, workshops, and/or seminars, and the cost of acquisition of microcomputers and other imported equipment. The Evaluation Team believes that ASSP support for this activity, a valuable input into the formulation by GOP of soundly conceived agricultural sector policies, would be fully in accordance with AID objectives in Pakistan.

b. Conclusion

1) The EAN/DAP organization has come of age but it has to earn GOP confidence by producing studies of high quality, by being responsive to GOP needs, and by being prompt in meeting these needs. It is equally important for GOP to show its confidence in EAN/DAP by according it formal institutionalization, and by giving it exacting policy analysis assignments.

2) EAN/DAP has less than two years' time, until the termination of Chemonics operations, to establish a solid reputation which would lead to its being accepted in the GOP hierarchy and would enable EAN/DAP to attract high-quality staff.

3) Given that EAN/DAP activity is worthwhile and keeping in mind the possibility that GOP funding after the formal institutionalization of DAP may be inadequate because of budgetary squeeze, it will be desirable for AID to provide some supplementary financing for future EAN/DAP activities through ASSP.

c. Recommendations

1) - In order to earn GOP confidence, EAN/DAP must make every effort to produce studies of high quality, to be responsive to GOP needs, and to be prompt in meeting these needs. (EAN/DAP)

- GOP should show its confidence in EAN/DAP by according it formal "institutionalization" and by giving it exacting policy assignments. (GOP)

2) In order to gain full acceptance within MINFA and to attract high-quality staff, EAN/DAP must work hard to establish a solid reputation in less than two years before Chemonics leaves the scene. (EAN/DAP)

3) If budgetary austerity makes it impossible for GOP to provide adequate funding to a fully "institutionalized" DAP, AID should make provisions in ASSP to finance a certain percentage, say, 40% of DAP's ordinary or recurring annual expenditures, plus certain big-ticket foreign exchange costs, which would decrease by, say, 10% each year. (AID)

5. STATUS OF FULFILLMENT OF CONDITIONS PRECEDENT (CPs) AND COVENANTS

All the CPs and Covenants are included as Annex 5.

a. Findings

1) All the CPs pertaining to EPA have been fulfilled. In CP 3a, the terms "Steering Committee" and "Economic Analysis Network Group" should be understood to mean "Advisory Committee on Policy Analysis in Agriculture" and "Technical Sub-Committee" respectively.

2) Covenant 3 pertaining to EPA has been fulfilled.

3) As regards Covenant 4 pertaining to EPA, GOP has abided by the relevant PC-I provisions by making non-recurring annual budgetary provision for the salaries of the Project Director and Deputy Director, EPA, and the support staff. Hence, GOP may be deemed to be in substantial compliance with Covenant 4.

4) Covenant 5 pertaining to EPA effectively applies as of the end of the project. However, in order to ensure compliance at that time, GOP has to begin making the necessary dispositions now. Implementation of the recommendations (II.E.2.c) for formal "institutionalization" of EAN/DAP including the allocation of budgetary funds should be deemed to constitute "reasonable efforts" under the terms of Covenant 4 and to signify the fulfillment of Covenant 4.

5) To the best of knowledge of the Evaluation Team, GOP is in substantial compliance with the provisions of Covenant 6 insofar as it applies to EPA.

b. Conclusion

GOP is in substantial compliance with all the CPs and Covenants.

c. Recommendation

No recommendation needed.

6. ACTUAL FULFILLMENT OF AID AND GOP RESPONSIBILITIES WITH RESPECT TO EPA AS COMPARED WITH PROJECT PAPER REQUIREMENTS

a. Findings

1) AID Responsibilities

The overall AID management role with respect to FSMP has been evaluated in V.B. Within ARD/EMPAD, the management and coordination of EPA has been handled by the Program Specialist in charge of EPA, under the overall supervision of the Division Chief, EMPAD/ARD who is also the Project Officer for FSM Project. The management and coordination of EPA has been performed competently and imaginatively. Problem solving ability of a high order has been displayed in dealing with previously unknown sensibilities of the GOP institutional structure and with unfamiliar problems such as the PLA.

2) GOP Responsibilities

- The Overall GOP performance with respect to FSMP has been evaluated in V.B. With respect to EPA, GOP has substantially implemented the responsibilities it undertook according to PC-I, although avoidable delays have occurred. The Project Director, Deputy Director, and EAN Coordinator were appointed in the first year of the project.

However, as mentioned in II.B, the Project Director and Deputy Director worked only part-time and the Deputy Director was transferred to other duties after a few months. Thus, from September 1985 to June 1986, the Chemonics Team Leader, with the help of the EAN Coordinator, had a major role in the initial organization of EAN. The present full-time Project Director was appointed in June 1986 and, after the resignation of the EAN Coordinator in the same month, GOP felt that this position was no longer needed with the appointment of the new Project Director in June 1986. The Evaluation Team agrees with this assessment in view of the excellent performance of the present Project Director (Director, DAP). After a long delay, the Deputy Director was appointed in December 1987.

- Although the PLA mechanism eventually began to function, the problems encountered (described in II.E.1) led to considerable delays in the implementation of EAN. This could have been avoided if there had been a clear recognition within GOP of the potential importance of this activity and if there had been better coordination among MINFA, EAD and Finance Division.

- Apart from the procedural problems of the PLA, the actual deposits by GOP into the PLA were delayed because of fiscal stringency. The PLA was opened with a deposit of Rs. 839,000 in July 1986, which was replenished with another deposit of Rs. 385,000 in July 1987, making a total of Rs. 1,224,000. GOP has now agreed to make an additional deposit to bring the PLA up to Rs. 2,000,000. This amount is expected to be adequate for EAN/DAP current expenditures, with periodic replenishment through AID reimbursement out of project funds for approved expenditures.

- The AID reimbursement check for Rs. 900,000 of expenses, incurred by EAN/DAP on contract studies in June 1987 ^{1/}, was received by the Finance Division in September 1987 but was not deposited in the PLA of EPA until January 1988. This delay caused disruption in EAN/DAP and every effort should be made by GOP to prevent a repetition.

b. Conclusion

1) AID management and coordination of EPA has been competent and imaginative.

2) GOP has substantially implemented the responsibilities it assumed in the PC-1 for EPA, but there have been avoidable delays, as detailed in the findings.

c. Recommendations

1) No recommendations needed.

2) GOP should ensure that avoidable delays in project implementation do not occur during the LOP in future. (GOP)

^{1/} Representing 25% advance payment on the first batch of three studies at the time of signing of the contract.

7. COMPARISON OF PROJECT PAPER "LOG FRAME" WITH ACTUAL OUTCOME

Any comparison of the Log Frame (Annex 6) vs. actual outcome should make allowance for the fact that the project started a year later than scheduled (see II.E.1). Also, the implementation of the project was slowed down because of the PLA problem (II.E.1) and delays in making key appointments (see II.E.1). Furthermore, for an activity like the EPA, it is difficult, midway during the LOP, to measure progress toward the achievement of the sector goal, project purpose, and outputs included in the Log Frame, particularly in view of the late start and slow implementation of EPA.

a. Findings

1) Progress toward the achievement of the sector goal is appraised in the overall FSMP evaluation (see V.C).

2) After the problems encountered in the first year, the progress of EPA in the second and third years was substantial. Hence, it is encouraging to note significant progress towards the achievement of the project purpose for EPA, namely, improvement of the analytical and policy formulation framework. In fact, some of the EOPS conditions (indicators of progress) already exist in a substantial (not just symbolic) way. For example: a national network of analytic resources is in place; priority policy issues in food security management are beginning to be addressed; and some relevant economic and policy analysis of good quality has been produced. Further progress is expected over the next 2-1/2 years of the LOP. The assumptions, applicable to EPA, for achieving purpose and outputs, are realistic and are still valid, subject to some reservations. There is evidence, both verbal and written, of the continued commitment of federal and provincial governments to improve agricultural sector planning and operations, through economic analysis and management. However, considering the evolution of EPA so far, the Evaluation Team feels that more intensive efforts are needed to translate this commitment into meaningful and effective actions. Similarly, while the analytic work is beginning to be utilized by decision makers, there is much room for improvement in this regard.

3) Progress has definitely been made towards achieving the basic EPA output of improving the institutional capacity to carry out economic and policy analysis. The objectively verifiable indicators of the magnitude of output, most of which are qualitative, show encouraging progress, sometimes with reservations. For example, a role and mandate for the EAN has been agreed upon by the concerned government institutions, but this agreement has not so far resulted in formal "institutionalization" of the EAN, and the two-way communication and collaboration between the EAN and some of the "cooperating institutions" leaves something to be desired. In place of the EANG, there is the Technical Sub-Committee which is fairly active. EAN/DAP organization is staffed with qualified personnel; but to say that it is well organized and fully staffed with qualified personnel at this time would involve a little overstatement. There is an ongoing economic and policy analysis program based on an annual research agenda developed by a high level GOP

committee; however, there is need for ACPAA to meet now and to meet annually on a regular basis. Of the two quantitative indicators, one has been achieved with the completion of two major specific policy studies. However, the quantitative target for training is far from being met for reasons discussed in II-E-1, namely, absence of a training plan and inability of several qualified candidates to pass the TOEFL test for English language capability. The assumptions have, by and large, proved valid with some qualifications. For example, GOP has prepared and approved the PC-I; however, the approval was not forthcoming until September 1985, as a result of which the start of the project was delayed by over a year. Project advisors are in the process of transferring skills and technology through workshops, seminars, studies and on-the-job training, but it is too early to say how successful they have been. As for the third assumption, while GOP has provided staff and resources more or less as programmed in PC-I, they cannot be considered sufficient in terms of the needs of the project, since a large share of project expenses is still being financed out of project funds. This inadequacy of GOP resources is due basically to budget austerity, but the PLA problem magnified the difficulties.

b. Conclusions

1) In spite of problems encountered during the first year, substantial progress has been made towards achieving the project purpose for EPA. The assumptions for achieving project purpose and outputs for EPA, are realistic and are still valid, subject to some reservations.

2) Progress has been made towards achieving the project output for EPA. The objectively verifiable indicators of the magnitude of output, show encouraging progress, except in one case. The quantitative target for training is far from being met (also see Conclusions for Evaluation Issue V.E.1).

c. Recommendations

1) No recommendation needed.

2) EAN/DAP should pay more attention to the training activity, so as to bring the achievement up to the target (also see Recommendations for Evaluation Issues V.E.1).

III. EVALUATION OF AGRICULTURAL DATA COLLECTION COMPONENT

A. BACKGROUND

At the federal level MINFA annually issues three successive estimates for major crops namely wheat, cotton, rice and gram etc. and two estimates for crops like maize, barley, rape, mustard and tobacco and only one estimate for fruit and vegetable crops based on the information supplied by the provincial governments. In the earlier years the Revenue Departments of provincial governments were responsible for collecting agricultural data used for preparing crop estimates. However, with the requirement for more reliable statistics and to avoid criticism of the crop reporting system used by the revenue department, these functions were transferred to the provincial agricultural departments who were made responsible for assessing yields and to release production estimates after obtaining area figures from the revenue department. Subsequently this methodology was changed for wheat and replaced with sampling techniques for estimating crop yields and production.

This system functioned well until 1970. But later, due to changes in the administrative boundaries of the country, the procedures for collecting agricultural statistics lost coordination with the result that different provinces organized different systems for collecting agricultural data based on their resources. While some provinces developed sample designs for selected crops to obtain area and yield, other provinces retained the old system of visual estimation.

The system now being used for crop estimation in different provinces is as follows:

1. PUNJAB

In Punjab, the first and second estimates of area sown for major crops are a result of sample surveys undertaken by Agriculture Department. The final estimate of area sown for each crop is based on complete enumeration of all Mazas carried out twice a year by Patwari of the revenue department. This information is passed on to the Provincial Bureau of Statistics for computerization. The same information is later sent to Agriculture Department for reconciliation and use in estimating production. Preliminary production estimates of major crops are based on opinion surveys undertaken by crop reporting service of the Agricultural Department. For final estimates crop cutting experiments are conducted for wheat, cotton and rice and growers opinion surveys for other crops. The final estimates are cleared by the Provincial Agricultural Statistics Coordination Boards. In this province the sample size for wheat is one thousand villages of the total 25,000 villages. The same sample is used for estimating production of other crops using crop cutting methodology although the sample was designed only for wheat.

2. SIND

In Sind, 1st and 2nd estimates of area for wheat, cotton and rice are prepared on the basis of area sown as collected by Agricultural Extension Staff. The final estimates of area sown under wheat, cotton and rice are prepared through sample surveys undertaken by the statistical staff of the Provincial Agriculture Department. For sugarcane, a farmer opinion survey is conducted by the Assistant Statistical officer for the area under his jurisdiction. The acreage estimates for the district are collected by the Statistical Officers of Revenue Department and then passed on to the Joint Director (Statistics) at the provincial headquarters. The consolidated information is examined by a sub-committee comprising representatives of the Provincial Revenue, Agriculture and Irrigation Departments and Bureau of Statistics. The 1st and 2nd estimates of all crops are approved by Secretary, Agriculture. The final estimates are approved by the Provincial Agriculture Statistics Coordination Board which is headed by the Additional Chief Secretary (Development).

Preliminary estimates of production for all major crops are based on subjective judgement of the staff of Agriculture Department. For final estimates, crop cutting experiments are conducted for wheat, cotton, and rice by Agriculture Department. Production estimates for remaining major crops are based on subjective judgement of the Provincial Agriculture Department and opinion survey conducted by Statistical staff of Agriculture Extension Department. The final estimates are checked by a Sub-committee comprising representatives of the Provincial Department of Agriculture Revenue, Irrigation and Planning and Development. In Sind the size of the sample for wheat is 285 villages of a total number of about 6 thousand villages. For cotton, rice and sugarcane it is 125, 140 and 75 villages respectively.

3. N.W.F.P.

In NWFP, the 1st estimates of area sown for all crops are determined on the basis of subjective judgement of the Crop Reporting Staff of the Provincial Agricultural Department. The 2nd estimate is based on sample survey method for 5 major crops.

The final estimates are based on Girdawari undertaken by the Revenue Patwari. These are however, examined by a sub-committee comprising representatives of Revenue, Agriculture, Irrigation and Planning and Developments.

Preliminary production estimates of 5 major crops are determined on the basis of grower's opinion survey undertaken by the Crop Reporting Staff of Improved Crop Estimates Project of the Provincial Agriculture Department and later approved by Secretary, Agriculture. Presently the final estimates of eight crops are based on the results of crop cutting surveys using random sampling techniques. The final estimates of all crops are then examined by a sub-committee comprising representatives of Provincial Revenue, Irrigation, Agriculture and Planning and Development Departments. These estimates are subsequently approved by the Provincial

Agriculture Statistics Coordination Board. The sample size currently under use is 433 villages out of a total number of eight thousand villages and the sample is used for two overlapping sub-samples of villages for winter and summer crops.

4. BALUCHISTAN

In this province data on crop estimates has not been regularly available. It is only recently that Agriculture Department has started collecting and compiling crop data through their extension staff based on their personal judgement. As far as production is concerned, yields of all the crops are fixed on the basis of subjective judgement of the extension staff of Agriculture Department.

For the issuance of these estimates a crop calendar was prepared by MINFA in consultation with the provincial governments based on the crop production seasons to determine the time by which area and production estimates should become available for use by the Federal and Provincial Governments. But practically the calendar has never been followed and the issue of crop estimates has been delayed.

With the efforts made so far to strengthen the existing system of collecting agricultural statistics an institutional base for crop reporting has been established particularly in the provinces of Punjab and Sind. But timeliness and crop forecasting still remain important goals to achieve. Since 1979, crop estimates are prepared by the provincial agriculture departments and after having been cleared by the Provincial Statistical Boards are sent directly to the Federal Bureau of Statistics in the statistics division, who collate and submit them to MINFA for issue. With this arrangement the time lag for the issue of these estimates has been a problem. Accordingly, one of the primary requirements for the ASF methodology is to be able to provide timely data which it is capable of doing. However, the process of arriving at an official estimate and publishing it must be streamlined.

B. GOAL, PURPOSE AND OBJECTIVES

The purpose of the ADC component stated in the PP is to provide an improved agricultural data collection system based on the area sampling frame methodology, which is to be in place and providing reliable data on a systematic and continuous basis. The name of project in PC-I is Agricultural Data Collection (ADC) using Area Sampling Frame (ASF) concept.

The ADC objective is to develop and institutionalize an ASF data collection and analysis system that will produce reliable and timely agricultural statistics in a cost efficient manner. The strengthened FBS and PDA's will be able to provide current reliable statistics on agriculture for improved planning and decision making so that resources can be allocated more effectively for the benefit of Pakistan's food security.

The ADC project output is an established national area sampling frame with trained personnel at all levels.

C. DESCRIPTION OF PROJECT

Timely and reliable agricultural data on area, production, prices, production costs, storage, cultural practices and other related items are essential inputs needed in developing effective economic policies and decision making concerning the agricultural sector and the total economy in Pakistan.

The GOP identified in PC-I several weaknesses in the existing agricultural data system in Pakistan:

1. Geographic coverage of agricultural statistics in NWFP and Baluchistan is not complete.
2. Reliability is not known of acreage statistics of crops sown throughout all provinces from surveys conducted by Departments of Revenue and Agricultural Extension.
3. Yields of crops are determined subjectively.

GOP concluded, "There is, therefore, an urgent need to modify the existing system. The introduction of Area Sampling Frame (methodology) is considered to be the answer to above mentioned shortcomings".

Area Sampling Frame is a concept for developing a sampling frame that contains 100% of the target population without omission or overlap, provides a clear cut means of identifying each sample unit, arranges characteristics so that probability sampling can be done efficiently, and provides for the calculation of sampling errors. Five major steps are required to develop an area sampling frame:

1. define and identify the target population such as district or province;
2. define and identify homogeneous land use categories into strata;
3. delineate the homogeneous land use areas into strata blocks;
4. subdivide strata blocks into count units containing approximately 10 sample units; and
5. subdivide count units into sample units called segments.

ASF construction uses aerial photos, photomosaics and topographic maps (topos) of the total land area of interest, such as a district or province. Each mosaic covers a land area about 15 miles square and is approximately equal to the area on a topo.

Land use characteristics are observed on mosaics and by using photo interpretation and identifying homogeneity of land use, strata are assigned and stratum boundaries are delineated on the mosaics. Usually three to seven strata are required to delineate the total land use in a district or province. Typical land uses are: extensive agriculture, villages, urban area, forests, mountains and deserts.

Strata boundaries are transferred exactly from a mosaic to its corresponding topo. Count units are delineated on the mosaic and transferred to topos and measured for area.

After an optimum sampling allocation is determined, simple random sampling is used to select a count unit and from it to select a sample unit.

Because sampling error is reduced by stratification, a relatively small sample is required to provide data with good reliability. Typically in ASF surveys, a sampling fraction of approximately 0.5 % will yield a sampling error of about five percent or less for major crops.

The existing GOP crop area and production estimation is planned to be improved by using the Area Sampling Frame methodology developed by the National Agriculture Statistics Services (NASS)/USDA. According to the scope of work, this ASF project is to be implemented in phases as a pilot project covering the districts of Sheikhpura, Jhang, Faisalabad and Multan in the Punjab and Larkana, Nawabshah and Hyderabad in Sind for which fairly recent aerial photographs are available with the Survey of Pakistan. The project life is for five years beginning July 1985. Training in ASF construction was started in November 1985 at the Survey of Pakistan. To date 17 persons have been trained. It is planned that these people will supervise the implementation of the program at different levels. The field work was to start in July 1986 but was delayed.

In the meeting with Secretary Statistics Division on 21st January, 1988, in depth discussions were held and assurances were given that the Statistics Division and FBS are fully committed to the successful implementation of this ASF project without delay. The first of the pilot districts, Sheikhpura, began ASF surveys in April 1987. So far four quarterly surveys have been completed there and survey results are available.

In the remaining districts, surveys are planned to be conducted on priority basis to complete this pilot work by April 1989. Although present progress is far behind schedule, FBS is now in the process of assigning 10 new ADC Cell workers which will allow the pilot to be completed for an early decision in 1989 to move into Phase-II ASF construction and surveys throughout Pakistan.

Additionally, objective yield forecast modeling will start in the sample area of Sheikhpura and Nawabshah in April 1988. The data may be used to make early season yield forecasts a month or so before harvest of major crops. When the forecast of data and its timely availability gets

established it will be a step forward and will provide support to GOP to plan for it's nation wide application. The importance of this point was emphatically stressed by SAPM in the evaluation team meeting with him on 26th January, 1988.

For the timely availability of crop estimates, a crop calendar covering all important crops was proposed in 1975, in consultation with the provincial governments. This calendar was based on crop seasons as well as the requirements of different crop estimates. There appears to be no need to introduce any change in this calendar of GOP traditional survey dates at this stage. However, it should be reviewed before a final data system is determined. Delays in meeting the established crop calendar dates have often occurred.

Data for ASF surveys in Pakistan is planned to be collected by trained crop investigators from provincial departments of agriculture through four quarterly surveys, timed to coincide with summer and winter crop seasons. The survey results are expected to provide the basic primary data necessary to improve the analytical and policy formulation framework for GOP to manage the national food security system effectively and efficiently. Furthermore the intricate details of handling this new methodology from area frame construction through sampling, survey design, field operations, data handling, processing, and estimation will be completely institutionalized into the GOP agricultural estimate system.

Some ASF survey results for Sheikhpura District, Punjab for April and October 1987 are shown in the table below with some comparison with latest GOP statistics published in August 1987:

**ASF SURVEY RESULTS, SHEIKHUPURA DISTRICT,
COMPARED WITH GOP PUBLISHED STATISTICS**

	ASF survey 1986-87 Crop (000) Acres	C.V. %	Ag. Statistics of Pakistan 1985-86 Crop (000) Acres
October 1987 Survey			
All land	1,441	1.1	
Rice	491	6.7	483
April 1987 Survey			
All Land	1,412	1.4	
Wheat	686	3.9	609
Berseem	180	6.9	

ASF wheat acres for the April 1987 survey for 1986-87 crop shows 686,000 acres with a 3.9 percent coefficient of variation (C.V.). This may be compared with the GOP estimates for wheat of 609,000 acres for the previous crop year 1985-86. No C.V. was available to indicate reliability. Also ASF shows rice acres at 491,000 acres for 1986-87 crop

compared with GOP estimate of 483,000 acres for year earlier 1985-86 crop.

The July 1987 ASF survey produced acreage estimates for more than twenty crops in this district but only a few crops are shown in the Table above. The survey also obtained estimates for fertilizer use by kinds and methods of wheat harvest and threshing.

The ASF coefficient of variation (C.V.) shown in the above table for wheat was 3.9 percent for this district from a sample of 128 land area segments which represent slightly over one half of one percent of the total land area in the district. Sampling at this rate in agricultural land areas would produce wheat acreage estimates with a C.V. of approximately one percent at Punjab Province level and 0.5 percent at the National level. Other major crops would also be expected to perform similarly while minor crops would have larger C.Vs.

The following Table compares ASF survey with CRS village survey results for wheat acreage:

**ASF SURVEY RESULTS, SHEIKHUPURA, DISTRICT COMPARED WITH
CRS VILLAGE SURVEY, WHEAT ACREAGE**

Crop Year	ASF Survey Results		CRS Village Survey		
	(000) Acres	C.V. %	Direct Expansion ^{1/} (000) Acres	C.V. %	Ratio Estimates ^{2/} (000) Acres
1986-87	686	3.9	595	5.9	629
1987-88	648	4.0	565	6.1	595

^{1/} Direct expansion estimates are not regularly published by PDA and are not their official estimates.

^{2/} PDA official estimates are ratio estimates. They are calculated by obtaining a year to year percent change from direct expansion estimates and multiplying that percentage by the area reported by the Revenue Department for the previous year. For example, 565,000 direct expansion divided by 595,000 multiplied by Revenue Department 627,000 for previous year results in a 595,000 acres ratio estimate for 1987-88.

The ASF wheat estimate of 648,000 acre for 1987-88 crop has a C.V. of 4.0 percent and is 9 percent above the CRS ratio estimates of 595,000 acres, which has no C.V. available. However, CRS direct expansion estimates had C.V.s of 6.1 percent for 1987-88 crop and 5.9 percent for 1986-87 crop. ASF corresponding C.V.s were 4.0 percent and 3.9 percent indicating a much higher level of reliability of survey data than that from CRS village sample.

During the July 1987 survey in Sheikhpura District 10 crop data collectors and 2 supervisors used 12 working days or a total of 144 person days to complete the 128 segment survey. The integrated master sample survey used by Punjab Province Department of Agriculture used 38 crop reporters and nearly three times as many persons days to complete data collection for Sheikhpura District as was required in the ASF survey.

While there is only limited data available, a generalization can be made that the ASF sample is far more efficient than the village sample. The integrated master sample survey used nearly three times as many person days for data collection to achieve a direct expansion estimate that had a relative standard error (C.V.) greater than the ASF survey.

The ASF estimate of 648,000 acres has a confidence interval of 620,000 to 676,000 acres based on one standard error. The ratio estimate of 595,000 acres falls outside this interval. It should be noted that this comparison is only done to stress the efficiency of the ASF sample over the village sample. A C.V. for the ratio estimate of 595,000 acres is not available. Also there is no indication of the reliability of the revenue data used as a base in the ratio estimate.

D. PLANNING FRAMEWORK

The PP Annex E identified that the following verifiable indicators which should be in place by the end of project June 1990.

1. Establishment of a National Area Sample Frame.
2. 408 persons trained (297 p.m.) in-country and abroad.
3. Publication of production statistics on a scheduled basis.
4. Reduction in data collection time & costs.
5. Improved planning resulting from more accurate and timely agricultural statistics.

This framework was realistic but will not be fully achieved primarily because the CP did not specify where and how photo and mapping materials would be used in the ASF program. Consequently, MOD security restrictions on aerial photo and mapping materials, caused the ASF construction and data collection activities to be well behind schedule at this date. Successful negotiations with SOP have resulted in reduced restrictions on uses of photos. No restrictions were made on the most recent district photo orders. Recommendations are made to review and streamline framing activities and add additional ADC Cell staff so that ASF will be complete with at least one nation-wide survey ready by end of FSMP.

253 persons and 133 person-months of training had been achieved at this date with in-country at 125 percent of target.

E. PERFORMANCE OF RESPONSIBILITY USAID AND GOP

USAID has generally given good support to the project. However, PLA funding problems have been a constraint to ADC implementation from the project beginning. Recent support from the Office of Financial Management and Office of Project Development and Monitoring seems to have resolved the problems, but these offices did not get actively involved in the issue until late 1987. More timely AID support was needed. CP 4.2 should have been more specific.

GOP also has assisted the project in many ways. For example, FBS and Statistics Division have provided adequate space for the ADC Cell and good quality employees to the ASF construction work, meeting the PC-1 staffing plan. Also GOP counterparts have shown good interest and support in ASF development and a sincere desire to adopt improved statistical methodology. However, several important GOP procedural issues arose during the first 30 months, which are listed below and were beyond FBS control. These have caused the ASF construction and survey implementation to fall behind Phase-I and Phase-II program schedule committed in PC-I.

1. RESTRICTED USE OF AERIAL PHOTOS AND TOPOGRAPHIC MAPPING MATERIALS

Because CP 4.2 did not specify where and how photo and mapping materials would be used in the ASF program, MOD restrictions on use and also delays in providing clearance throughout most of the project thus far have significantly impeded progress of ASF construction.

Sheikhupura District in Punjab province was the first District assigned for ASF construction. Eight months of negotiations were required with MOD before photographic materials were released to FBS quarters in Islamabad.

Photo enlargements for 80 of the 128 sample area segments were restricted by MOD from FBS-ADC Cell and ASF field use. This required sampling procedures to be altered to collapse stratum 121 into stratum 141, creating a new stratum 151 and a point sampling procedure to be used which resulted in 3.75 ADC Cell worker person-days per segment to layout and verify the segment boundary in the field compared to just 0.83 person-days per regular aerial photo segment in the laboratory. These 80 segments, therefore, required a total of 224 additional person-days to establish in the field.

Clearance to obtain aerial photography for Nawabshah District, Sind province (the second pilot district) was requested of MOD in November 1986 and was approved in May 1987, a delay of six months. These delays and restrictions by GOP have made it difficult for completing and evaluating the performance of Phase-I ASF construction and data collection in time to complete Phase-II ASF construction for the rest of Pakistan during the FSMP time-frame.

Although all of these delays and restrictions have now been eliminated as reported by high level GOP officials, FBS and Statistics Division must continue to deal aggressively with Survey of Pakistan (SOP) so that these kind of restrictions and delays are minimized for all future requested photographic and topographic mapping materials for use in ASF methodology.

2. FAILURE TO PROVIDE ADDITIONAL WORKERS

Additional ADC Cell workers were requested beyond those requested in PC-I in order to speed up ASF construction, but these efforts were not successful. However, a statement was made during our January 1988 meeting with Statistics Division that 10 additional workers would be available to the ADC Cell promptly. At a later meeting, the team was told that new hirees were being processed.

3. PLA FUNDING

Funding for PLA has been a major constraint to implementation. The PC-I specified that GOP will open a revolving fund account in the name of Project Coordinator to fund the project activities. However, responses to requests for many kinds of project spending such as materials, salaries of field workers etc. have been quite slow. GOP austerity measures and complication of funding procedures have been the primary reasons.

GOP officials indicated that this was no longer a problem as some procedural problems have been corrected. Through recent efforts of AID-PDM and FM and Statistics Division, funding problems seem to have been resolved by establishing a revolving fund as specified in PC-1.

F. FULFILLMENT OF CONDITIONS PRECEDENT AND COVENANTS

CP Section 4.2 is, "Conditions Precedent to Disbursement for Activities under the Agricultural Data Collection Component. Except as AID may otherwise agree in writing, prior to any disbursement of funds under this project for activities under the Agricultural Data Collection component of the project, or to the issuance of AID of documentation pursuant to which such disbursement will be made, the Grantee, through its Survey of Pakistan, shall furnish to AID in form and substance satisfactory to AID, written assurance that use of aerial photos and topographical maps required for implementation of the Area Sampling Frame Methodology will be made available to project-financed consultants and/or AID designated and Grantee approved GOP staff".

GOP provided written assurance in an official memo dated November 27, 1984 which stated, "this fulfills the condition precedent to disbursement as per Section 4.2 of the Agreement dated August 27, 1984".

The CP was too general and needed more specific detail of where and how photo and mapping materials could be used. SOP made the materials available upon request but only on SOP premises which was inefficient for frame construction and made use of survey materials for data collection impossible. Consequently, the ASF could not have been implemented under

these conditions. FBS needed (1) the photo mapping materials to be available in the ADC Cell space in FBS for ASF construction and (2) to send the photo enlargements and topo maps showing the sample segments selected to the field as essential tools to be used by ASF data collection during each survey.

Because the CP did not specify the detailed use of the photo and mapping materials, the GOP "written assurance" for CP 4.2 and USAID acceptance were inefficient in expediting the ASF which was caused by a basic communications failure. Consequently, a considerable amount of time was lost in negotiations to use the materials at FBS and in the provinces during surveys.

G. PROGRESS

1. YEAR ONE - JULY 1985 - JUNE 1986

The PP set forth the following major project events:

- a. Project Agreement signed.
- b. Initial CP and CP for ADC component met.
- c. Procurement of expatriate technical assistance and commodities begins.
- d. PCU established in O/ARD and staff hired.
- e. ADC Cell established in FBS.
- f. First group of participants selected and sent abroad for training.
- g. Development of ASF initiated.

Each of these issues is discussed below:

- a. Participating Agency Services Agreement was signed July 17, 1985 with NASS/USDA.
- b. FBS replaced MINFA as GOP counterpart agency for ADC. In spite of FBS strong efforts in dealing with Ministry of Defence (MOD) the Condition Precedent (CP) for ADC component to secure unrestricted access to necessary aerial photo and mapping material was not specific enough.
- c. Procurement of expatriate technical assistance and commodities began as follows:

- 1) Team Leader arrived in July 1985.
- 2) Survey statistician arrived in February 1986.

3) Commodities procured included office equipment and space, micro-computers, vehicles and other commodities specified in PC-I.

d. A Project Coordination Unit (PCU) was established in O/ARD and staffed.

e. ADC Cell was established in FBS and staffed with one director, thirteen technical staff and two support staff.

f. Seven GOP officials associated with ADC attended a six week short course in Statistics in NASS/USDA Washington DC.

g. ASF training and initial work in ASF construction started in November 1985. A second ASF construction training session was held in March 1986.

h. Additional training courses held during the first year of ADC were:

1) Micro-computer Managers Seminar - April 1986.

2) Computer application Users training - April 1986.

3) Agricultural Statistics Short Course - June-July 1986.

4) One participant sent on nine month international training NASS/USDA Arizona May 1986.

i. Four micro computers placed with counterparts.

2. YEAR TWO - JULY 1986 - JUNE 1987

The PP set forth the following major project events:

a. FBS/ADC Cell staff expanded for ASF program.

b. ASF completed and implemented on a pilot project basis initiated.

c. Contract for temporary data collection personnel executed.

d. ASF in-country training program conducted.

Each of these issues is discussed below:

a. FBS-ADC Cell expanded support and administrative staff.

b. ASF was far short of the plan of being complete. Frame construction was completed in only one of the seven pilot districts. The first ASF survey was conducted in this district in April 1987. ASF construction was partly complete in three other districts.

c. A contract or agreement was executed between FBS and the four Provincial Departments of Agriculture, who would provide the ASF data collection staff.

d. Training of survey enumerators was held for the April 1987 ASF survey, also a six week in depth training in ASF construction and concepts was held in FBS-ADC cell for eight Provincial Statisticians, two from each province.

e. Other accomplishments

- 1) Four formal ADP workshops.
- 2) Managers ADP seminars.
- 3) Three on the job training sessions on micro-computers use.
- 4) Statistics short course.
- 5) M.S. candidate sent to New Mexico State University.
- 6) Placed eight micro-computers with GOP counterparts.
- 7) Assisted Baluchistan and NWFP provinces to improve methodology, data handling, and processing capacity to expedite existing agricultural estimating system.
- 8) Conducted a study "An Appraisal of Agricultural Prices Statistics in Pakistan" in conjunction with the EPA component of FSMP.

3. YEAR THREE (PARTIAL) JULY 1987 - JANUARY 1988

The PP set forth the following major project events:

- a. Analysis and data collection activities expanded.
- b. Full-scale data collection using ASF underway in at least one province.
- c. First group of long-term participants returns to Pakistan.

Each of these issues is discussed below:

a. Analysis of pilot project was not possible as only two of the seven pilot districts has ASF frame constructed and ASF survey conducted.

b. Full-scale data collection survey ASF in at least one province was impossible for the same reasons as stated in item above.

c. First long-term participant has not returned because he started training in August 1986 which was later than scheduled.

d. Other Accomplishments

- 1) Published "An Appraisal of Agricultural Prices in Pakistan" bulletin December 1987 in conjunction with the EPA component.
- 2) Assisted Baluchistan province with Fruit Tree Census tabulation.
- 3) Four micro computers placed with counterparts.

H. **SPECIFIC ISSUES**

1. PACE OF ASF CONSTRUCTION

a. Findings

ASF construction is critically behind the schedule envisioned in PC-1 and PP. Phase 1 (Pilot project) was to be completed in 24 months or by July 1, 1987. Phase 1 included having ASF construction completed and survey data available from the seven specified districts in the pilot project. As of January 1988, 6 months later than the planned ending of Phase 1, only 2 districts have ASF construction complete and 1 of those is being surveyed for the first time in January 1988. Plans now are to complete Phase 1 by April 1989, which is nearly two years behind schedule.

The evaluation team feels that the pace of ASF construction is extremely important. Discussions with FBS officials have indicated it is doubtful that the GOP would be able to obtain sufficient funds to complete frame construction for Pakistan, after the ADC project ends in June 1990. The team feels the pace of construction must be accelerated by all means to attempt to complete ASF construction by end of FSMP.

The ASF objective appears to have slipped from one of completing the frame, conducting one or more national surveys and phasing out current Provincial data systems to simply completing the pilot project during the 5 year project. The July 86-June 87 work plan called for the 7 pilot district to be completed within one year. The July 87-June 88 stated that 1 district was completed and 3 additional districts would be completed by June 1988. It also contained a statement that if 10 additional people were provided to the ADC Cell, the pilot could be completed by March of 1989. Staff in excess of the number specified in PC-1 has not been provided to date. However, FBS is now in the process of assigning staff to the ADC Cell.

From the program report it appears clear that even with the 10 additional people the planned rate of progress assumes about 3 months to complete a district. There are 71 district and 7 Tribal Areas in the country of which about 40 have a fair amount of agriculture. Assuming that each of

these 40 takes 3 months to complete and the remaining 38 which have lesser amounts of agriculture will require 6 weeks per district, one can project the completion of the sampling frame as follows:

- March 1989 7 agricultural districts completed
- October 1996 33 additional agricultural districts completed
- January 2000 38 remaining districts completed.

This rate of progress does not seem reasonable. Undoubtedly some gains in efficiency will come about as a natural process. Even so, something needs to be done to speed up the pace of frame construction and sample selection. There is a limit as to how many people can be effectively managed on this type of work. Women can perform well in ASF construction work. While more staff (in addition to the 10 promised) is required to speed the project, other factors must be considered.

The ADC Cell staff also prepares survey materials, conducts ASF survey training and supervision duties which take most of them away from frame construction nearly one month for each quarterly ASF survey or nearly one-third of their total work time. This demand will increase as more districts are surveyed. Preparing for the field work and getting the work pace back to normal after the field work also takes time.

A brief review of materials indicated some streamlining of ASF construction step by step procedures was possible as follows:

- 1) Photo mosaics are already prepared and available from Survey of Pakistan. Procure and use them whenever feasible instead of making mosaics from contact prints in ADC Cell.
- 2) Construct or delineate count unit boundaries directly on topographic maps instead of delineating them on mosaics which then requires transferring the boundaries to the maps.

Short cut procedures (1) and (2) will not hurt the quality of the ASF construction and is estimated to reduce time required by approximately 20 percent. Of course, steps (1) and (2) and any other changes will need to be reviewed and approved by the contractor.

In addition it is suggested that more specialization within ASF construction activities, and control of material flow etc are needed. Work plans with milestone target dates will also be useful. The evaluation team did not have an opportunity to examine the activity since the ADC Cell was helping in the January survey, but believes a close examination is needed with the objective of improving efficiency.

If fewer than 7 districts have been completed by early January 1989 for some reason, January 1989 survey results from all the districts available should be analyzed to determine whether or not to do Phase 2. This decision should be made by March 1, 1989. That would leave 16 months to complete the ASF construction for all remaining districts in Pakistan.

Many districts have little agricultural land area and therefore can be framed in a shorter time period. It would also be helpful if FBS could make an interim internal decision to initiate area frame construction for the balance of the country so that this work can continue while the decision is being deliberated.

b. Conclusion

The pace of frame construction has been inordinately slow. It was slowed originally due to inability to obtain mapping material and additional staff. FBS officials have said there are no further problems in regard to obtaining mapping materials and 10 additional staff. There still remains a problem in the pace of frame construction. Recent improved availability of mapping materials and the estimated 20% improvement in efficiency have not yet been accounted for in current ADC work plans. However, even given these changes, the goal of ADC does not seem attainable. The reason for the slow pace is not readily discernible and needs to be further examined in depth. If further efficiency and/or staff additions are made, ASF construction may be completed by June 1990.

c. Recommendations

1) The NASS technical assistance staff should consider:

i. Conducting a review of the procedures, work flow etc, with the purpose of streamlining the frame construction and sampling procedures resulting in a more efficient process.

ii. Developing work plans that can serve to guide the work and to measure progress on a weekly basis.

2) FBS should consider:

i. Adding additional staff (beyond the 10 new staff members promised) consistent with good management practices and available space.

ii. Continuing long range planning to obtain mapping materials so that they are available when they are needed.

iii. Creating 2 major sub units in frame construction - stratification and sample selection. The stratification unit should not have any field duties, so that stratification is not interrupted.

iv. Using the results of recommendations 1, 3 and 4, develop a work plan through completion of the project so that at least one National Survey can be conducted by the end of FSMP.

v. Continuing ASF frame construction beyond the pilot districts while decision on pilot results is being deliberated.

vi. Making Phase-I ASF construction top priority of all ADC activity until Phase-I is completed.

vii. Obtaining new aerial photography to be flown as soon as possible to cover any agricultural areas having photos older than 1976. If new aerial photos were available by September 1989, this would provide excellent support for ASF construction in these areas. ASF construction would progress from March to September 1989 in areas already having 1976 photos. However, if new photos are not available by September, satellite imagery, landsat, spot or other, should be procured for those areas which would be used in conjunction with the older photos for ASF construction.

viii. Using January 1989 survey results to make final decision for Phase II regardless of the number of pilot districts surveyed.

3) AID should consider:

Continuing the following significant uses and total development of ASF methodology into the ASSP program:

a) Early season objective yield forecast modeling for wheat, rice, cotton, corn and sugar-cane.

b) Development of cost of production, farm management, livestock and poultry surveys to support economic and policy analysis in EAN.

c) Development of a total integrated agricultural statistics data collection and estimation system which would integrate ASF and any retained agricultural data system such as revenue department data. This integrated system produce coordinated reliable, timely information at all desired levels.

2. ASF METHODOLOGY APPROVAL PROCESS

a. Findings

There does not seem to be an approval process prepared to review Phase-I survey results so that an objective decision can be made whether or not to continue ASF methodology into Phase-II.

b. Conclusions

A specific approval process and work plan need to be prepared and an agreement reached and signed with GOP for analyzing and evaluating the pilot survey data in order to make a well considered decision whether or not to approve Phase-II. This decision is needed as soon as possible after January 1989 survey results are available so that FBS-ADC Cell could expedite ASF construction for Phase-II. It would be helpful if this work plan contains the nature of the data and analysis required, the specific GOP units involved, and the organization or individual who has

the approving authority, etc. The work plan should contain milestones and target dates.

c. Recommendations

1. Prepare the approval process and the work plan and have official agreement by July 1, 1988. (FBS, Contractor)

2. Named officials should review January 1989 ASF survey results and make the decision on initiating Phase-II activities by March 1, 1989. (AID, FBS)

3. FBS AND PROVINCIAL ADC COORDINATION

a. Findings

There are certain elements that a statistical data system must have if it is to fulfill its function of providing reliable data to policy makers and others in a timely fashion. First of all, a statistical agency should not have a political function as this could create a conflict of interest. The agency responsible for collecting data at the national level should have the responsibility of publishing the data as that agency is in the best position to discuss the data quality, measures of reliability etc. Another item of major importance is that the responsible agency has the required authority to develop the program content based on interaction with end-users, instrumentation, data collection procedures, timing, summarization and publication of survey results.

In Pakistan the following coordination procedures have been developed:

1) ADC Steering and Technical Committees were established in FBS to facilitate coordination among Federal and Provincial Governments and to assist and ensure effective implementation of ADC (see Chart 5). FBS has the primary financial and implementing responsibility for the ADC component and for coordinating, monitoring and keeping liaison with provincial governments and USAID. The Directorate of CRS, Punjab and the three other provincial departments of agriculture will have direct responsibility for implementing this ADC project in each of their provinces, primarily in data collection. The coordination role of FBS is expanded to ensure the Nation's need for accurate agricultural data is met.

2) The ADC project has provided several micro computers through FBS to each of the 4 provincial departments of agriculture and trained their staff in the computer use and software to assist the provinces to improve the quality and timeliness of getting traditional survey data processed.

3) Punjab Department of Agriculture crop reporters are collecting data on their fourth ASF survey in Sheikhpura District using aerial photos and contacting all of the farmers who operate land in the segment shown on the photo. The FSMP evaluation team observed crop

reporters working two different survey segments and were well pleased with their complete handling of ASF survey methodology. The data is moving smoothly through computerized data edit and summarization processes.

4) Sind Provincial Agricultural Extension Data Collectors are collecting ASF data for the first time in Nawabshah District. The traditional data system staff here lacks the organization and experience present in Punjab.

5) All information agrees that Baluchistan and NWFP data organizations are least well organized and trained.

b. Conclusions

1) ASF surveys can work well in Pakistan because the quality of photo and mapping materials is better than most countries using ASF. Early results have indicated the ASF methodology is well suited to the country.

2) FBS coordination of ADC effort is going well in Punjab, fair in Sind. Baluchistan and NWFP Provinces are anxious to enter the ASF survey activity but will have less experienced data collectors which make coordination and timing more difficult.

c. Recommendations

1) As ASF surveys move from Punjab, which has the most experienced data collectors, to Sind and onto NWFP and Baluchistan, training and quality control procedures must be emphasized and careful monitoring of enumerator performance exercised to ensure that ASF survey concepts and procedures are clearly understood and performed. (FBS, Contractor)

2) ASF Steering Committee should meet semi-annually and ASF Technical Committee should meet quarterly to discuss data needs, data improvement, timing, progress and problems encountered with ASF and other surveys, so that these can be handled consistently. (GOP)

3) Give sufficient coordinating authority to FBS so that they (i) approve standard survey content, data editing, data handling and processing for each survey, to ensure consistent quality and reliability of data (ii) obtain unsanitized data at the segment or lower level in a single file (iii) establish due dates for district and province survey data to arrive at FBS so that National estimates can be prepared in a timely manner. (GOP)

4) It is recognized that under the present arrangements, FBS has responsibility for ASF construction and survey design while the cooperating Provincial Departments of Agriculture are primarily responsible for data collection. To strengthen this collaboration effort stronger lines of communication need to be developed. FBS should consider working through their field offices (presently about 30 and

schedule to increase to 60 - 70 by 1990) in implementing ASF survey technology. (FBS)

4. IMPLEMENTATION OF ASF IN NON-PILOT DISTRICTS

a. Findings

The current procedure of implementing the ASF on a district by district basis is not efficient since a great deal of time is spent on survey activities. It is currently estimated that, with the 10 additional staff, the ADC Cell can complete stratification and sample selection for one district in approximately 2 months and survey operations in 1 month. If this procedure is carried forward it will take a considerable time to complete a province and the country.

In addition, the individual sample sizes for providing district estimates will be relatively large when summed across all districts to a province level. It would be preferable to have smaller sample sizes at the province level during the initial survey and then gradually increase if needed for selected district level data or lower C.V.s.

b. Conclusion

Current district by district implementation of ASF is inefficient. Completion of the ASF construction and sampling for the entire province will save time and resources. Also the first survey at the provincial level should be on a pilot basis.

c. Recommendation

1) Complete ASF construction and sample selection for an entire province. (FBS, Contractor)

2) Data collection should be conducted on a pilot basis at the provincial level and then sample sizes gradually increased, if needed. (FBS, Contractor)

5. DISTRICT VERSUS PROVINCE LEVEL STATISTICS

a. Findings

As stated elsewhere in this report each of the Provinces operate their data systems independently. They collect data, make estimates have a review by Provincial Agriculture Statistics Coordination Boards and forward them to FBS for review and then to the Planning Committee for publication. District level data for 1985-86 crops were published August 19, 1987 in the publication "Agricultural Statistics of Pakistan 1986". Minor crop hectareage is published for each district. The lowest positive hectareage observed was five. There is no probability data system that will provide this level of estimation. No measures of reliability were published.

High officials in FBS have indicated that the two most crucial elements needed in the GOP agricultural data system were early crop yield and production forecasting capability and timeliness. District level data are opposing forces. For example, district level data, particularly for minor crops, requires substantially larger samples which under normal conditions require more time and also creates more non-sampling errors. This is true of any probability data system.

Policy decisions demand data at the national and in some cases perhaps at the province level. District level data are needed mainly for time series and historical purposes. They are also beneficial for agricultural planning, for example, wheat hectareage production in major agricultural districts are necessary for planning locations of storage facilities etc. The PP has indicated that provinces will be made to produce some district data.

Early results of the ASF methodology in Pakistan have shown that it can provide reliable and timely data at the district level for major crops. This is consistent with experience in other countries. It will, however, increase sample size and thus increase costs and perhaps slow data results. If district level estimates are desired for minor crops some other procedure will need to be developed. Often time list frames and other procedures are used in conjunctions with the ASF. For example, the data collection activities of the Revenue Department's Patwaris may be used for this purpose.

b. Conclusion

Early indications are that the ASF will be capable of providing early season forecasts of major crops on a national level in a timely fashion. For example, one or two months ahead of harvest. It will also be able to provide district level data for major items in major districts with a reasonable sample size. Special procedures will need to be developed to obtain district level estimates for less major crops. An annual data program can be defined once the entire country has been framed and additional experience with ASF gained.

c. Recommendation

An "Annual Data System" plan should be developed once the ASF has the entire country framed and a national survey conducted. This plan should also eliminate duplication of data collection efforts wherever possible, set forth general methods of how requirements for various levels of data (national vs district) will be met, timing of major surveys, a due date calendar for major reports, etc. This plan should be developed prior to allocating samples to obtain major crop estimates at the district level. (GOP)

I. TECHNOLOGY TRANSFER

The ADC component, TA staff and TDY consultants have made a strong contribution thus far in transferring technology to GOP by providing many productive and varied training and commodity packages throughout Pakistan.

A quantum leap ahead in technology is easily observable at this date at each Provincial level in the use of micro-computers with the latest statistical spreadsheets and data base software. These facilitate the capability to edit and process crop reporting data in a standard, consistent and time efficient manner compared to the manual procedures just recently replaced. The micro technology also includes word processing for improved communications and graphics and spreadsheets which provide a much improved opportunity to present statistical information in an interesting, effective and meaningful manner. This new ADC supplied technology is already very productive in each of the provinces and is improving each day as more GOP staff is trained in its use and as more uses are found for the technology. One beneficial impact anticipated in automating the data collection, handling and summarization processes is the improved coordination between FBS and the Provincial Departments of Agriculture which should result in a more timely and reliable agricultural data system throughout Pakistan.

The following ADC specific accomplishments are all helping to strengthen the agricultural statistics infrastructure in GOP:

- a. Implementing ASF probability sampling and survey methodology. The seven project districts are now expected to be completed by March 1989 or earlier.
- b. Twenty micro-computers placed with GOP counterparts.
- c. One MS Statistician participant sent to the U.S. and 8 participants completed 17 person months of non-degree training.
- d. 239 participants received 115 person months of short-term training in 17 in-country seminars, workshops and short courses.
- e. Other activities
 - 1) Computer data processing in Baluchistan and NWFP.
 - 2) Improved statistical methodology in NWFP.
 - 3) Fruit trees census in Baluchistan.
 - 4) Conducted study, "An Appraisal of Agriculture Prices Statistics in Pakistan" in cooperation with the EAN component.
 - 5) Conducted "A Study of Proposed Computer Modernization and Expansion" for the Statistics Division.
 - 6) Provided a team of USDA, NASS statisticians to review the sampling and survey methodology of the Agriculture Census Organization.
 - 7) Working with Statistics Division to establish the proposed Statistics Training Institute in Lahore.

8) Working with Statistics Division and Federal Bureau of Statistics in developing a working paper on phased approach to improving crop statistics for the Economic Coordination Committee.

IV. EVALUATION OF POST HARVEST MANAGEMENT.

A. BACKGROUND

During recent years, growth in Pakistan's wheat and rice production have led to increased surpluses in major producing regions. Food grain production accounts for about 53% of total cropped area. Wheat and rice together account for about 45% of the cropped area followed by other food grains such as maize and sorghum.

The production of wheat reached 13.9 million tons in 1985-86 but decreased to 12.0 million tons in 1986-87. Rice production which in 1985-86 was 2.9 million tons increased to 3.5 million tons in 1986-87. Pakistan can potentially continue to increase agricultural production including wheat and rice. This is one of the major objectives of both GOP and AID.

GOP policies do not encourage development of storage in the private sector and as a result the public storage facilities have to absorb increased production. These factors taken together will require additional storage facilities and more efficient use of existing facilities. A recent World Bank study projected that 500,000 MT of additional grain storage would be needed by 1990 and 1.3 MMT by the year 2000. Over the last several years the private sector storage has been estimated to be between 5 and 6 MMT at the end of July. Most of this wheat is held by farmers. Larger farmers, those with 25 hectares or more, produce about 85 percent of the wheat that is sold.

A major concern for the government has been the provision of adequate storage facilities and protection of the stored commodities from moisture and pest damage. Adequate storage facilities are necessary to implement the procurement and price support policies for wheat and to store rice intended for export. In line with this policy objective GOP has been allocating funds for building additional storage.

According to the 1987-88 annual plan, the current status of the public sector storage for wheat and rice is as follows:

PUBLIC SECTOR STORAGE FOR WHEAT AND RICE (MILLION TONS)

CROP	CAPACITY AS ON 6-30-1986	ACHIEVEMENT 1986-87	TARGET 1987-88	TOTAL STORAGE CAPACITY	1/
Wheat	4.080	0.602	0.194	4.876	
Rice	0.878	---	---	0.878	
TOTAL	4.958	0.602	0.194	5.754	

1/ Available by June 1988.

If the 1987-88 planned targets are achieved, government would have a storage capacity of 5.754 million tons for wheat and rice. The operations and management of the public sector storage is handled by six agencies: four PFDs; PASSCO and; RECP to store rice intended for export.

The GOP has constructed some bulk storage facilities in recent years. This has created problems as mixing bag type storage with bulk storage is difficult at best. Most studies indicate that such a mixture is more costly than a single type and requires much more planning and management.

Private sector off-farm storage is confined to the market areas. It is somewhat more organized in the regulated markets. Otherwise wheat and other food grains are generally stored in ordinary store rooms owned by the dealers. This storage is for short periods of time for each consignment.

The current physical status of the public sector storage has been surveyed by Experience Inc. (EI) ^{1/} based on a sample of 700 facilities 5 years old and older at 49 sites including 658 HTG's and 42 bin type stores with the capacity of 476,000 MT and 71,200 MT respectively. The study showed the physical condition of storage facilities was deplorable in most cases and that management and maintenance were inadequate. In general, there are defects in storage design, maintenance and management which allow insect pest populations to build up. Entry of water through broken windows, defective roofs or floors leads to moisture damage and growth of molds. Generally, the standard of cleaning is poor. The World Bank study on food grain storage and processing report storage losses at about 6.3% in house type godowns, 5.6% in sheds and 4.5% in bins during a normal storage period. In the case of rice storage losses are comparatively less and may not be more than 3%. These are at best estimates indicating loss of food grain during storage under average conditions. Under unsatisfactory management conditions storage losses could reach 25% as reported by the sub-group of the agricultural inquiry committee on plant protection. The proceeding data on storage losses are in conflict with the current GOP "no loss" position. The "no loss" GOP position places them in the untenable position of not recognizing losses while acceptable industry standards for storage loss are 1.0 to 1.5 percent.

Generally, the management of storage facilities is unsatisfactory as persons responsible for treating food grains are not fully aware of the technologies which could be used under different sets of conditions. This calls for improving the management system at different levels by arranging training programs for all ranks of people who are associated with the work.

^{1/} A study, "Godown Rehabilitation Recurrent Cost Analysis and Management Audit of Public Sector Grain Storage", an output of the PHM component.

B. GOALS, PURPOSE AND OBJECTIVES

The project paper (PP) set forth the goals and objectives of the PHM sub component only in general terms. The goal of the FSM project is, "to achieve the full security objectives of the GOP in a manner consistent with the rational and efficient use of national resources, overall economic development of the country, and an improved standard of living for farm families and the population at large". The PP also set forth a purpose for Post Harvest Management (PHM) that by the completion of the FSM project, "the provincial storage system is operating with reduced grain losses at a lower cost per unit stored due to the enhanced state of godown repair, better trained personnel with access to modern and appropriate storage technology, and improved management practices (including an effective maintenance program with a sufficient budget)."

The PC-1 sets forth the objectives as follows:

1. Rehabilitation of approximately 750,000 MT of grain storage over 5 years old. (The PP also has specified a limit of \$7,546,000 from grant funds and \$1,888,000 from GOP funds)
2. Introduction of better management systems.
3. Strengthening the system for transfer of technologies for storage design, grain quality maintenance and pest control technologies to these facilities through Pakistan Research Institutions, including universities.
4. Technical Assistance.
5. Providing short-term and long-term training program for management and operational personnel through in-country seminars and specialized intensive training including foreign degree courses.

C. DESCRIPTION OF PROJECT AND OUTPUTS

The PHM component was to focus on measures to improve the management of the public storage system. To accomplish its tasks, FSMP planned financing activities in all provinces in each of the following three areas.

1. Storage Management Training, to provide the human resource base necessary for improvement of the management and operation of storage facilities;
2. Storage Infrastructure, to rehabilitate approximately 750,000 metric tons of storage capacity and promote improved maintenance of all facilities in the system; and
3. Storage Technology Transfer, to identify and apply more effective and safer technologies for controlling pests.

More specifically the project paper set forth the following activities:

1. STORAGE MANAGEMENT AND TRAINING

a. Management systems: Develop and implement improved systems for DFA storage, including necessary commodities and other inputs.

b. Training: LONGTERM 6MS and 2 Ph.D Short-Term overseas 44 person months, short term study tours 10 person months, short term in-country 130 persons at 2 days, 100 persons at 2.5 days, 83 persons at 1 week, (amount unspecified), 850 persons at 3 days, and 810 persons at 1 day. Additional training to be defined during implementation in pest control, management system, etc.

2. STORAGE INFRASTRUCTURE

a. Storage rehabilitation

1) Survey existing facilities and develop rehabilitation plans, including design, schedule and costs.

2) Rehabilitate up to 750,000 MT

b. Storage Maintenance

1) Requires long-range plan with performance targets to meet Operations & Management (O&M) costs based on a comprehensive recurrent cost study and management audit.

2) Assist in design and implementation of improved management system.

3. STORAGE TECHNOLOGIES

a. Grain Handling

Assess studies by other donors on design of bulk grain storage, including a comparison with bagged storage.

b. Pest Control

1) Integrated Pest Management --PARC

2) Vertebrate Pests --Vertebrate Pest Control Centers
--VPCC

3) Insect Pest Resistance --PARC

In order to carry out the activities stated above, AID issued 3 RFP's. As a result the following activities were initiated and contractors supporting the project are as follows:

<u>ACTIVITY</u>	<u>CONTRACTOR</u>
Storage Management and Training Integrated Pest Management, and Insect pest resistance (Storage Development & Technology Transfer)	Food and Feed Grain Institute, Kansas State University
Storage Infrastructure	Experience Incorporated
Vertebrate Pests	Denver Wildlife Research Center

4. POLICY AND OTHER STUDIES

a. IFPRI grain modeling study (45 person-months) under EPA component

b. Comparison of public and private sector storage under EPA component and as a part of O&M recurrent cost study.

The PC-1 and PP stated the following outputs to achieve the project purpose:

- 1) Rehabilitation of 750,000 MT of grain storage facilities (the PP stated rehabilitation of up to 0.75 MMT.)
- 2) Approximately 1888 persons trained in-country and abroad in post harvest management technologies.
- 3) Improved maintenance and management of grain storage facilities
- 4) Reduced storage and handling losses
- 5) Improved pest control and storage design research
- 6) Improved in-service training programs in post harvest management techniques
- 7) A long-range plan for meeting the O&M recurrent costs of all existing and newly built sector grain storage facilities.

D. PLANNING FRAMEWORK

The logframe stated that the following outputs were to be obtained:

1. A long term plan with performance targets for meeting O&M recurrent cost of public sector godowns established.
2. Rehabilitation of up to 0.75 MMT of cereal grain godowns.
3. 1988 person trained (312 person month) in-country and abroad.

4. Improved maintenance and management of godowns.
5. Reduced storage losses.
6. Improved pest control and storage design research.
7. An improved MOFA in-service training capacity in PHM.

As of this date none of the outputs have been obtained due to the lateness of the project. The project was initiated late because the GOP did not sign the PC-I until September 1985 due to internal clearance procedures. AID inputs are judged adequate and as such did not contribute to the project delays. The critical element causing delays in the project was the administrative difficulty encountered by GOP in responding to Conditions Precedents (CPs) in a timely fashion (detail discussed in Section F). Also the GOP failed to nominate individuals for long term training in the degree program.

The GOP, namely the Department of Finance, has promised delivery of the long term plan by the end of February, 1988. The Storage Technology Development and Transfer (STDT) has a modified plan and as a result the PHM component is now poised and ready to move forward. It appears that the envisioned outputs can still be realized during the remaining life of the project barring other unforeseen difficulties.

LESSONS LEARNED: The GOP has difficulty in responding to certain issues, which served to slow the project. It should be noted, however, that the decision process was difficult and required many hand wringing decisions not easily taken by the GOP. AID could have been more aware of this and planned accordingly.

E. PERFORMANCE OF RESPONSIBILITY (AID AND GOP)

As stated in Section C, the PHM also has three major sub-components. These three sub-components are sufficiently independent so no real coordination is required with the exception of the training element. Training for PHM will be discussed in Section J-2-b.

Progress on the rehabilitation sub-component was held up by the GOP not being able to meet Section 4.4 and 4.5. The STDT sub-component was held up by the GOP not being able to meet Section 4.6 CP. The Project Coordinator was instrumental in working with the GOP and aided in developing solutions which allowed the GOP to proceed in meeting the CP. All commodities and funds including additional funds requested by the Vertebrate Pest Control (VPC) and STDT sub-components, have been provided on a timely basis.

In summary, AID should receive high marks in performance of their responsibility.

On the other hand, the picture is not quite so bright on the GOP side. Their slowness in responding to the CPs has slowed the progress in PHM. The day to day coordination was the responsibility of the Director,

Storage Cell. Activity from the GOP on the PHM component has been minimal. The World Bank field staff was to be utilized for the research efforts of the STDT sub-component. Since the staff was not sanctioned in the PC-I they were lost. Staff was also slow in being acquired for the VPC sub-component. The first professional staff was assigned nearly a year into the project. Two additional staff members are in the process of being assigned after the sub-component has been in operation a little over two years. Both of these sub-components were assigned a Coordinator in PARC. However, given the structure of the PARC, the Coordinator position was perhaps created at the incorrect level and without a balance between research and training. They rely on other agencies and institutions for their budget. These factors all seemed to create a situation where the Coordinator position was viewed at times as posing a bottleneck. To alleviate the situation both sub-components started dealing at higher levels within PARC.

PARC also had the responsibility to nominate individuals for long term training abroad. They requested and obtained 60 percent of all long term training. To date, no candidates have been nominated. The project is far enough along that the 2 Ph.D. positions cannot now be filled due to time constraints. One Ph.D position was given to an entomologist already in study abroad. It is assumed that this individual will return to the project.

F. FULFILLMENT OF CONDITIONS PRECEDENT AND COVENANTS

The entire PHM component was fraught with lateness, primarily caused by GOP's administrative difficulties in responding to CPs set forth in the FSM PP. The terminal dates for meeting CPs for Section 4.4 and 4.5 were extended from Feb 26, and May 26, 1987 respectively to June 30, 1988 vide PIL No.16.

Section 4.4, CP to disbursement for rehabilitation of grain storage facilities required GOP to develop a long term plan for meeting the operation and maintenance (O&M) recurrent costs. The long term plan could not be developed because the GOP had not isolated funds for O&M. With assistance from AID, a new budgeting system was developed where non lapseable funds would be automatically allocated each year for the O&M function when the incidentals for wheat were sanctioned for the year. This change in the budgeting system enabled GOP to develop a long range plan which is currently pending in the Department of Finance. The Department of Finance has promised approval by the end of February 1988.

Section 4.5 CP to disbursement for rehabilitation of grain storage facilities in a specific province required written confirmation of the Grantee's acceptance and agreement with the results and findings of the study "Rehabilitation and Recurrent Cost Analysis of Public Wheat Storage in Pakistan - Phase-I". The agreement with the results was finally received in September of 1987.

Also a rehabilitation plan of existing grain storage facilities over five years of age was required. Such a plan was developed and is currently pending in the Department of Finance and is promised in late February.

Lastly, documentation was required from the DFAs for a specific province to enter into an agreement with the PASSCO to complete the rehabilitation work. This documentation has been promised by the end of February.

Conditions precedents 4.4 and 4.5 are in the process of being met with all required documents promised by the end of February. Accordingly, AID was able to initiate Phase II of the project. A meeting between GOP, PASSCO, AID and EI was held on January 24, 1988 to kick off Phase II. Phase II involves developing detailed engineering specifications/designs and cost estimates for the Phase III rehabilitation of up to 750,000 MT of godowns.

Section 4.6 CP to disbursement for grain storage research studies under PHM component to be undertaken by exclusively local research entities required documentation that the Grantee had established a coordination unit. This has never been received as the staff and funds required for the coordination unit were never sanctioned in the GOP's PC-1. The requirements under section 4.6.b, appointing of program coordinator, and section 4.6.c a work plan for the local research programs have been met. The Food and Feed Grain Institute (FFGI) of Kansas State University and AID developed a modification on staffing the research work that has been accepted in concept by all parties. The contractor should be complimented for taking the initiative to look for alternative solutions and then pursuing them to get the project underway. A large part of any TA team is to identify and solve problems which require perception, flexibility, communication skills, innovations etc. The development of the modified plan required the contractor to use all of these attributes. On the other hand the modified plan would not have been possible without the full cooperation and vision of PARC, DFAs, and PASSCO. All parties have made valuable contributions to the problem solving process. The implementation plan will now have to be revised upon written acceptance of the modification in concept.

In summary, had it not been for the intervention of AID and FFGI and appropriate units in the GOP, the PHM component would probably have been dropped. As it is, the project now seems to have new life and reasonable progress is expected by the end of FSMP.

G. PROGRESS

The FSMP was late in getting final signature and approval. The final completion date has been extended to June 1990. Contractor support for the PHM sub-components was obtained at various times. A summary of progress made on events listed in the PP follow:

1. YEAR ONE, JULY 1985 - JUNE 1986

<u>Events Proposed</u>	<u>Accomplishment during time frame</u>	<u>If not in time frame, date of accomplishment</u>
=====		
a. Procurement of expatriate technical assistance begins	Yes	

2. YEAR TWO, JULY 1986 - JUNE 1987

<u>Events Proposed</u>	<u>Accomplishment during time frame</u>	<u>If not in time frame, date of accomplishment</u>
a. Work plans for local grain storage research plan approval	Yes <u>1/</u>	
b. In-Country storage management training underway	No	
c. Result of O&M recurrent cost study and management audit available.	Yes	
d. Long term plan for meeting O&M recurrent cost and effecting management improvement agreed to.	No	Possibly February, 1988
e. CP to storage rehabilitation met	No	Possibly February, 1988
f. Contract with local A&E firm executed.	No	
g. Supervisory engineers hired for DFA's.	No	
h. Preparation of provincial rehabilitation plans initiated.	No	
i. Contract with U.S. firm executed to conduct bulk grain storage study.	Yes	

3. YEARS THREE, FOUR AND FIVE, JULY 1987 - JUNE 1990

a. No major project events planned in these years have been met.

As a result of a recommendations of "Review of the Feasibility of Bulk Wheat Handling and Storage in Pakistan" report, the FFGI contract was amended March 31, 1987 to provide a proposal for a full chain bulk storage pilot project. The report was completed in the fall of 1987. Also, the Vertebrate Pest Control project has published 13 separate reports covering losses in the public and private sectors.

1/ Must be revised to reflect modification caused by not receiving funding and staffing set forth in the PC-I.

H. OPERATING AND MAINTENANCE POLICY

1. FINANCING O&M COSTS

a. Finding

Various reports have called attention to the poor state of repair of capital stocks in the storage sector. The sector has been characterized by rapid capital stock deterioration and large losses of grain quality. The EI Godown Rehabilitation study indicated that only about one half of the funds for repair and maintenance was allocated and of that amount only one half to two thirds expended. Contributing to the poor maintenance of capital stock was the PFDs requesting insufficient funds and delaying the transfer of funds to the C&Ws who in turn placed low priority on repairing and maintaining godowns (this is regarded as a poor institutional framework). As a result much of the funds lapsed. Therefore a rightful concern of the designers of the FSM project was to ensure that capital stock was properly maintained once the rehabilitation was completed. Accordingly, a CP was set forth requiring the GOP to provide a long range plan for meeting O&M costs for all capital stock. Other donors have attempted similar procedures. For example, in a World Bank Project started in 1981, the GOP had legal obligations to maintain the entire inventory of capital stock. While the GOP apparently had a legal obligation they still were unable because of administrative and financial difficulties to implement additional or improved maintenance.

The rehabilitation project has been delayed nearly 18 months as the GOP was unable to meet the CPs because they had difficulty in isolating funds for meeting O&M recurrent costs. The FSMP USAID Coordinator proposed the GOP develop a new system which would provide funding for O&M. The proposal essentially entailed use of a formula to determine the yearly budget based on the repair and maintenance per ton cost applied to the procurement target. The funds were to be charged against incidentals (cost for handling and storage of wheat). In addition the funds were to be non-lapseable. This process required a great deal of effort on behalf of the project coordinator working with the PFDs and MINFA. The proposal is awaiting final approval at the Finance Department but verbal approval has already been received. With this approval the Phase II and III portion of the Rehabilitation Sub-Component can be initiated. The project coordinator is to be complemented on his knowledge and persistence.

b. Conclusions

As a result of the Rehabilitation sub-component a major policy change was brought about in the financing and budgeting procedures for repair and maintenance of the capital stock in the public storage sector. This change will serve to reduce storage losses.

2. 'NO LOSS' GOP POSITION

a. Findings

The GOP currently has a "no loss" position which assumes that the same amount of wheat that is placed in storage must come out of storage. The EI Godown Rehabilitation study said that "The current no loss policy which facility managers are forced to operate under was found to contribute to outrageous adulteration practices which place the health of consumers in jeopardy". It is only reasonable to assume normal weight losses due to normal respiration and moisture loss. In addition, other losses are unacceptably high due to spillage during bag handling, pest losses, spoilage losses caused by poor maintenance, etc. Practices such as inserting dirt, sand and other debris into the grain as well as wetting the grain, etc. are caused by the no loss position. The STDT sub-component is in the process of developing a working paper on the "no loss" position.

b. Conclusion

The "no loss" official GOP position indicates that there is no problem and as such no action needs to be taken to reduce losses. However, the entire FSMP was developed to reduce storage loss and improve grain quality. The proposed working paper will examine these conflicting positions and indicate ways in which they may be resolved.

3. INSTITUTIONAL STRUCTURE OF PUBLIC STORAGE REPAIRS AND MAINTENANCE

a. Findings

One of the recommendations for GOP action in the EI report was "that PASSCO, based on its storage facility design, operations, and maintenance experience, be selected as the agency to effect not only the rehabilitation efforts but also the repair and maintenance of these facilities including any new structures that may be built". The GOP has agreed to and adopted this recommendation.

b. Conclusion

As a result of the Rehabilitation project, a single organization with good maintenance and engineering experience is now responsible for repair and maintenance. This should serve to protect the huge investment in capital stock and reduce grain loss during storage.

4. WHEAT QUALITY

a. Findings

The GOP follows a practice of buying wheat on the basis of "fair average quality". This generally entails only a visual inspection of the wheat as it is delivered to storage. Fumigation practices and the use of pesticides to control pests are carried out at various levels and

times with little or no standards. The state of repair of the storage facility allows entrance of water which causes development of molds and the entry of rodents which contaminates the grain. The PFDs and PASSCO are being induced to improve grain quality by the grain processors and consumers as a result of the derationing policy. The research and training program planned by the STDT sub-component will be addressing these issues. It will also introduce the equipment and know how for using grades and standards in the marketing of wheat.

b. Conclusions

The STDT sub-component will concentrate their research and training on elements of wheat quality and as a result should improve the quality of grain emerging from storage and further reduce losses.

I. POLICY IMPLEMENTATION

1. FINDINGS

Over the past several years, from 1970 to the current time, Pakistan has gradually become self sufficient in wheat production. This has come about by a steady increases of area planted and yield. In recent years there has been periodic and unexpected wheat surpluses and deficits. In fact, this year there is an estimated shortfall of approximately 1.5 MMT. In the event of a surplus the GOP must either pay large storage costs or subsidize exports. When the country is faced with a deficit wheat crop they must finance imports.

Historically, the GOP procures about 60-70 percent of the marketed surplus. The storage capacity of the public sector has increased from 1.7 MMT in 1977 to approximately 5.0 MMT if planned 1987/88 construction targets are met. In 1986 the total off-farm storage for food grains was estimated at nearly 4 MMT of which 97 percent was in the public sector.

During this period the private sector has had no incentive to increase their capital investment in storage facilities. This situation was generally caused by the GOP not adjusting farm gate prices seasonally to reflect normal storage costs, by restricting normal open-market fluctuations in the retail price through the ration shop system and public open market operations, and regulations that restrict the GOP from paying reasonable leasing rates to the private sector.

The EI Godown Rehabilitation report pointed out the desirability of adding grain storage capacity in excess of normal production requirements. A recent World Bank report projects that with 1.0 MMT operational and security reserves, the GOP must construct an additional 3.5 MMT of storage capacity by 1999/2000 to maintain it's current role in the post harvest wheat system.

In this environment, the GOP has re-evaluated its position and has developed a policy of increased privatization of the storage sector. The FSM project has good timing and foresight in providing technical studies to assist the GOP's decision making process in facilitating the

privatization policy. Information collected on IFPRI study, "Household Food Security in Pakistan with Reference to the Ration Shop" helped the GOP in making the derationing decision. This study showed that only about 30 percent of the wheat issued actually reached the ration shops while the balance was sold illegally in the open market. Accordingly, the GOP abolished the rationing system on March 15, 1987. They also took steps to deregulate movement of wheat within the country.

Immediate effects of the derationing policy have been positive and encouraging. Direct reduction of GOP subsidy is estimated at about Rs. 400 million in 1986/87. Other positive impacts are: (i) inefficient millers earlier dependent on milling for the ration system are closing down; (ii) the price of flour on the open market has been declining; and (iii) millers are now more aware of open market competition as well as quality and quantity of wheat.

The GOP decided that to meet its objectives of continued wheat production growth and adequate supply for domestic consumption they would: (i) continue procurement of wheat at support prices; (ii) maintain adequate security reserves; and (iii) release wheat in the open market to stabilize prices. The first year of derationing has shown that the GOP kept the price stable by releasing wheat at a constant price even though the crop is short this year.

The GOP current policy envisages greater reliance on market prices and an increased private sector role. This implies that a positive price differential will need to be maintained between release and procurement by the GOP to provide an incentive for the private sector to invest in longer term storage and marketing activities.

A second study by IFPRI suggests that increasing the differential between the procurement and release price would be an attractive option for the GOP to induce private participation in the long term storage sector. Currently there is an 8 paisa per kilogram differential and the report estimated that this would cost Rs. 3.5 billion annually. Expected costs would decline to Rs. 3.2 billion if the differential was 10 paisa, to Rs. 2.6 billion with a 15 paisa gap, and Rs. 1.3 billion with a 30 paisa gap. The study also indicated that the private sector would respond to an expected seasonal price rise.

Again, these studies are timely and directly related to current GOP deliberations.

2. CONCLUSION

It is difficult to measure the true impact of a particular activity or study on resulting policy changes as many factors are normally considered in arriving at final decisions. The studies were timely and tightly targeted to critical issues. As a result, the FSMP was instrumental in helping achieve policy changes.

J. THE INDIVIDUAL SUB-COMPONENTS - SPECIFIC ISSUES

1. VERTEBRATE PEST CONTROL

The PP and the contractual arrangement with the Denver Wildlife Center, USDA called for research and training of vertebrate pests in and around public grain storage facilities. The project is housed at NARC but receives backup from PARC. PARC has a laboratory in Karachi that works on vertebrate pests. Only a limited amount of their work is extended to the field. NARC has several field sites scattered around the country. The project is working through these field sites and the PFDs. They also work with universities through purchase orders to conduct research.

a. Content of Program

1) Findings

Surveys of post harvest losses, documented in several reports, showed that the loss caused by vertebrate pests was minimal and could range from 0.1 to 0.2 percent in godown structures with little or no loss in bulk storage bins. Much of the vertebrate pest damage that did occur would be eliminated with proper structure maintenance. Loss to rats in the Rawalpindi wholesale grain market was estimated to range from 0.12 to 0.24 percent.

The Joint Secretary of Food had an interest in preharvest vertebrate pest changes. The Secretary requested in writing that the unit conduct research on a preharvest basis. After this request a limited amount of work was initiated on preharvest losses.

As work with the public sector was completed, more and more effort was placed on preharvest losses. At the current time about half of the effort is spent on preharvest loss studies. Preharvest studies in Faisalabad district show losses in wheat, corn, and sugarcane range from 5 to 8 percent which by most standards is substantial. The project is continuing to evaluate postharvest losses at grain markets, mills, on-farm, etc. More and more effort will probably be directed to preharvest losses. There has been no written AID approval for working in the preharvest sector, with the exception of an amendment to the PASA, and no work plan showing the departure from what was originally envisioned in the PP.

2) Conclusion

The project activity has deviated from the public sector as envisioned in official documents. This deviation is not covered by a scope of work. This has been a beneficial change as postharvest losses are minimal but preharvest losses range from 5 to 8 percent.

3) Recommendation

Develop an overall plan of work clearly showing the work in both the preharvest and postharvest sectors. This plan of work should then be approved by GOP and AID. (Contractor, AID, GOP)

b. Methodology Used in Studies

1) Findings

The sampling and data recording procedures varied somewhat among the various studies. Random sampling procedures were used for studying the food storage facilities in Punjab province. In the other provinces sampling was based upon those with wheat stocks or upon the advice of the PFD officials. The preharvest studies mostly in Faisalabad entailed a procedure using road transects and selected fields near the road transect. Two to four observers would inspect the selected fields for pest damage. In some fields plots were laid out and used as a check on observer results. Damage to the crop was estimated as a percent of the field damaged. This rate was then averaged across fields. Losses in terms of crop value were then extrapolated to the district level and in some instances to the national level. Statistical methodology was only vaguely defined in reports and no work plans for individual reports were available.

2) Conclusion

The methodologies used in selecting samples, quantifying losses, and extrapolations to district or national levels are technically suspect. Even though the statistical techniques used are less than desirable, it is evident that preharvest losses from vertebrate pests are considerably greater than postharvest losses. Future attempts at quantifying losses on a district or national basis should use improved statistical techniques. The improved techniques will generally require additional resources. On the other hand, procedures for selecting demonstration plots and related research on the plots require less rigorous procedures in terms of sampling. Proper experimental designs should be used if multiple pest control treatments are used in the demonstration plots.

3) Recommendations

i. Work plans should be developed for each study. The work plan should contain a discussion of the statistical techniques used. (Contractor)

ii. Total cost of damage should only be made to the area sampled. Further extrapolations should probably be avoided, or if attempted, highly qualified. (Contractor)

iii) Future assessments of damage, other than of an exploratory nature, should use more rigorous sampling techniques and more objective procedures in quantifying damage. A possible link to the ADC

component could be developed. A random sample of fields enumerated in a survey conducted by the ADC component and procedures they will use in crop cutting and forecasting yield could be used for quantifying preharvest losses to vertebrate pests. (Contractor)

c. Institutionalization

1) Findings

The PC-1 states that assistance would be provided to the Vertebrate Pest Control Center (VPCC) in Karachi to upgrade its applied research program in the control of birds and rodents in stored grains. Neither the PP nor the PC-1 clearly specified who was to provide professional staff for the sub-component. The consultant and support staff was provided office and laboratory space at NARC in Islamabad. One of the reasons for locating operations at NARC was the high rat infestation in their experimental plots. The laboratory at Karachi is approximately 1000 miles from Islamabad and not located strategically for vertebrate pest control work. PARC has a concern that the Karachi laboratory was not effective in extending its work to the field. Consequently, the laboratory is being reorganized and two professional staff members are being assigned to work at NARC but may not be attached to the sub-component. The desire is to set up an operational unit at NARC in Islamabad. Project personnel do not view the Extension Service as a viable conduit for delivering research results and training to the farm operators.

2) Conclusion

GOP has been slow in providing professional staff to the project. It is not clear from originating documents that work in vertebrate pests were meant to be carried on after the FSMP is concluded. It is not clear just how work on vertebrate pests will be institutionalized at this point in time.

3) Recommendation

Effort should be taken to formally locate the project staff in PARC or NARC. The two staff members from the Karachi laboratory should be assigned to the project. As the work continues the need for additional COP staff should be considered. (Contractor, AID, GOP)

2. STORAGE TECHNOLOGY DEVELOPMENT AND TRANSFER

The STDT was to provide technical assistance for specific research and training activities. The FFGI of Kansas State University was to work through PARC under an agreement signed in October 1986. The GOP agreed to make staff available to assist in the project. The staff was to conduct research at the province level by experimental design techniques on groups of three adjacent storage facilities and take additional measures related to grain quality in and around the selected

sites. Preliminary analysis was planned in the field. Results would be forwarded to the Karachi Laboratory for additional analysis.

The field staff to support research was already in place under a World Bank Project which was to terminate in December 1987. Due to an oversight, the field staff was omitted from the PC-1 document and consequently were lost to the project. While the technical research staff was in place in the institutions the research work could not be carried on without the field staff. Accordingly the plan of work was reexamined for research and training. The Chairman of PARC recommended that the FFGI contractor work directly with the Director, GSRL, in Karachi rather than the formal counterpart. A modified plan of work was developed which entails using the GSRL staff for research, training and technical coordination and the field staff to be provided by PFDs and PASSCO for help in research and training. The modified plan meets the essentials for research and training and does not need the funds and staff omitted in PC-1. Preliminary approval has been received and the FFGI consultant is confident that final approval will be obtained. All research equipment has been received by the FFGI consultant. PDF's and PASSCO have each nominated from 6-9 staff members from which approximately 14 will be selected. The plan is now under question by a new Managing Director of PASSCO. As a result the implementation of the plan may be delayed or modified somewhat. The project is ready to proceed once final approval is received.

a. Organization Structure during Balance of Project

1) Findings

The January 19, 1988 letter from PARC to Director, GSRL stated that the modified plan was viewed by the Chairman of PARC as a "purely interim arrangement, pending the availability of additional funds from the Ministry of Finance". The letter further indicated that the Secretary, Food and Agriculture Division was requested to meet with Finance to sort out the funding issue. In the event the required funding becomes available the letter stated that the modified plan could revert to the original plan of work as provided in the Project Document. In addition, it appears that PARC had no plan to carry on the project after FSMP was completed. Hopefully the modified plan will provide the mechanism. As of the December 31, 1987 approximately 37% of project time has passed and only 24% of the STDT project funds have been expended.

2) Conclusion

A substantial amount of time has already been lost. It is not clear if additional GOP funding will be made available. Further revision of the work plan could serve to further delay the project. The modified plan provides a viable alternative and has a chance of institutionalization.

3) Recommendations

i. Future changes in the work plan should strongly consider impact on progress and institutionalization. (Contractor, AID, GOP)

ii. Develop a new work plan for research indicating changes in the conduct of field work. (Contractor)

b. In-Country Training Program

1) Findings

The need for management training is noted in several documents. The PP stated "the lack of training at all levels was identified during the project design as a key barrier to improve performance". EI in their Godown Rehabilitation Study said "First, the current no loss policy which facility managers are forced to operate under was found to contribute to outrageous adulteration practices which place the health of consumers in jeopardy". "Second, the training of godown managers was found to be minimal and in some instances, inappropriate".

The PP specifically called for management training to be provided by in-country seminars, short term workshops and specialized intensive training. The STDT plan of work appears to stress applied research and using the results to focus training. The VPC component is to organize, participate in and evaluate in-country short courses. However, the bulk of VPC in-country training has been delivered to the private sector. Phase-II of the rehabilitation component scope of work states the contractor shall "(a) Design of an improved system of recurrent cost accounting procedures to be used by public sector storage managers ---" "(b) Design of an improved system of public grain storage O&M and management improvement procedure ---". There is a general need to computerize grain accounting and improve inventory control. Clearly, implementing these procedures will require substantial training. Efficient incorporation of bulk storage into the sector will also require training.

The PP also states the PHM component will focus on measures to improve the management of the public storage system in five critical management sub-systems:

- i. Inventory control and stock management.
- ii. Financial and cost accounting.
- iii. Quality control of stored grains, including the use of effective and cost efficient pest control technologies.
- iv. Rehabilitation and maintenance of physical facilities.
- v. Management and development of human resources.

The STDT work plan treats training in a vague fashion but appears to focus on items (iii) and to some extent (v) above. There appears to be confusion on who should develop management training for the other elements. The STDT technical proposal does not specifically include training for items (i), (ii), and (iv). Management training is alluded to in vague statement of in-country training with little or no content.

PASSCO and PFDs have presented their views in writing concerning the content of a management training course. The program places emphasis on operations. The PFDs and PASSCO have a combined total of approximately 5,600 personnel that could participate in training. Historically the turnover rate has been high and thus even more stress would be placed on the training program. A summary of PFD and PASSCO personnel by classification that could participate in training is shown below:

Provincial Food Department (Management & Supervisors)	NWFP	Punjab	Sind	Baluchistan	Total (Estimated)
Assistant Directors	3	--	--	25	28
Dist. Food/Ration Controller	1	35	--	11	47
Storage & Enforcement Officer	2	35	--	--	37
Assistant Food Controller	38	189	125	43	395
Subtotal:	44	259	125	79	507
(Operational Personnel)					
Food Inspectors	45	567	700	--	1312
Foodgrain Supervisors	33	366	--	38	437
Chowkidars	480	1392	--	340	--
Subtotal:	558	2325	700	378	3961
PFD TOTALS:	602	2584	825	457	4468

PASSCO

(Management & Supervisors)

Deputy General Managers	17
Senior Project Manager	6
Project Managers	21
Subtotal:	44

(Operating Personnel)

Deputy Project Managers	38
Purchase Officers	264
Assistant Purchase Inspectors	540
Helpers	82
Chowkidars	167
Subtotal:	1197

PASSCO TOTAL: 1241

The decision was made while developing the PP to limit the PHM to wheat storage in the public sector which accounts for roughly half of the total storage. It is not the intent of the evaluation to reconsider that decision, however, the GOP has shown signs of changing their pricing policy resulting in a greater incentive for the private sector to increase their storage capacity. Also full chain bulk storage concepts involve the private sector mills. Thus it may be well to consider making the training available to the private sector.

Supporting planning documents such as the PP and PC-I all describe the storage problem in terms of cereal grain. The RFP for the EI study limited activities to wheat. Wheat is the most important of the foodgrain group and of primary interest to the GOP. As a consequence the PHM component has limited its initial effort to wheat. There is, however, no apparent reason why other food grains such as rice could not be included if resources are available.

2) Conclusion

There appears a need to coordinate the training aspects of the rehabilitation, technology, and vertebrate pest sub-components of the PHM project. In addition to increased coordination, an overall training program work plan should be developed spelling out in greater detail the content of the proposed training with greater stress on management. The need for improved management is well documented. Improvement of existing storage, new storage construction, continued introduction of bulk storage makes improved management imperative to protect the huge investment in infrastructure, improve efficiency of operation, and to improve the quality of food grains. As a product of the training programs, management manuals for both administrative and operational personnel should be produced. Consideration should be given to including quality issues and related research on rice and corn and extending the training program to the private sector.

3) Recommendations

i. Increased coordination of the PHM sub-components in the area of training. (AID, GOP)

ii. Develop a revised work plan for an overall training program with greater emphasis on management training. Also consideration should be given to including the common elements of EAN and ADC such as basic computer training, basic statistical analysis etc. (Contractor)

iii. The responsibility for the training program should be centered in the Storage Technology Development and Transfer sub-component. (AID, GOP)

iv. A counterpart training organization should be developed in an institution such as PARC, PASSCO, Provincial Institutions, or the Agricultural University system. (Contractor, GOP)

v. Operational manuals for the administration and operation of storage facilities should be developed as a part of the training program. (Contractor, GOP)

vi. Consideration should be given to including training on quality issues and related research on additional food crops such as rice and corn and to extend limited training to the private sector. (Contractor, AID, GOP)

vii. A program to monitor quality of grain while in storage should be developed and made a part of the operational manual. (GOP)

viii. Long range consideration should be given to developing training center(s) with a permanent training staff providing continuous training. (GOP)

c. Overall strategy for the storage sector

1) Findings

As discussed in Section I, the GOP has been moving towards a policy that places greater reliance on market prices and an increased role for the private sector in the storage sector. The GOP currently plans to purchase wheat at support prices to assure farmers receive a price which will induce increased production; maintain an adequate supply for food security purposes; and release wheat in the open market to stabilize prices at a level that consumers can afford. They have also recently derationed wheat and reduced restrictions of wheat movement within the country as a first step to inducing greater participation from the private sector. A second step towards inducing private participation is providing a differential between the wheat purchase and selling price. This step has not yet been taken, or for that matter has not been made a firm policy goal. Even if this step is taken the private sector is expected to move slowly because of earlier restrictive policies of the GOP. The GOP must provide assurances to the private sector that their future policy will continue to foster privatization. Other inducements for new construction, purchase of existing facilities, etc. may be necessary to bring about desired results in a reasonable timeframe. It could very well be that the cost of such a program would be less than the current subsidy.

In the meantime there are several other factors in the storage sector that need consideration. There is concern that the current storage facilities do not have the most effective geographic distribution. For example, in the province of Punjab, MINFA determines the targets for the PFD to procure wheat for current use and PASSCO for surplus. The groups can exceed targets with MINFA approval if the production is greater than expected. PASSCO has 0.37 MMT of storage capacity in Punjab and may procure 1.0 to 1.5 MMT of wheat annually. During harvest they cannot move the wheat in the available time period to the wheat deficit areas even though sufficient storage exists there. This forces them to store

wheat outside godowns. While the existing storage capacity may be sufficient on a national basis it is not in the correct location.

The Asian Development Bank proposal for building 403 "house type" godowns (designed by PASSCO for bulk convertible) is being reconsidered by the GOP. The World Bank and the Asian Development Bank are putting more than \$75.0 million into capital stock for the storage sector.

The Storage Rehabilitation sub-component of PHM plans to rehabilitate up to 750,000 MT of "house type" godowns. The EI study indicated the original estimated funds was insufficient and that it would require \$12.8 million to rehabilitate 750,000 MT of godowns storages 5 years old and older and \$32.8 million to rehabilitate all godowns 5 years old or older. Of course, the question "how much rehabilitation should be done?" must be asked. This question is most difficult and perhaps impossible to answer in isolation from the rest of the storage sector.

Other factors affecting the storage sector follows: there is concern over the "no loss" position of the GOP and there should be a dialogue on discontinuing the position or modify it to be more realistic; also the current infrastructure may be inefficient with both PASSCO and PFDs managing storage facilities and procuring wheat and the pro's and con's of a simple organization managing the system should be evaluated. In the meantime the FSMP goal is "to achieve the full security objectives of the GOP....". The PHM component was to assist in attaining this goal with the activities spelled out in Section C.

The preceding discussion merely points out that the wheat storage sector is dynamic by nature. There are several donors assisting MINFA and all are working on partial solutions. Many studies have been completed with varying and sometimes contradictory results. GOP policies are changing and management of the sector is quite costly. Storage losses are high and wheat quality is unsatisfactory. Recent liberalization of marketing policies by GOP has resulted in some purchasers rejecting orders of wheat because of quality. It is unknown what portions of current stocks are not saleable at full market price or for that matter at any price. This situation could place food security in jeopardy. It may be said that the sector is in a high state of confusion.

2) Conclusion

There is no overall strategy for the storage sector. The GOP has a policy of maintaining sufficient wheat stocks for food security and stabilization of prices. Yet, there doesn't seem to be any real agreement on the amount of storage needed to achieve this policy. They also are moving toward privatization of the storage sector with no real plan or policy to achieve this objective. The storage sector is dynamic and the planning for achieving desired policies has been "ad hoc" in nature. The FSMP is difficult to evaluate in the absence of an overall strategy. In fact, FSMP could be contributing to the "ad hoc" planning as a result of the policy environment in which it operates. Once such a strategy is developed, a vehicle such as ASSP could be utilized to help carry it out.

3) Recommendation

Develop an overall strategy for the storage sector. The strategy should include but not be limited to such items as: quantifying the storage required to meet the GOP policy for food security and price stabilization; the organization that should be responsible for procuring and storing a strategic level of stocks; introduction of grades and standards; the proper role of bulk storage; determining methods and timeframe for privatization of the storage sector; creating an environment for orderly transition from a predominantly public controlled sector to one guided by the market place, etc. Once an overall strategy is laid out, it should be followed by a plan to direct resources toward accomplishing the GOP objectives. Earmark activities that are to be accomplished during the balance of FSMP and those to be transferred to ASSP. (AID, GOP)

d. Bulk Storage

1) Findings

While the majority of storage facilities can only accommodate bag storage, the GOP is showing greater interest in bulk handling as a means of reducing costs. This is being accomplished by new construction and in some cases converting "house type" godowns to multi-use storage. The World Bank study observed that any approach to partial bulk storage was bound to increase overall handling costs. They felt that only the concept of a full bulk chain from procurement or storage center to processing would offer an advantage over the current system and recommended test bulk chains. They attempted an economic analysis even though no reliable basic data were available. The analysis indicated only a full bulk chain would produce a substantial benefit of 12%. The report further stated there was no pressing technical or social need to introduce bulk handling for wheat as the present bag procedure works comparatively well and at reasonable costs.

The STDT sub-component was to conduct a review of previous studies. If this review showed the bulk system feasible, they were to develop an implementation plan for conducting a study to identify the most efficient bulk storage design for Pakistan's conditions. Accordingly a team conducted the review and presented a report in October 1986.

The report determined that there was no technical reason why Pakistan could not convert to bulk handling and storage of wheat. The studies in the review failed to provide sufficient cost data or technical factors involved with a bulk storage system and as such a firm decision on bulk storage could not be reached. The FFGI team recommended a series of activities including pilot projects, training, and comprehensive planning. The team recommended no additional studies but rather a system analysis leading to a comprehensive plan. However, cost data for such an analysis was unknown and in the teams's opinion could only be provided by full-scale pilot project.

On the basis of this review, MINFA requested that FFGI undertake and complete a detailed plan for a bulk wheat handling and storage pilot project in Pakistan. Accordingly, the report "Bulk Wheat Handling and Storage - Pilot Project in Pakistan" was developed and submitted in October 1987. The report is currently under consideration. The estimated project budget for the pilot project was a little over \$48.0 million. FFGI considers that this report concluded their contract responsibilities. There has been concern raised in the GOP over the scope of the proposed pilot project. MINFA and PASSCO have suggested developing a report "Economic Feasibility of Bulk Storage Project."

As stated previously there is need for an overall strategy for the storage sector. A transition to bulk storage will require a large capital investment. By its very nature, the role of bulk storage must be considered in developing an overall strategy. Therefore the report requested by MINFA and PASSCO should consider the impact on the entire storage sector and how it may interact with the overall strategy yet to be developed.

2) Conclusion

There is no apparent overall strategy for the storage sector. There is no clear case or study that provides the need for a full bulk chain pilot. The FFGI team pointed out the need for a pilot project study to obtain cost data required for a comprehensive analysis. MINFA and PASSCO have suggested the need for additional information in their deliberations. The evaluation team would like to make it clear that it does not view it as their function nor does it have the resources to evaluate the proposed full bulk chain pilot.

3) Recommendation

Conduct the proposed "Economic Feasibility of Bulk Storage Project" report taking into account the impact of bulk storage on the balance of the storage sector. (Contractor)

e. Postharvest Information System

1) Findings

A portion of the contract and work plan involves working with NARC for a Postharvest Information System. The Project was to provide certain equipment, and transfer of relevant references on postharvest research. PARC/NARC was to provide one person for this. A 2 week TDY in January 1987 worked with this person to establish the program. However, this person left NARC for long term training under a Canadian program, and will not return to the project. Another person has not been named due to funding constraints.

Never the less, transfer of documents has continued with a part-time person in NARC receiving and cataloging the information. Some 100 journal articles were being processed or had been sent in the last quarter of

1987. Similarly, NARC has provided all Pakistani references for the Kansas State University Post Harvest Documentation Center.

Attempts to coordinate efforts and equipment purchases with the MART project are made to avoid some duplication of efforts and overlapping of equipment orders.

2) Conclusion

Progress on developing the information system is proceeding well considering the difficulty with staffing.

3) Recommendation

A full time person should be devoted to the activity.
(GOP)

3. REHABILITATION

The rehabilitation of public sector storages is to be completed in three distinct phases as follows:

Phase I: EI and ZOR Engineers completed a recurrent cost analysis and management audit of the public sector grain storages. All the recommendations made in the report were accepted by the Ministry of Food and Agriculture in a letter from the Secretary to Director Staples dated September 13, 1987.

Phase II: After GOP agreement with Phase I recommendations, EI will assist the GOP in transforming accepted recommendations on meeting recurrent costs and implementing improved management system into long-term plans. The work will mainly concentrate on detailed survey and design work, estimates of quantities required, cost estimates and the preparation of tender documents, etc.

Phase III: This is the actual rehabilitation of the godowns which would begin upon completion of Phase II.

a. Availability of Funds

1) Findings

The funds originally provided were not sufficient to restore up to 750,000 MT of facilities. The Phase I study indicated that it would require \$12.5 million to restore 750,000 MT of storage facilities 5 years old and older and \$32.8 million for the entire stock of godowns 5 years old and older. The PP set forth a limit of \$9,434,000 of GOP and AID funds for rehabilitation. At the current time there remains \$8,388,000. Thus the amount of storage in terms of metric tons has been reduced because construction costs were underestimated during the original planning stages and construction costs have increased during the past five years. Therefore the funds earmarked for the project are

hardly sufficient to restore 350,000 MT of storage facilities. Project staff is of the opinion that all work for the 750,000 MT of storage facilities could be completed in the remaining time should additional funds be made available. Two priority lists of godowns for rehabilitation have been developed. A first priority list for those under current funds and a second list for those should additional funding become available.

2) Conclusion

As stated elsewhere, a considerable loss of time in this project has been caused by the GOP not meeting the Conditions Precedent. Funds originally estimated and presently earmarked for the project are insufficient. Priority lists have been developed for current funds and for additional funds. It is assumed the Phase II costs will be affected by the number of godowns and content of work in each godown selected.

3) Recommendations

i. Establish a plan on how initial work on Phase II will be handled in regard to the two separate priority lists considering cost of preliminary work (other than actual construction costs); (AID, GOP)

ii. Establish a cut-off date for approval of the additional funds required to rehabilitate the entire 750,000 MT of storage facilities consistent with the plan developed in recommendation (1); (AID)

V. OVERALL EVALUATION OF FSMP

The foregoing pages contain a separate evaluation for each of the three components of FSMP. This chapter presents a brief overall evaluation of FSMP, which complements the separate evaluations and which deals with certain aspects concerning FSMP as a whole which could not be covered in the evaluations of the components.

A. COORDINATION AMONG THE THREE COMPONENTS

1. FINDINGS

Conceptually the 3 components of FSMP are closely interlinked. The implementation of the ADC component would greatly improve the data base (for example, more timely and more reliable estimates of production of major crops), would make possible more sophisticated and more diversified policy analysis (EPA), and would facilitate better advance planning of storage (PHM). The EPA component would provide pertinent and timely economic analysis of policy options and would be the catalyst for the formulation of policies to reduce the fiscal cost of storage and to stimulate private sector participation in storage (PHM), for example, by analyzing the implications of the differential between procurement and release prices. The PHM component would, in effect, increase available grain supplies by reducing storage loss through pest control and by improving storage management. The increased availability of grains would affect domestic grain prices and/or import needs and would consequently necessitate a re-examination of pricing, import and other policies (EPA).

Since the three components are sufficiently distinct from each other, separate management of each component has proved to be efficient. However, the conceptual linkage among the 3 components is not ignored in the actual functioning of project management. For example, within ARD/EMPAD, the 3 Program Specialists in charge of each component remain in close contact with each other, under the guidance of the Project Officer FSMP (Division Chief, EMPAD) who is concerned with the coordination of the 3 components. A similar mechanism exists on the GOP side, with the coordination role assigned to the Project Coordinator (A.S., MINFA). At another level of coordination, the expatriate Chiefs of Party and other expatriate consultants stay in communication with each other and with USAID. There is a monthly meeting of ARD/EMPAD with the Chiefs of Party for exchange of information. Finally, there is continuing contact among the ARD/EMPAD staff, the expatriate consultants, and the GOP counterparts.

2. CONCLUSION

Separate management for each of the three components of FSMP has proved to be efficient and has not detracted from the conceptual linkage among the units.

3. RECOMMENDATION

On a regular basis, perhaps quarterly, the appropriate GOP officials should be invited to the monthly meeting of EMPAD/ARD and the Chiefs of Party. An agenda item at these quarterly meetings should be possible ways to improve the linkage and coordination among the counterparts. (AID and GOP)

B. MANAGEMENT OF FSMP BY AID AND GOP

1. FINDINGS

The management of FSMP by AID has been entrusted to ARD/EMPAD. The function of overall FSMP management includes management of the three FSMP components, coordination among the three components, coordination with other AID projects (such as PL-480 and ACE), coordination with the GOP FSMP Coordinator, coordination with the GOP counterparts for each component, and coordination with FSMP expatriate contractors. These active ties have included providing assistance and solving problems. The Division Chief of ARD/EMPAD is the project officer for FSMP and works under the guidance of the ARD Officer.

There are three Program Specialists, one in charge of each component. One of these Program Specialists has been designated as the Project Coordinator for FSMP. These program specialists work under the supervision of the FSMP Project Officer who coordinates their functions.

The PP envisaged the creation of a Project Coordinating Unit (PCU) within the AID Mission, headed by an expatriate. It was not possible to recruit a qualified expatriate and consequently the PCU was not formally established.

The present AID management system for FSMP is similar to the PCU and works quite well. The Project Officer and the Program Specialists have demonstrated their competence, imagination and management skills, including problem solving and crisis management, and their ability to work closely and effectively with the GOP counterparts and the expatriate contract consultants. In addition to informal but continuous personal contact, ARD also uses other formats such as the monthly meeting of ARD staff with the Chiefs of Party of the expatriate consultant teams for the 3 components. The ARD team has been particularly good when dealing with unfamiliar or unforeseen problems. Comments on the management of the 3 components are included in the respective evaluations.

On the GOP side, the set up is conceptually similar but is, in practice, much more dispersed. The Additional Secretary (AS), MINFA is the FSM Project Coordinator, which position was held until December 1986 by the Joint Secretary, Food, MINFA. The FSM Project Coordinator is assisted by the coordinators for the three components, namely: for EPA, the EAN Coordinator until June 1986 and the Project Director, EPA, since then; for ADC, the Director General, FRS, which is under the Ministry of Finance, Statistics Division; for MHC, the Joint Secretary, Food, MINFA. From the second year of the project onwards, the GOP counterparts have

been responsive and have taken seriously the task of management of the FSMP and coordination of its three components. Further details are provided in the evaluation of each component.

2. CONCLUSION

The PCU was never formally established due to inability to locate a suitable expatriate. The present AID management is similar to the PCU and is working well. On the GOP side, management is conceptually the same as in AID but much more dispersed.

3. RECOMMENDATIONS

No changes are recommended.

C. SUMMARY EVALUATION OF FSMP, WITH REFERENCE TO SECTOR GOAL AND INPUTS OF "LOG FRAME"

1. FINDINGS

From the evaluations of the 3 components, it is clear that, after an uncertain start, progress is being made towards the achievement of project purpose. It is true that the progress is uneven among the three components, with the achievement factor being the highest for EPA, followed by ADC, and then by PHM. There is no doubt about the potentially valuable contribution of the 3 components, and a good case has been made in the evaluations of individual components for possible incorporation of some of the FSMP activities into the ASSP.

As for the sector goal of the "Log Frame" (Annex 6), Table 19 shows that, since the initiation of the FSMP in 1985, the Pakistan economy has continued to grow at about 7% in real terms (with substantial increases in per capita real income); and that the value added in agriculture in real terms increased at an average annual rate of close to 6% during 1985-87. However, in view of the late start of the project and other delays, too little time has elapsed for any meaningful statement to be made regarding the economic benefits of this project. However, the potential benefits of FSMP are significant and its economic contribution would be noticeable by the end of the project. For example, EPA may lead to policy reforms that may directly or indirectly increase agricultural production, increase exports, reduce imports and/or reduce the budget deficit. Similar benefits may flow from the additional data availability for policy purposes as a result of the full installation of ASF. Improvements in storage as a result of PHM may increase food security, stabilize food prices, reduce budget deficit and/or reduce imports.

Uptodate and systematic data regarding inputs could not be provided by USAID/RDO to the Evaluation Team in the time available. Because of the time constraint, the Evaluation Team could not even attempt to obtain the necessary data from other Mission offices, such as the Office of Financial Management, or from the individual contractors. Most of the data made available are on a fairly updated basis for overall FSMP but less so far the individual components. It is not been possible to

compare the actual accomplishments in financial terms or in terms of physical magnitudes (such as person-months) with expected or budgeted levels because comparable budget data (i.e., comparable in concept and timing) are not readily available. It is true that such a comparison would have been possible after some research, but the Evaluation Team did not have the time to do so.

In spite of the above limitations, the available data regarding inputs, supplemented by the information contained in the Mission half-yearly PROMIS reports, do confirm the conclusions in the evaluation report concerning the initial slowness of implementation as well as the expectations that the FSMP funds would be fully committed (though not fully disbursed) by the end of the project.

With respect to the overall FSMP project, the budgeted funding (by activity) by AID and GOP is shown in Table 20. Table 21 shows amounts obligated, committed and disbursed in the first three year years of the project (amounts actually disbursed in the third year through 1/31/88). From Table 21, it is clear that there is a large amount in the pipeline. Full commitment of project funds is projected in Table 22 which shows expected project expenditures in FY 88 and FY 89. The PROMIS report as of 9/30/87 shows a narrowing gap between planned and achieved expenditures for FSMP as a whole (Chart 7). It is interesting to note that the comments on Chart 7, while mentioning the effects of the 1986-87 GOP budget cuts (want of seed money in the PLA, slower project implementation) indicate that actual accomplishments are proceeding satisfactorily.

Table 23 shows cumulative rupee expenditures for EPA through the end of 1987 as 8% of allocations, while cumulative dollar expenditures for EPA through the end of 1987 are shown in Table 24 as 47% of the contracted level. Cumulative expenditures for the three ADC offices (Islamabad, Lahore, and Hyderabad) through June 1987 are shown in Table 24. The exhaustion of the PLA account allocations of Rs. 500,000 each for the Islamabad and Lahore ADC offices and of Rs. 450,000 for the Hyderabad ADC office is brought out in Table 25.

Cumulative Technical Assistance activities for each of the 3 components of FSMP are shown (in weeks) in Table 26. For EPA, level of effort in short term technical assistance at the end of 1987 was 76% of the contracted level (Table 24). The PROMIS report as of 9/30/87 shows the actual expenditures on technical assistance for FSMP as a whole to be above the planned amounts (Chart 8), with the observation that LT technical assistance is on board and ST technical assistance is arriving as planned.

Table 27 compares the planned with the achieved levels of training for the three components. For ADC component, there is under-performance in both ST (27% of target) and LT (9% of target) training. There is under-performance in both ST (41% of target) and LT (zero achievement) training for PHM. For EPA, there is some over-performance in ST (113% of target) training (see also Table 14) and significant under-performance in LT (26% of target) training. The PROMIS report as of 9/30/87 shows achieved training to be catching up with planned levels for FSMP as a

whole (chart 9), with the comment that there are no problems and that efforts to step up LT training will be continued.

2. CONCLUSIONS

a. After an uncertain start, progress is generally being made in varying degrees in all the three components. Too little time has elapsed since the project start to make a meaningful statement concerning economic benefits of the project. Potential benefits through policy reform, more reliable and timely data and storage improvements can be valuable and thus it is important to monitor pace of future progress.

b. In view of the potential benefits, there is good justification for the incorporation of some of the FSMP project activities, specifically mentioned in the evaluation of the individual components, into the ASSP. Care must be taken, however, to restrain the natural tendency for the pace of FSMP in the final stages to be slowed down pending the start of the ASSP.

c. After a slow start, the performance regarding inputs has kept pace with the evolution of the project.

3. RECOMMENDATIONS

a. Monitor the progress in each component to guard against future underperformance. (AID and GOP)

b. Incorporate specific FSMP activities, as recommended in the evaluation of individual components into the ASSP without permitting a slow down in these FSMP activities in the final stages pending their incorporation into the ASSP. (AID)

c. No recommendation needed.

TABLE 1

SUMMARY OF CHEMONICS/EAN SHORT-TERM EXPATRIATE TA

PERIOD	ACTIVITY	SHORT-TERM ADVISOR
OCT-NOV 85	APPRAISAL OF EAN RESEARCH PROGRAM	KEN NOBE, MELVIN SKOLD
NOV 85	PAPER. "BALANCED COMMODITY TO INCREASED FOOD SECURITY." AT EDIBLE OILS STOCK AND TRADE MGMT SEMINAR	KEN NOBE
NOV 85	PAPER. "POTENTIAL TRADING STRATEGIES TO MINIMIZE PAKISTAN'S FOREIGN EXCHANGE COSTS FOR EDIBLE OIL IMPORTS." AT EDIBLE OILS STOCK & TRADE MANAGEMENT SEMINAR	DONALD LARSON
FEB-APR 86	POULTRY INDUSTRY STUDY	FORREST WALTERS
APR 86	WORKSHOP. "INTRO TO APPLIED AGRICULTURAL ECONOMIC ANALYSIS"	FORREST WALTERS
JUL-AUG 86	EVALUATION OF PLANNING UNIT'S FARM MANAGEMENT PROGRAM	DONALD LYBECKER, MELVIN SKOLD
SEP-OCT 86	WORKSHOP. "MICROCOMPUTER TRAINING"	KRIS OSWALT
SEP-NOV 86	ASSIST WITH USAID STUDY. "CONSTRAINTS TO AG PRODUCTION"	DAVID SECKLER
NOV 86	SEMINAR. "SUPPLY MODELING"	LUTHER TWEETEN, JAMES TRAPP
NOV 86	COLLABORATION WITH DR. ALI ON AG SUPPLY MODELING, INCORPORATION OF SUPPLY ELASTICITIES IN AG POLICY SIMULATION MODEL	LUTHER TWEETEN, JAMES TRAPP
JAN 87	WORKSHOP. "AGRICULTURAL MARKETING"	FORREST WALTERS, ALBERT MADSEN
JAN-FEB 87	WORKSHOP. "TECHNICAL WRITING"	MILDRED KONAN
FEB 87	REVIEW OF "CONSTRAINTS TO AG PRODUCTION" STUDY	DAVID SECKLER
MAR 87	WORKSHOP. "ECONOMIC RESEARCH POLICY"	CARL PRAY, TERRY ROE, WESLEY SUNDQUIST
MAR 87	EVALUATION OF EAN RESEARCH PROPOSALS	JERRY ECKERT
MAR-MAY 87	INPUT-OUTPUT MODEL REVISION	JOHN McKEAN, FORREST WALTERS

Source: EAN/DAP

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SUMMARY OF CHEMONICS/EAN SHORT-TERM EXPATRIATE TA

PERIOD	ACTIVITY	SHORT-TERM ADVISOR
MAR-MAY 87	REVIEW OF AG PRICE STATISTICS	KERRY GEE
APR-JUN 87	SUGAR INDUSTRY STUDY	ALBERT MADSEN
JUN 87	WORKSHOP. "AGRICULTURAL POLICY ANALYSIS"	JERRY ECKERT, WARREN TROCK
OCT-DEC 87	DAIRY INDUSTRY STUDY	STANLEY KRAUSE
OCT-NOV 87	PRIVATIZATION OF SCARP TUBEWELLS STUDY	ROBERT YOUNG
JAN-FEB 88	WORKSHOP. "INPUT-OUTPUT ANALYSIS"	GARTH TAYLOR

TABLE 2

COMPOSITION OF THE ADVISORY COMMITTEE
ON POLICY ANALYSIS IN AGRICULTURE.

1.	Minister for Food and Agriculture.	Chairman.
2.	Minister of State for Food & Agriculture.	Vice Chairman.
3.	Secretary (F & A)/ Additional Secretary (F & A).	Member.
4.	Chairman, P.A.R.C.	"
5.	Chairman, A.P.Com.	"
6.	Vice Chancellor, Agriculture University, Faisalabad.	"
7.	Vice Chancellor, Agriculture University, Tandojam.	"
8.	Vice Chancellor, Agriculture University, Peshawar.	"
9.	Additional Secretary, Planning & Development Division.	"
10.	Minister/ Secretary, Agriculture Department, Punjab.	"
11.	Minister/ Secretary, Agriculture Department, Sind.	"
12.	Minister/ Secretary, Agriculture Department, NWFP.	"
13.	Minister/ Secretary, Agriculture Department, Baluchistan.	"
14.	Chairman, Planning & Development Board, Punjab or his representative.	"
15.	Additional Chief Secretary, Planning and Development Department, Sind.	"
16.	Additional Chief Secretary, Planning and Development Department, NWFP.	"
17.	Additional Chief Secretary, Planning and Development Department, Baluchistan.	"
18.	Director, Punjab Economic Research Institute, Lahore.	"
19.	Director, Applied Economic Research Centre, Karachi.	"
20.	Director, Centre for Applied Economic Studies, Peshawar.	"
21.	Director, P.I.D.E., Islamabad.	"
22.	Financial Adviser (F & A).	"
23.	Economic Consultant, Ministry of Food and Agriculture.	"
24.	Project Director (EPA), Food & Agriculture Division.	Secretary.

TABLE 3

ADVISORY COMMITTEE ON POLICY ANALYSIS
IN AGRICULTURE.

TERMS OF REFERENCE

1. To develop Agricultural Research Programme and supervise its implementation.
2. To fix priorities of the research studies on the basis of the proposals received from various Provincial/ Federal agencies and Universities etc.
3. To review the final results of the Research Studies.
4. To recommend measures to strengthen the research capability of various public & private institutions.

Source: EAN/DAP

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TABLE 4

COMPOSITION OF THE TECHNICAL SUB-COMMITTEE
FOR ECONOMIC & POLICY ANALYSIS.

1.	Secretary/ Additional Secretary (F & A).	Chairman.
2.	Chief Economic Research Section, Planning and Development Division.	Member.
3.	Chief, Agriculture Section, Planning and Development Division.	"
4.	Financial Advisor (F & A).	"
5.	Chief Economist, Planning and Development Department, Punjab.	"
6.	Chief Economist, Planning & Development Department, Sind.	"
7.	Chief Economist, Planning & Development Department, NWFP.	"
8.	Chief Economist, Planning & Development Department, Baluchistan.	"
9.	Economic Consultant.	"
10.	Project Director (EPA), Food & Agriculture Division.	Secretary.

Source: EAN/DAP

TABLE 5

TECHNICAL SUB-COMMITTEE

TERMS OF REFERENCE

1. Register and maintain a list of Research Institutes/ Consultants for this programme.
2. Circulate objectives and scope of studies proposed to be contracted out among Research Institutes/ Consultant and pre-qualify 3-5 institutions for the award of a study.
3. To evaluate technical proposals of research studies submitted by the Consultants.
4. To approve the methodology, procedure and design of each study for which the institution concerned will make a presentation.
5. To award studies to consultants according to the prescribed procedure.

Source: EAN/DAP

8/3

TABLE 6

STEERING GROUPS
COMPOSITION

The composition of the steering group will vary from study to study depending upon nature of the study and will normally consist of the following:-

- | | | |
|------|-----------------------------|----------|
| i) | Subject Specialist/ Expert. | Convener |
| ii) | Economist. | Member |
| iii) | Statistician. | Member |

Source: EAN/DAP

TABLE 7

STEERING GROUP(S)

FUNCTIONS

- i) To assist in the formulation of the TOR of a study if required.
- ii) To supervise and monitor the study being conducted to see if it was being conducted according to agreed plan.
- iii) To examine the draft report.

Source: EAN/DAP

TABLE 8

LIST OF RESEARCH TOPICS

1. Price & Import of seed constraints in production & distribution of important seeds in public and private sectors.
2. Effectiveness of Pest Control measures and Policies by crop and ecological zones with a view to examine adoption by small farmers.
3. Application of fertilizer & Yield responses of important crops by size of farm & mode of irrigation for different ecological zones.
4. Impact of mechanization of productivity & employment by farm size & tenure for different ecological zones Economic assessment of various levels of mechanization.
5. Constraints in the flow of credit with particular references to small farmers.
6. Impact of price policy on cropping pattern and farming system estimating of short, medium and long term price elasticities of supply for major crops.
7. Study of farm productivity by size & tenure & crops estimation of domestic resources costs for major crops.
8. Estimate of private investments in Agriculture during the sixty five year plan by board categories of capital assets.
9. Examination of post-harvest system of major crops for minimizing losses, reducing handling costs and evolving an improved grading system.
10. Study of marketing margins of selected crops in the context of farming system & ecological zones.
11. Constraints to development of cooperatives in the country in the light of examples of successful cooperatives in other countries specially farming cooperatives & marketing cooperatives of perishable commodities.
12. Evaluation of different models of extension services in terms of effectiveness & cost including the impact of communication media on Agricultural Production.
13. A study of Trade, Price and institutional policies needed for procurement, processing, marketing & export of perishable commodities.

Source: EAN/DAP

TABLE 9

LIST OF INSTITUTIONS SERVING IN AGRICULTURE

H. Economic Analysis Network Cooperating Institutions

1. Pakistan Agricultural Research Council
Islamabad.
2. Planning Unit
Food & Agriculture Division
Islamabad.
3. Agricultural Prices Commission.
Islamabad
4. Planning and Development Department
Government of Punjab,
Lahore
5. Planning and Development Department
Government of Sind,
Tughrag House,
Karachi
6. Planning and Development Department,
Government of NWFP,
Peshawar
7. Planning and Development Department,
Government of Baluchistan,
Quetta
8. Department of Agriculture,
Government of Punjab,
Lahore
9. Department of Agriculture,
Government of Sind,
Karachi
10. Department of Agriculture,
Government of NWFP,
Peshawar
11. Department of Agriculture,
Government of Baluchistan,
Quetta
12. University of Agriculture,
Faisalabad

13. Sind Agricultural University,
Tandojam
14. NWFP Agriculture University,
Peshawar
15. Punjab Economic Research Institute,
Lahore
16. Applied Economic Research Centre,
University of Karachi,
Karachi
17. Centre for Applied Economic Studies,
Department of Economics,
University of Peshawar,
Peshawar
18. Institute of Development Studies,
NWFP Agriculture University,
Peshawar
19. Pakistan Institute of Development Economics,
Quaid-e-Azam University,
Islamabad
20. Food & Agriculture Section,
Planning & Development Division,
Pakistan Secretariat, Block "F",
Islamabad
21. The Agricultural Livestock & Marketing Adviser (ALMA)
Karachi
22. Planning & Development Department
Govt. of Azad Kashmir
Muzaffarabad.

TABLE 10

LIST OF NINE CONTRACT STUDIES
TO BE AWARDED

1. Price and Import of Seed Constraints in Production and Distribution of important seeds in the public and private sector.
2. Effectiveness of Pest Control Measures and Policies by Crop and Ecological Zones with a view to examine Adoption by Small Farmers.
3. Application of Fertilizer and Yield Responses of Important Crops by size of Farm and Mode of Ecological Zones.
4. Impact of Mechanization of Poultry and Employment by Farm Size and Tenure for different Ecological Zones. Economic Assessment of various levels of Mechanization.
5. Study of Farm Productivity by Size and Tenure and Crops Estimation of Domestic Resources Costs for Major Crops.
6. Study of Marketing Margins of Selected Crops in the Context of Farming Systems Ecological Zones.
7. Constraints to Development of Cooperatives in the country in the light of Example of Successful Cooperatives in other countries specially Farming Cooperatives and Marketing Cooperatives of Perishable Commodities.
8. Evaluation of Different Models of Extension Services in Terms of Effectiveness and Cost Including the Impact of Communication Media on Agricultural Production.
9. A Study of Trade, Price and Institutional Policies needed for Procurement, Processing Marketing and Exports of Perishable Commodities.

Source: EAN/DAP

MAR 1986

TABLE 11
PROGRAMME OF RESEARCH STUDIES

<u>Name of Pre-qualifieds with Relevant Study</u>			
<u>S.No.</u>	<u>Name of Pre-qualified Institutions</u>	<u>Studies for which Pre-qualified</u>	<u>Telephone.</u>
1.	Aftab Associates, Lahore.	4, 8	883910
2.	Economic Policy Research Unit, Lahore.	4, 12	320131-5
3.	United Consulting Group Limited, Lahore.	1, 10, 13	412193
4.	M. Ayub Abidi and Associates, Lahore.	3, 4	853819
5.	Pakistan International Agricultural Consultants Services, Lahore.	5,	412826
✓ 6.	Al Mushavarat, Karachi.	6, 9	531837
EDU — 7.	The Lahore Graduate School of Business Administration, Lahore-II.	6, 7	874045
✓ 8.	Farm Guide Agricultural Consultancy Services, Lahore-3.	2, 12	
9.	INNOTECS, Lahore-III	1, 9	304208
✓ 10.	Sheikh Nisarul Haq, Lahore. <i>Below Consult</i>	1, 2	871196
11.	Iqbal Shafiq Associates, Karachi.	2, 3	433148
✓ 12.	Chemical Consultants (Pak) Ltd; Lahore.	2, 3	872431
13.	Agricon, Karachi.	2, 9	521271
14.	Development Studies Institute Ltd; Lahore Cantt.	5, 8	370783
15.	Agro Technical Consultants International Limited, Lahore.	1, 12	—
✓ 16.	Progressive Consultants, Lahore.	2, 3	871951
17.	Sanna Associates, Rawalpindi.	1, 5	43229
18.	Research Associates, Islamabad.	11,	829528
19.	ESSESJAY Consultants Ltd; Karachi.	11, 13	430140
✓ 20.	United Consultants Ltd; Lahore.	4, 6	412193
✓ 21.	Associated Consulting Engineers, Lahore.	3, 12	873441
✓ 22.	Techno Consults, Lahore	13,	852355

F.T.O

S.No.	Name of Pre-qualified Institutions	Studies for which Pre-qualified.	Volume No.
	23. M.S.J. Research Institute, Karachi.	10, 11	443643
	24. Centre for Administrative Research and Development Studies, Lahore.	10, 11	302326
EDU, RESIST	25. Director, Applied Economic Research Centre, Karachi.	7	465749
EDU	26. University of Punjab, Lahore.	8, 13	852176
EDU	27. Vice Chancellor, University of Agricultural, Faisalabad.	7, 11	25911
GOVT RES INST.	28. Director, Punjab Economic Research Institute, Lahore.	5, 12	883144
	✓ 29. National Engineering Services (Pak) Limited, Lahore.	10, 12	858313
EDU	30. Sind Agricultural University, Tandojam.	5, 7, 9	40436
EDU	31. Centre for Applied Economic Study, Peshawar.	7, 10	41028
EDU	32. IWFP Agriculture University, Peshawar.	4, 8	8981
EDU	33. Institute for Development Studies, Peshawar.	9,	42170

24 FIRMS

9 EDU, GOVT RESH INSTITUTES

33 PRIVATE, GOVT INSTITUTIONS WIKIE

PRE QUALIFIED IN JAN-MAR 86.

TABLE 12

SUMMARY OF CHEMONICS/EAN PROJECT STUDIES

TITLE OF STUDY	STATUS
=====	
CONTRACT STUDIES:	
"CROP FERTILIZER RESPONSE." BY CHEMICAL CONSULTANTS. LAHORE	ONGOING (JUL 87-JUN 88)
"CONSTRAINTS TO DEVELOPMENT OF COOPERATIVES." BY RESEARCH ASSOCIATES. ISLAMABAD	ONGOING (JUL 87-JUN 88)
"IMPACT OF MECHANIZATION ON PRODUCTIVITY AND EMPLOYMENTS." BY UNITED CONSULTANTS. LIMITED. LAHORE	ONGOING (JUL 87-JUN 88)

STUDIES COMMISSIONED BY MINFA:	
"POULTRY INDUSTRY STUDY"	COMPLETED
"APPRAISAL OF AGRICULTURAL PRICE STATISTICS"	COMPLETED
"INPUT-OUTPUT MODEL (COMPLETION OF PIDE MODEL)"	COMPLETED. AWAITING PUBLICATION
"APPRAISAL OF EAN RESEARCH PROGRAM"	COMPLETED. AWAITING PUBLICATION
"APPRAISAL OF PLANNING UNIT FARM MGMT STUDIES"	COMPLETED. AWAITING PUBLICATION
"SUGAR INDUSTRY STUDY"	COMPLETION 1ST QTR 87
"DAIRY INDUSTRY STUDY"	COMPLETION 1ST QTR 87
"PRIVATIZATION OF TUBEWELLS"	COMPLETION 1ST QTR 87

CHEMONICS IN-HOUSE STUDIES:	
"FERTILIZER POLICY UPDATE BRIEFING PAPER"	COMPLETED
"WHEAT POLICY BRIEFING PAPER"	COMPLETED
"POULTRY INDUSTRY DEVELOPMENT BRIEFING PAPER"	COMPLETED
"POULTRY PRICES AND MARKETING BRIEFING PAPER"	COMPLETED
"POULTRY FINANCIAL MANAGEMENT BRIEFING PAPER"	COMPLETED
"POULTRY FEED SITUATION BRIEFING PAPER"	COMPLETED
"PUNJAB WHEAT SEED INDUSTRY"	COMPLETED. AWAITING PUBLICATION
"PAKISTAN SYSTEMS AGRICULTURAL SUPPLY MODEL"	BEING REVISED FOR 1ST QTR 88 PUBLICAT.
"RETURNS TO IRRIGATION O&M EXPENDITURES"	BEING REVISED FOR 1ST QTR 88 PUBLICAT.
"REGIONAL. NATIONAL LP MODELS"	ONGOING
"FOOD & FIBER INTERINDUSTRY RELATIONSHIPS"	JAN-FEB 88
"EDIBLE OILS POLICY UPDATE"	FEB-APR 88

Commissioned by MINFA

Source: EAN/DAP

TABLE 13

SUMMARY OF CHEMONICS/EAN PROJECT WORKSHOPS/SEMINARS

DATE	WORKSHOP TITLE	---PARTICIPANTS---	
		No.	F-Months
6-24 APR 86	INTRODUCTION TO APPLIED AGRICULTURAL ECONOMIC ANALYSIS	32	25.1
23 SEP- 7 OCT 86	MICROCOMPUTER TRAINING	16	9.6
4-22 JAN 87	AGRICULTURAL MARKETING	27	21.2
25 JAN- 12 FEB 87	TECHNICAL WRITING	14	11.0
8-19 MAR 87	ECONOMIC RESEARCH POLICY	30	15.2
7-25 JUN 87	AGRICULTURAL POLICY ANALYSIS	23	18.0
13-17 SEP 87	MICROCOMPUTER TRAINING	14	3.2
	TOTAL:	142	103.4

DATE	SEMINAR TITLE	---PARTICIPANTS---	
		No.	F-Months
21 NOV 85	EDIBLE OILS POLICY (STOCK AND TRADE MANAGEMENT)	50	2.3
10 SEP 86	SUPPLY MODELING (MUBARIK ALI)	16	0.2
2 NOV 86	CONSTRAINTS TO AG PRODUCTION	20	0.2
23 NOV 86	AGRICULTURAL SUPPLY MODELS (TWEETEN & TRAPP)	40	0.9
27 APR 87	I-O MODELING	15	0.2
12 NOV 87	PRIVATIZING TUBEWELLS	25	0.3
3 DEC 87	DAIRY INDUSTRY I	20	0.2
6 DEC 87	DAIRY INDUSTRY II	15	0.2
9 DEC 87	POULTRY INDUSTRY	60	2.8
	TOTAL:	261	7.3

TOTAL EAN LOCAL TRAINING:	403	110.7
EPA COMPONENT INCOUNTRY ALLOCATION:	212	135.0
EAN AS PERCENT OF EPA ALLOCATION:	190	82

Source: EAN/DAP

TABLE 14

TRAINING AVAILABLE UNDER EPA/ESR PROJECT TO DATE

S NO.	NAME AND DEPARTMENT	SUBJECT	DURATION	PIG/P TO EAO	DATE OF DEPARTURE	PIG/P STATUS
ECONOMIC POLICY ANALYSIS (EPA) COMPONENT						
1.	Mrs. Abida Tahirani, Asstt. Professor, University of Sind, Jamshoro	Eco/Aq. Economics	3M	04-24-85	12-29-85	85133
2.	Mr. Anwar Hussain Usari, Professor, University of Sind, Jamshoro	Eco/Aq. Economics	3M	04-24-85	12-29-85	85133
3.	Mr. Aurangzeb Abbasi, Research Investigator (PU), MINFA; Islamabad	Eco/Aq. Economics	3M	09-12-85		85257
4.	.....	Eco/Aq. Economics	3M			
5.	.....	Eco/Aq. Economics	3M			
6.	Mr. Bashir Ahsed Khan, Statt. Officer, MINFA; Islamabad	Eco/Aq. Economics	24M			
7.	Mr. Mohammad Akram, Research Investigator, MINFA; Islamabad	Eco/Aq. Economics	24M	10-20-86	08-26-87	87034 In-Trg
8.	Mr. Habib Ahsed, Research Investigator, MINFA; Islamabad	Eco/Aq. Economics	24M			
9.	Mr. Wasim Ahsed Malik, Statt. Officer, CRS, Aq. Department, Lahore	Eco/Aq. Economics	24M			
10.	Mr. Faqir Ahsed, Statistical Officer, Aq. Department, Lahore	Eco/Aq. Economics	24M			
11.	Mr. Arshad Khan, Statistical Officer, Aq. Department, Lahore	Eco/Aq. Economics	24M			
12.	Mr. Shahid Tanweer, A/Chief, P&D Division, Islamabad (Against 42 M)	Eco/Aq. Economics	24M	14-25-87	08-12-87	86328 In-Trg
13.	Mr. Mohammad Ibrar, Research Officer, MINFAC (Planning Unit), Islamabad	Eco/Aq. Economics	24M			
14.	.....	Eco/Aq. Economics	24M			
EYSB						
1.	Mr. Mohammad Sarwar Shah, Aq. Economist, Aq. Department, Lahore	Aq. Economics	3/24	04-28-86	01-01-87	86177
2.	.....	Aq. Economics	3/24			
3.	.....	Aq. Economics	3/24			
4.	.....	Aq. Economics	3/24			
5.	.....	Aq. Economics	3/24			
6.	Mr. Zameer A. Akbar, A/Director, Bureau of Statistics, 60Sind, Karachi	Aq. Economics	24M	01-11-87	03-19-87	87103 In-Trg
7.	Mr. M. Saddique Akbar, Deputy Secretary, PFD; Govt of Punjab, Lahore	Aq. Economics	24M			87224 In-Trg
8.	.....	Eco/Aq. Economics	24M			
9.	.....	Eco. Aq. Economics	24M			
10.	.....	Eco. Aq. Economics	24M			
11.	.....	Eco. Aq. Economics	24M			
12.	.....	Eco. Aq. Economics	24M			

Source: AID

8/24/87

TRAINING AVAILABLE UNDER AGC/FSN PROJECT TO DATE

9. NAME AND DEPARTMENT NO.	SUBJECT	DURATION	PIO/P TO EAD	DATE OF DEPARTURE	PIO/P STATUS
AGRICULTURAL DATA COLLECTION (ADC) COMPONENT					
1. Mr. Abdul Shakor Sabiry, Research Investigator, MINFA, Islamabad	Aq. Statistics	14	11-10-86	03-28-87	87033 Complete:
2. Mr. Muzameel Hussain, Deputy Director General, FBS, Karachi	Aq. Statistics	14	09-13-85	09-17-85	85233
3. Mr. Sharif Ahmed Khan, Director, FBS, Islamabad	Aq. Statistics	14	09-13-85	09-17-85	85233
4. Mr. Mohammed Asraf Khoshr, Statistician, Ag. Deptt; Lahore	Aq. Statistics	14	09-13-85	09-17-85	85233
5. Mr. Abdul Samad, Statistician, Agriculture Department, Quetta	Aq. Statistics	14	09-13-85	09-17-85	85233
6. Mr. Taji Ullah Khan, Statistician, Ag. Deptt; NWFP; Peshawar	Aq. Statistics	14	09-13-85	09-17-85	85233
7. Mr. Akhtar Ali Shayan, Jr. Ag. Census Commission, Lahore	Aq. Statistics	14	09-13-85	09-17-85	85233
8. Mr. Abdul Wahab, Chief Statistical Officer, FBS, Islamabad	Aq. Statistics	14	09-13-85	09-17-85	85233
9. Mr. Abdullah, Chief Statistical Officer, Islamabad (against 7 M)	Aq. Statistics	14	14-13-87	05-21-87	82272 Complete:
10. Raja Gulfiqar Hussain, Statistical Officer, Rawalpindi	Aq. Statistics	14	14-13-87	05-21-87	82272 Complete:
11. Mr. M.A. Salik, Dy. Ag. Census Commissioner, Quetta (against 7 M)	Aq. Statistics	14	14-13-87	05-21-87	82272 Complete:
12. Mr. Abdul Rahman Khanzada, Statistical Officer, Hyderabad	Aq. Statistics	14			
13.	Aq. Statistics	14			
14.	Aq. Statistics	14			
15.	Aq. Statistics	14			
FY86					
1. Mr. Mohammed Amin Thaco, A/Statistical Officer, Ag. Department, Karachi	Aq. Statistics	14	10-10-86		87033 Avail 87
2. Mr. Mohammed Aslam Gureeni, Statistical Officer, Baluchistan, Quetta	Aq. Statistics	13			
3. Mr. Khalid Mahmood, JCO, Federal Bureau of Statistics, Islamabad	Aq. Statistics	14	07-01-86	08-24-87	36231 In-Frg
4. Mr. Habib Ahmed, Statistical Officer, Agriculture Department, Lahore	Aq. Statistics	13	09-10-86		87033 Pending
5. Mr. Shaid M. Maaid, Statistical Officer, Ag. Department, Lahore	Aq. Statistics	14	14-27-86	05-09-86	86173
6. Mr. Mohammed Iqbal, Statistical Officer, Agriculture Department, Lahore	Aq. Statistics	14			
7. Mr. Saad Uddin Gureeni, Stat. Officer, Bureau of Statistics, Karachi	Aq. Statistics	14			
8. Mr. Saad Bus, Statistical Officer, FBS, Karachi	Aq. Statistics	14			
9. Mr. S. Aziz Ahmed, Statistical Officer, FBS, Lahore	Aq. Statistics	14			
10. Mr. S. J. Muzameel Hussain, Statistician, Ag Research Institute, Faisalabad	Aq. Statistics	14			
11. Mr. Shaikat A. Rizvi, A/Stat. Officer, C/o of Ag. Statist, Quetta	Aq. Statistics	14			

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TRAINING AVAILABLE UNDER PMA/FSM PROJECT TO 2016

S NO.	NAME AND DEPARTMENT	SUBJECT	DURATION	PIO/P TO EAD	DATE OF DEPARTURE	PIO/P	STATUS
POST HARVEST MANAGEMENT (PHM) COMPONENT							
1.	Mr. Irshad Ali Unar, Storage and Enforcement Officer, Hyderabad	Stg. Management	2M	03-25-85	06-06-85	85095	
2.	Mr. Abdul Mavee, Dy Chief, Planning and Dev. Division, Islamabad	Stg. Management	2M	09-22-85		85259	
3.	Mr. Mohammad Hussain Awan, Plant Mgr. Seed Corp. Khanewal	Stg. Management	2M	04-27-87	05-28-87	87329	Completed
4.	Mr. M. Siddiq Akbar, Dy Secretary, Food Department, Lahore	Stg. Management	2M	05-02-87	08-19-87	87329	Completed
5.	Mirza Abdul Razaq, District Food Controller, Sheikhupura	Stg. Management	2M	06-11-87	08-20-87	87511	In-faq
6.	Mr. Sonrad Khan Kalwar, Rationing Officer, PFD; Karachi	Stored Grain Res	2M	6/10/85		86434	Completed
7.	.....	Stored Grain Res	2M				
8.	.....	Stored Grain Res	2M				
9.	.....	Stored Grain Res	2M				
10.	.....	Stored Grain Res	2M				
11.	.....	Stored Grain Res	2M				
12.	.....	Stored Grain Res	2M				
13.	Mr. Mohammad Ismail Memon, Deputy Director Food, Karachi	Stg. Rehabilitation	2M	03-25-85		85096	
14.	Mr. Ghulam Nabi Mughal, Deputy Food Controller, Sanghar	Storage Rehabilitation	1M				
15.	.....	Storage Rehabilitation	1M				
16.	Mr. Mohammad Sharif, Dy Director Food, Sargodha	Post Harvest Management	5M				No rel letter to EAD 06-10-85
17.	.....	Bulk Storage Design	1M				
18.	.....	Bulk Storage Design	1M				
19.	.....	Bulk Storage Design	1M				
20.	.....	Vertebrate Pest	5M				
21.	.....	Vertebrate Pest	5M				
22.	Mr. Sikanar Hayat Mehan, S.O. MINFAC, Islamabad	Grain Stg. Management	6M	05-25-87	06-07-87	87446	Completed
23.	Mr. Ghulam Ali Memon, Stg Enforcement Officer, Food Deptt. Hyderabad	Storage Management Program	8M	05-20-87		87412	Pending
24.	Mr. Irshad A. Junaid, Food Department, Hyderabad	Storage Management Program	8M	05-20-87		87412	Pending
EXB4							
1.	Mr. Mohammad Anwar Khan, Assistant Director Food, MNFP; Peshawar	Storage Management	8M	05-27-86		86245	
2.	Mr. Kamal Khan Aizaz, Veg Botanist, Ag. Research Institute, Quetta	Storage Management	8M	07-01-86		86322	In-trq
3.	Mr. Abdul Latif Dastg, Deputy Director Food, Lahore.....	Storage Management	8M	04-13-87	06-04-87	87271	Complete
4.	Mr. Mukhtar Gul A. Beg, General Manager, PASSCO, Lahore (against B M)	Storage Management	6M	05-25-87	06-07-87	87448	Completed
5.	Mr. Masud Abbas, Assistant Food Controller, MNFP; Abbottabad	Bulk Storage Design	4/6M	05-27-86		86244	
6.	Mr. Abdullah Yousaf, District Food Controller, Jhang	Storage Rehabilitation	4M	05-13-86		86210	

POST HARVEST MANAGEMENT (PHM) COMPONENT (Continued)

7.	Storage Rehabilitation	4M		
8.	Storage Rehabilitation	4M		
9.	Storage Rehabilitation	4M		
10. Mr. Shaqir Ahsan Gureshi, Superintending Engineer, PASSCO, Lahore	Stg. Rehabilitation	4M	01-13-87 06-04-87	87106 Completed
11. Chaudhary M. Sharif, Deputy Director Food, Rawalpindi	Stored Grain Research	8M	03-13-86	86207
12. Mr. Shuaib Rasool, Entomologist, AARI, Faisalabad Mr. M. Rafiq, Entomologist, AARI, Faisalabad	Stored Grain Research	3M	03-22-87	87228 On-hold
13. Mr. Squeeb Khan Kalwar, A/Director, Prov. Food Department, Karachi	Postharvest Grain Handling and Marketing	4M	09-25-86	86434
14. Mr. Naseem Iqbal Khan, Deputy Director, Stg. Cell, MINFA, Islamabad	Entomology	36M	01-11-87	87104 Pending
15. Raja M. Shafiq (EAD), AARI, Faisalabad Mr. Rukhsar Ahsan, EADA, AARI, Faisalabad	Entomology	36M	03-22-87	87228 On-hold
16. Mr. Habib Ahsan, Entomologist, AARI, Faisalabad	Vertebrate Pests		03-22-87 07-15-87	87228 Completed
17.	Insect Resistance to Pests	6M		
18.	Pesticide Residue	6M		
19.	Integrated Pest Mgt.	4M		
20.	Integrated Pest Mgt.	4M		
21.	Integrated Pest Mgt.	4M		
22.	Information System	10M		
23.	Grain Science/Entomology	36M		
24.	Grain Science/Entomology	36M		
25. Mr. Abdul Hamid, Assistant Ag. Engineer, Ag. Department, Rawalpindi Mr. Falak Sher Khan, Assistant Ag. Engineer, Ag. Department, Karachi	Storage/Ag. Engineering	24M		
26.	Storage/Ag. Engineering	24M		
27.	Storage/Ag. Engineering	24M		
28.	Pest Management	24M		
29.	Vertebrate Pest	24M		
30. Mr. Aman Ullah Khan, Plant Pathologist, Lahore Mr. Monameed Riyazul Haque, Plant Pathologist, Lahore	Plant Pathology	24M		
31.	Plant Pathology/Entomology	24M		
32.	Plant Pathology/Entomology	24M		

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TRAINING AVAILABLE UNDER FSM PROJECT IQ DATE

S	NAME AND DEPARTMENT NO.	SUBJECT	DURATION	PIO/P TO EAD	DATE OF DEPARTURE	STATUS
1	Mr. Sharfuddin, Statistical Officer, M/O Finance, Islamabad	Sampling & Statt Methods	12M	01-20-87		01987
2	Mr. Mohammad Hanif Dhabar, Statistical Officer, Karachi	Sampling & Statt Methods				
3	Mr. Mohammad Saeed Anwar, System Analyst, Islamabad	Computer Data System				
4	Mr. Mohammad Manzoor, Senior Programmer, Lahore	Computer Data System				
5	Mr. Masrullah Chaudhary, Statistical Officer, Gujrat	Survey Methods				
6	Mr. M. Khan Sahib, Dy. Agricultural Statistics Officer, Quetta	Survey Methods				

TRAINING AVAILABLE UNDER AID PROJECT TO DATE

S NO.	NAME AND DEPARTMENT	SUBJECT	DURATION	PIO/P TO EAO	DATE OF DEPARTURE	PIO/P STATUS
OTHER UNPLANNED						
15.	Mr. Mohammed Azeem Khan, Chief Statistical Officer, FBS (SNHS) Karachi	Econ National Accounts	13/24M			
16.	Mr. Mohammed Anwar, Statistical Officer, FBS; Quetta	NS Ag. Economics	13/24M			
17.	Mr. Bashir Ahsan Shattai, Asstt. Ag. Census Commissioner, AGO; Lahore					
18.	Mr. M. Aslam Khan, Statistical Officer, FBS; Karachi	Strategy for De. Growth	SM	04-30-86	05-11-86	86185
19.	Mr. S. N. Aslam Khan, Dy Agriculture Commissioner, MINFA; Islamabad	Strategy for De. Growth	SM	04-30-86	05-11-86	86185
20.	Mr. M. Aslam Khan, Deputy Secretary, MINFA; Islamabad	Strategy for De. Growth	SM	04-30-86	05-11-86	86270
21.	Mr. M. Aslam Khan, Deputy Secretary (ARO), MINFA; Islamabad	NS Ocean Science	13/24M	01-11-87	03-12-87	87105 In-try
22.	Mr. Mohammed Manzoor Akhtar, Assistant Comm PCD, Islamabad	NS Tech Staff	13/24M	10-20-86		97016 Pending
23.	Mr. Abdul Majid Khan, Statistical Officer, FBS; Karachi					
24.	Mr. S. Mujahid Hussain, Statistical Officer, FBS; Karachi	Ag. Management	7/4M	07-01-86	08-11-87	86352
25.	Mr. Mohammed Azeem, Ag. Economist, ARI; Sialkot, Quetta	Int'l Pro on Rev Dept	9M	09-01-86	01-07-87	86393 In-try
26.	Mr. Ghulam Ahsan, Chief Staff Officer, Statistics Division, Islamabad	Data Collection Systems	SM	03-03-87	05-12-87	87193 Completed
27.	Mr. S. Rasheed Qasbi, Deputy Director (Port), Karachi	Grain Storage Marketing	7M	05-15-87	03-10-87	87413 In-try
28.	Mr. Bashir Ahsan Sheikh, District Food Controller, Rawalpindi	Establishing Calculators & Analytic Systems	11M	05-12-87	05-13-87	87594 Completed
29.	Mr. Iftikhar M. Shah, Under Secretary, Ag. Department, Lahore	Ag. Forum	3D	05-19-87		87442 Cancelled
30.	Mr. Zafar Iqbal, Secretary, Production, Islamabad	Manpower Projection and Analysis for 1987-88	SM	05-17-87	01-11-87	87413 Completed
31.	Mr. Mohammad Yunus, Director Federal Bureau of Statistics	Measurement of Salaries	SM	05-02-87	01-12-87	87565 Returned due to ...
32.	Mr. Iftikhar Ahsan, Statistical Officer	-do-				
33.	Mr. Mohammed Shafiq, Statistical Officer, Islamabad	Establishing Calculators & Analytic Systems	11M	05-21-87	01-07-87	87447 Completed
34.	Mr. Azhar Hussain, Statistical Officer	Grain Storage Marketing	SM	05-25-87	01-07-87	87448 Completed
35.	Mr. Abdul Aziz Sabir, Asstt Professor, Ag. University, Faisalabad					
36.	Mr. Bashir A. Malik, Dy Director, Planning Unit, MINFAC, Islamabad					
37.	Mr. M. Rafiq Khan, Ag. University, Faisalabad					

Best Available Document

SEMINARS/CONFERENCES

21. Mr. Malavat Hussain Raja, S.O. MINFAC, Islamabad
22. Dr. Mohammad Hameed, Dy. Ag. Development Commissioner, Islamabad
23. Mr. Masrullah M. Malik, Dy. Director (Food), Karachi
24. Mr. Maula B. Qureshi, Secretary, MINFAC, Islamabad
25. Mr. Ghulam Saeed, S.O. MINFAC, Islamabad
26. Mr. Shah Mansoor Chaudhary, Economic Consultant, MINFAC, Islamabad
27. Syed Inayat Ullah, Under Secretary, Ag. Department, Lahore
28. Mr. Abdul Rauf Chaudhary, Asstt Professor, Ag. University, Faisalabad

STUDY TOURS

1. Dr. Masuda Akhtar, Economic Consultant, MINFA, Islamabad
2. Mr. Abdur Rehman, Joint Secretary, Statistics Division, Islamabad
3. Mr. Inaam Khan, Joint Secretary (Food), MINFA, Islamabad
4. Mr. Shaffar Chaudhary, Chief of Research, PIDE, Islamabad
5. Mr. Umar Khan Sultan, Director of Research, PARC, Islamabad
6. Dr. A.H. Naeem, Director DAP, MINFA, Islamabad
7. Mr. M. Tariq Jinnah, JS, MINFA, Islamabad
8. Mr. M. Rasheed Khan, SO, MINFA, Islamabad
9. Mr. S. Anwar Hussian, Director Food, Sind, Karachi
10. Mr. Shaikat Jinnah, IAS, PS, Pesnawar
11. Col. M. Farid, IAS, PS, Lahore
12. Maji M. Asim, IAS, PS, Lahore
13. Mr. Niaz Mohammad Khan, Director Food, Baluchistan, Quetta
14. Mr. Lia Ul Haq, Director Food, Punjab, Lahore

(Project Analysis for Ag. & Rural Development)
 Policy Form & Mgt of Ag.
 Ag. Policy Seminar
 Ag. Policy Seminar
 Food Policy & Eco Seminar
 Ag. Policy Seminar
 Ag. Policy Seminar

AM 06-01-87 06-09-87 87447 Completed
 AM 06-01-87 06-09-87 87447 Completed
 IM 06-01-87 06-09-87 87448 Completed
 AM 06-08-87 87504 Deferred
 AM 06-08-87 06-19-87 87504 Completed
 IM 06-08-87 08-18-87 87503 Completed
 AM 06-14-87 06-22-87 87528 Completed
 AM 06-14-87 06-20-87 87528 Completed

Req Evaluation Conf
 Study Tour
 Study Tour
 Visit to U.S.
 Italy/UK/US

IM 09-10-85 09-19-85 85249
 IM 06-26-86 07-02-86 86314
 IM 06-19-86 07-02-86 86311
 IM 05-10-87

3rd Session of Reg. Food
 Security for Asia & Pacific
 Study Tour Mt. Stq
 Study Tour Mt. Stq

40 05-03-87 05-11-87 87382 Completed
 IM 09-01-87 01587 Completed
 IM 09-20-87 02787
 IM 09-20-87 02787 Completed

Best Available Document

TRAINING AVAILABLE TO DATE

S NO.	NAME AND DEPARTMENT	SUBJECT	DURATION	PIO/P TO EAO	DATE OF DEPARTURE	PIO/P STATUS
AGRI-BUSINESS/PRIVATE SECTOR						
1.	Mr. M. Saadat, Mobile Credit Officer, AOSP: Gujranwala	Ag Eco Tech Agri	18M			
2.	Mr. M. Saadat, Assistant Director, AOSP: Islamabad	Ag Eco Tech Agri	18M			
3.	Mr. M. Saadat, Mobile Credit Officer, Malist	Ag Eco Tech Agri	18M			
4.	Mr. Mansoor Sultan, Manager, AOBP: Mardan	Finance & Banking	9M			
5.	Mr. M. Saadat, Manager, AOBP: Rawalpindi	Credit Policy/Rural Finan	9M			
6.	Mr. Abdul Baki, Manager, AOBP: Peshawar	Credit Policy/Rural Finan	9M			
7.	Mr. Mansoor Saadat, Assistant Director, AOSP: Islamabad	Communications	18M			
8.	Mr. M. Saadat, Manager, AOBP: Karachi	Personnel Management	18M			
9.	Mr. Mansoor Saadat, Program Specialist, AIC/USAID, Islamabad	Economics	3&M	05-10-87	08-31-87	37440 In-trq
10.	Mr. Mansoor Saadat, ANIS Enterprises Ltd. Lahore	Dairy Processing	4M	07-14-87		37440
11.	Mr. Mansoor Saadat, Olympia Poultry Farms, Manserha Road, Abbotabad	MS-Poultry Pathology	3M	04-06-87		01687
12.	Mr. M. Saadat, Uman Flour Mills, Jhang Road, Faisalabad	Flour Milling Tech.	3M	04-06-87		01787
13.	Mr. Mansoor Saadat, Habib Dossa, 150, First Floor, Aynabad Colony, Karachi	Compost Fertilizer	3M	04-06-87		01887
14.	Mr. Mansoor Saadat, Manager, 4-Park View, Morgah, Rawalpindi	Animal Nutrition	3M	04-06-87		02187
15.	Mr. Mansoor Saadat, Energy Consultant Ltd. 103/B, SHCS, Karachi	Fare Cooperatives	3M	04-06-87		02287
16.	Mr. Mansoor Saadat, Bhatti, 207, Pak Block, Allama Iqbal Town, Lahore	Poultry Pathology	24M	04-06-87		02387
17.	Mr. Mansoor Saadat, Dow Chem Pacific Ltd 38/B, Block 4, PECHS, Kar.	Agbus. Management.	3M	04-06-87		02487
18.	Mr. Mansoor Saadat, Farmers Association, Sherikhe, Howshera Kalan	Soil Sciences	3M	04-06-87		02587
19.	Mr. Mansoor Saadat, Pfizer Labs Ltd. 222, Kandia Hussain Road, RP.	Agri. Marketing	3M	04-06-87		02687
20.	Mr.					

TRAINING AVAILED TO DATE

S	NAME AND DEPARTMENT NO.	SUBJECT	DURATION	PIO/P TO EAD	DATE OF DEPARTURE	PIO/P	STATUS
1.	Mr. N. Akhtar Arain, IC, St. 23, Khayaban Mujahid, Defence, Karachi	Prod. Prod. : Utility of by-product of Sugarcane Poultry Production Program	3M	7-20-87		87700	Pending
2.	Mr. Ghulam Asghar, Oivepsia Poultry Farms, Lahore		6M	8-10-87		87745	Admit 87
3.	Ms. Kaisar Ashraf					87415	In-trq
4.	Mr. Iqbal Aneeq Saloon, Saloon Clinic, Opp Market PO Hyderabad	Wheat Production, Harvesting & Storage Sugar Mill Processing Farm Management Poultry Prod Program	3M	07-20-87		87706	On-hold
5.	Mr. Khalid Hussain, Sniff Chemist, Fauji Sugar Mills, Sangla Hills		3M	07-23-87		87702	Pending
6.	Syed Iftikhar Hussain, Sved Ag. Farms, Rakh Dhungana, Bhakkar		3M	06-20-87		87772	Pending
7.	Mr. Akhtar Lodhi, Gila Road, Muzaffarabad, A.K.		6M	08-10-87		87745	Admit 87
8.	Syed M. Javed Iqbal					87779	
9.	Mr. S. M. Haidar Jaffery, Burewala, District Vehari	Poultry Prod Program	3M	08-10-87		87745	Admit 87
10.	Mr. Avaz Ali Khan, Alibad Ag. Farms, Raheeni Nagar, K.N. Shan, Dadu	Agrib. Eco Program	3M	08-27-87		87771	Pending
11.	Mr. Avud Naveed Khan, Shandara Town, Lahore	Poultry Prod Program	6M	08-10-87		87745	Admit 87
12.	Mr. K.M. Tasleem Khan		3M	08-20-87		87770	Pending
13.	Mr. Perwaiz Saeed Khan, Norwest Foods Limited, Karachi	Agro Indust. Mgmt.	3M	08-16-87		87745	Admit 87
14.	Mr. Tahseen Khalid Khan, Oivepsia Poultry Farms, Lahore	Agro Indust. Mgmt.	6M	08-16-87		87745	Admit 87
15.	Mr. Khalid Mansoor, Oivepsia Poultry Farms, Lahore	Poultry Prod Program	6M	08-16-87		87745	Admit 87
16.	Mr. Victor Nathaniel, Nadir Colony, Karachi	Poultry Prod Program	6M	07-26-87		87774	Pending
17.	Mr. Azizul Haque Mishtar, Mgr. BMB, St. 5, F-8/3, Islamabad	Financial Mgmt	6M	07-26-87		87668	Deferred
18.	Ms. Huma Qureshi, Dir. BICTECH Limited, Lahore	Dairy Processing	8M	07-14-87		87227	On-hold
19.	Mr. Ghulam Rasool		3M	07-25-87		87698	Pending
20.	Ms. Shabeen Saeed, Sr. Sales Officer, I-9, Islamabad	Sales Mgmt Program	6M		09-20-87	87558	In-trq
21.	Mr. Moazzam Saleem, Section Officer, MINRA, Islamabad	Proj. Insp. : Rural Dev				87745	Admit 87
22.	Syed Asraf Ali Khan		6M	08-10-87		87745	Admit 87
23.	Mr. Ahmed Basmarat Swati, POF Man Cantt, Islamabad	Poultry Prod Program	3M	08-21-87		87774	Pending
24.	Syed Saqneer Usdin, Prod. Manager, Mung Road, Islamabad	Food Sciences				87272	Completed
25.	Mr. Abdul Wahab		6M	08-10-87		87745	Admit 87
26.	Mohammad Yousof, Jhawarian Road, Sargodha	Poultry Prod Program					
27.	Mr. Shabbir A. Khan, 3M, Jamindar Tractors, Bus Stand, Bannu	Communication & Media Relating to Ag.	3M	08-21-87		87776	
28.	Mr. Malled Haidar Malik, 42-H, Gulberg III, Lahore	Master in Bus. Adm	24M	08-25-87		87777	
29.	Mr. Siddik Mohammad, 42-H, Gulberg III, Lahore	Master in Bus. Adm	24M	08-25-87		87778	

21. Sved M. J. 22241, Ag. Engineer, E-7, Islamabad	Irrigation Management	3M 08-23-87	87780
22. Mr. Munir Ahmad, Sultanpur, PO Shanpur Kanjra, Lahore	Aq. Economics	24M 08-23-87	87781
23. Mr. Asif Ali Jureshi, 128, Army Officers Colony, Sher Shah Road, Multan	Aq. Management	24M 08-23-87	87782
24. Mr. S. Salimuddin Sohail, Yasirabad Block, Federal 2 Area, Karachi	Poultry Science	24M 08-23-87	87783
25. Mr. Perwaiz Hattar, 183-A/2, Near Ghali's Market, Buzurg III, Lahore	Food Sc & Tech Program	09-1-87	00487
26. Mr. Zulfiqar A. Gill, Jr. Engineer, Tarbela Dam Project, Tarbela	Aq. Economics	7/5M	01087

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TABLE 15

EAN PROJECT MILESTONES

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DATE          EVENT
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FEB 85        RFP ISSUED
APR 85        CHEMONICS PROPOSAL SUBMITTED
JUL 85        CONTRACT SIGNED (EFFECTIVE 15 JUL 85-15 JAN 90)
1 SEP 85      TEAM LEADER FIELDDED
SEP 85        2 COMPAQ COMPUTERS, PRINTERS DELIVERED BY CHEMONICS
6 OCT 85      EAN COORDINATOR HIRED
OCT 85        NOBE-SKOLD EAN REVIEW/ANALYSIS
21 NOV 85     EDIBLE OILS POLICY SEMINAR
DEC 85        8 IBM PC/AT COMPUTERS, PRINTERS DELIVERED BY CHEMONICS
DEC 85        FIRST NEWSLETTER PUBLISHED
DEC 85        EAN MEMBERSHIP CAMPAIGN STARTED
DEC 85        LOCAL WORKSHOP PLANNING BEGINS
FEB 86        LOCAL FIRMS/INSTITUTIONS PREQUALIFIED FOR EAN STUDIES
FEB-APR 86    POULTRY INDUSTRY STUDY CONDUCTED
FEB 86        SYLLABI PREPARED FOR 13 LOCAL WORKSHOP TOPICS
APR 86        APPLIED ECONOMIC ANALYSIS WORKSHOP
APR 86        RFP'S ISSUED FOR 13 EAN STUDIES
20 APR 86     ASLAM JAFRI RESIGNS AS PROJECT DIRECTOR
MAY 86        RFP TOR'S STRENGTHENED BY CHEMONICS 3-PERSON TEAM
MAY 86        RFP TOR'S AMENDED, RFP'S DEADLINES EXTENDED 2 WEEKS
4 JUN 86      A.H. MAAN APPOINTED DIRECTOR, DAP AND EAN PROJECT
30 JUN 86     EAN COORDINATOR RESIGNS, MINFA DOES NOT WANT REPLACEMENT
JUL 86        FARM MANAGEMENT WORKSHOP CANCELLED BY MINFA
JUL 86        EAN PERSONAL LEDGER ACCOUNT OPENED WITH Rs 800,000
JUL 86        64 EAN PROPOSALS RECEIVED, SENT TO 13 REVIEWERS
JUL-AUG 86    LYBECKER-SKOLD REVIEW OF PU FARM MGMT RESEARCH PROGRAM
AUG 86        EAN NEWSLETTER STARTS BI-MONTHLY PUBLICATION
SEP 86        9 REVIEWERS FINISHED
SEP 86        SUPPLY SEMINAR (MUBARIK ALI)
SEP-OCT 86    MICROCOMPUTER WORKSHOP
NOV 86        AG CONSTRAINTS SEMINAR
NOV 86        SUPPLY SEMINAR (TWEETEN & TRAPP)
DEC 86        ALL REVIEWS OF 64 EAN PROPOSALS COMPLETED
DEC 86        MINFA ADDIT SECY BECOMES FSM, EAN COORDINATOR
DEC 86        ALL MINFA/PU AUTHORITY OVER EAN ABOLISHED
JAN 87        AG MARKETING WORKSHOP
FEB 87        TECHNICAL WRITING WORKSHOP
MAR 87        ECONOMIC RESEARCH POLICY WORKSHOP
MAR 87        APPLIED ECON WORKSHOP SKED FOR APR CANCELLED BY MINFA
MAR 87        JERRY ECKERT EVALUATES EAN PROPOSALS, REVIEWS
MAR-MAY 87    I-O MODEL DEVELOPED
APR 87        I-O MODELING SEMINAR
APR-JUN 87    SUGAR STUDY CONDUCTED
APR 87        1987 EAN MEMBERSHIP DIRECTORY DISTRIBUTED (315 MEMBERS)
JUN 87        AGRICULTURAL POLICY SEMINAR
JUN 87        CHEMONICS BEGINS HIRING DAP PROFESSIONAL STAFF
JUN 87        CONTRACTS SIGNED FOR 3 ONE-YR EAN STUDIES
JUN 87        Rs 400,000 ADDED TO PLA (TOTAL NOW Rs 1.2+ MILLION)
JUL 87        FORREST WALTERS BEGINS 2 YR DAP ADVISOR ASSIGNMENT
SEP 87        MICROCOMPUTER SEMINAR
OCT-DEC 87    DAIRY INDUSTRY STUDY
OCT-NOV 87    PRIVATIZING TUBEWELLS STUDY

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Source: EAN/DAP

DATE PREPARED: 31-Jan-88

PAGE 1 OF 2 PAGES

EAN PROJECT MILESTONES

DATE	EVENT
NOV 87	PRIVATIZING TUBEWELLS SEMINAR
DEC 87	TWO DAIRY SEMINARS
DEC 87	POULTRY INDUSTRY SEMINAR
DEC 87	WORKING PAPER PREPARED FOR AG POLICY ADVISORY COMMITTEE
DEC 87	MINFA UNABLE TO USE PLA FUNDS TO PUBLISH EAN STUDIES
JAN 88	USAID AUTHORIZES CHEMONICS TO PUBLISH EAN STUDIES
JAN-FEB 88	I-O WORKSHOP

TABLE 16. THIRD ANNUAL EAN WORK PLAN (Continued)

PROGRAM AREA/ACTIVITY	DURATION
6. <u>INSTITUTIONALIZE PUBLICATIONS PROGRAM (CONT.)</u>	
p. PUBLISH 1988 EAN MEMBERSHIP DIRECTORY	FEB 88
q. PUBLISH STAFF BRIEFING PAPERS	ONGOING
r. DAP ASSUMES PUBLICATIONS PROGRAM	JUN 88
7. <u>DAP DEPUTY DIRECTOR ASSIGNED</u>	NOV 87
B. <u>STRENGTHENING THE EAN</u>	
1. <u>INSTITUTIONALIZING ADVISORY COMMITTEE</u>	
a. REVIEW MEETING	NOV 87
b. REVIEW MEETING	MAY 88
2. <u>IMPLEMENTING LOCAL WORKSHOPS</u>	
a. MICROCOMPUTER TRAINING WORKSHOP	SEP 87
b. FINISH MARKETING MANUAL UPDATE	OCT 87
c. PLAN WORKSHOP MOU W/INSTITUTIONS	OCT 87-MAR 88
d. "RATS" SEMINAR	NOV 87
e. FINISH APPLIED AG ECON ANALYSIS MANUAL	DEC 87
f. FINISH ECON RESEARCH POLICY MANUAL	JAN 88
g. INPUT-OUTPUT MODELING WORKSHOP	JAN 88
h. MICROCOMPUTER TRAINING WORKSHOP	FEB 88
i. SUGAR POLICY SEMINAR	FEB 88
j. DAIRY POLICY SEMINAR	MAR 88
k. SIGN WORKSHOP MOU W/INSTITUTIONS	APR 88
l. AGRICULTURAL POLICY WORKSHOP	MAY 88
m. ECONOMETRICS WORKSHOP	JUN 88
3. <u>TRANSFER MICROCOMPUTER TECHNOLOGY</u>	
a. 15 SYSTEMS SENT TO EAN INSTITUTIONS	AUG-OCT 87
b. 26 SYSTEMS SENT TO EAN INSTITUTIONS	JAN-MAR 88
c. TRAINING WORKSHOPS	SEP 87, FEB 88
4. <u>SPECIAL COMMISSIONED STUDIES</u>	
a. DAIRY INDUSTRY STUDY	OCT-DEC 87
b. PRIVATIZATION OF PUBLIC TUBEWELLS	OCT 87-FEB 88
5. <u>FSM/EPA TRAINING PLAN</u>	
a. PREPARE QUESTIONNAIRES	OCT 87
b. MAIL QUESTIONNAIRES, CONDUCT INTERVIEWS	NOV 87
c. PREPARE FINAL PLAN	DEC 87
6. <u>INSTITUTIONALIZING INDUSTRY STUDIES</u>	
a. POULTRY POLICY SEMINAR	NOV 87
b. SUGAR POLICY SEMINAR	FEB 88
c. DAIRY POLICY SEMINAR	MAR 88
7. <u>UPDATE ANNUAL EAN MEMBERSHIP DIRECTORY</u>	
a. MAIL NEW MEMBERSHIP FORMS	NOV 87
b. UPDATE DATABASE WITH REVISED FORMS	JAN 88
c. PUBLISH 1988 EAN MEMBERSHIP DIRECTORY	FEB 88

Source: EAN/DAP

TABLE 16. THIRD ANNUAL EAN WORK PLAN

PROGRAM AREA/ACTIVITY	DURATION
A. <u>INSTITUTIONALIZATION OF THE DAP</u>	
1. <u>EXPANDED PLA</u>	
2. <u>IMPLEMENTATION OF DAP RESEARCH PROGRAM</u>	OCT-DEC 87
a. RESEARCH ASSIGNMENTS W/CHEMONICS STAFF	JUL 87
b. WHEAT POLICY	JUL-AUG 87
c. REGIONAL FARM PROGRAMMING MODEL	JUL-SEP 87
d. WATER PRICING	JUL-OCT 87
e. AG POLICY SIMULATION MODEL	OCT-DEC 87
f. ROLE OF AG IN PAKISTAN DEVELOPMENT	AUG-SEP 87
g. TRADE ISSUES IN AGRICULTURE	NOV-DEC 87
h. FERTILIZER POLICY STUDY UPDATE	JAN-MAR 88
i. UPDNATED PAKISTAN INPUT-OUTPUT MODEL	FEB 88
j. NATIONAL MACROECONOMIC MODEL	MAR-JUN 88
k. SEED INDUSTRY ECONOMICS	APR-JUN 88
1. QUARTERLY MINFA BRIEFINGS	BEGIN DEC 87
3. <u>IMPLEMENTATION OF EAN STUDIES</u>	
a. MONITOR "CROP FERTILIZER RESPONSE"	JUL 87 - JUN 88
b. MONITOR "ECON EFFECTS OF MECHANIZATION"	JUL 87 - JUN 88
c. MONITOR "CONSTRAINTS ON COOPERATIVES"	JUL 87 - JUN 88
d. SIGN CONTRACT FOR "MARKETING MARGINS"	DEC 87
e. SIGN CONTRACTS FOR "FARM PRODUCTIVITY"	DEC 87
f. MONITOR "MARKETING MARGINS"	JAN-JUN 88
g. MONITOR "FARM PRODUCTIVITY"	JAN-JUN 88
h. SIGN CONTRACT FOR "PESTICIDES"	MAR 88
i. MONITOR "PESTICIDES"	APR-JUN 88
j. SIGN CNTRACT FOR "AG EQUIPMENT"	MAY 88
k. MONITOR "AG EQUIPMENT"	JUN 88
4. <u>REDESIGN TECHNICAL, STEERING COMMITTEES</u>	OCT-DEC 87
5. <u>USE OF DAP IN DEFINING RESEARCH AGENDA</u>	ONGOING
a. AG POLICY LEGISLATIVE AGENDA	ONGOING
b. AG POLICY CLIENT GROUP IDENTIFICATION	ONGOING
c. MEASURING AG PRODUCTIVITY	
6. <u>INSTITUTIONALIZE PUBLICATIONS PROGRAM</u>	
a. DAP GRANTED PUBLICATIONS CLEARANCE	OCT 87
b. DESKTOP PUBLISHING BEGINS	OCT 87
c. PUBLISH ECONOGRAM	BI-MONTHLY
d. PUBLISH POULTRY DATA BOOK	OCT 87
e. PUBLISH NOBE-SKOLD PAPER	OCT 87
f. PUBLISH FARM MANAGEMENT REPORT	OCT 87
g. PUBLISH AG PRICE STATISTICS STUDY	OCT 87
h. PUBLISH INPUT-OUTPUT ANALYSIS STUDY	OCT 87
i. PUBLISH EAN STYLE MANUAL	OCT 87
j. PUBLISH SUPPLY MODEL	OCT 87
k. PUBLISH SUGAR STUDY	NOV 87
l. PUBLISH IRRIGATION O&M STUDY	NOV 87
m. DAP STAFF BEGINS EDITORIAL ASSISTANCE	NOV 87
n. EAN BEGINS SUBMITTING ARTICLES	DEC 87
o. PUBLISH DAIRY STUDY	JAN 88
	FEB 88

ECONOMIC RESEARCH TOPICS PROPOSED FOR 1987-88 UNDER THE ECONOMIC ANALYSIS NETWORK PROJECT

TOPIC NO.	NAME OF INSTITUTE PROPOSING TOPIC	PROPOSED TOPICS OF RESEARCH
1	1 APPLIED ECONOMIC RESEARCH CENTRE, KARACHI	1 Bio-physical and socio-economic constraints in the adoption of non-traditional oilseed production in Pakistan.
2	IAERC	2 Farm family Budget studies on a nationally co-ordinated basis in different ecological zones.
3	IAERC	3 Determination of Export potential for fruits and vegetables.
4	IAERC	4 Impediments in the development of dairy industry in Pakistan.
5	IAERC	5 Increasing income disparities profile in rural Pakistan.
6	IAERC	6 Investment pattern of expatriate income in Pakistan agriculture.
7	IAERC	7 Impact of changes in rural real income on investment in agriculture.
8	2 Pakistan Agricultural Research Council (Social Sciences Division)	1 Agro-economic evaluation of improved seeds in the production of major crops.
9	PARC	2 Fertilizer response functions by different farm sizes.
10	PARC	3 Factors affecting N and P ratio in the production of different agro-ecological zones.
11	PARC	4 Economics of alternative pest management and weed control technologies constraints in their adoption especially at small farms.
12	PARC	5 Water use efficiency in different crops and under different sowing methods and land levelling techniques.
13	PARC	6 Price policy of ... and fertilizer and its impact on production and resource use.
14	PARC	7 Identification and assessment of post-harvest management in the farm-retail food chain.

TABLE 3.1. ECONOMIC RESEARCH TOPICS PROPOSED FOR 1987-88 UNDER THE ECONOMIC ANALYSIS NETWORK PROJECT
(CONTINUED)

TOPIC NO.	NAME OF INSTITUTE PROPOSING TOPIC	PROPOSED TOPICS OF RESEARCH
15	IPARC	8 Study of the channels and margins in marketing of fruit and vegetables.
16	IPARC	9 Study of the current status of food chain margin: (Transport, storage, processing, handling and packing costs) and measures for improvement.
17	IPARC	10 Projections of demand for major food items till 2000 A.D.
18	IPARC	11 Marketing of oilseeds and local edible oils with special emphasis on trade margins.
19	IPARC	12 Crop-Livestock farming systems.
20	IPARC	13 Economics of alternative crop rotations.
21	IPARC	14 Cropping system research: implication for technology design and transfer.
22	IPARC	15 Farming systems development using opportunities of improved farm management and cropping systems.
23	IPARC	16 Economics of small tractors.
24	IPARC	17 Analysis of emerging trends in terms of: On-farm & Non-farm income & employment generated Wages for farm & non-farm mechanized work. Farm machinery demand creation. Alternative contractual arrangements. Demand for repair & maintenance services. Custom hiring of tractors & farm machinery. Energy demand under alternative rates of farm mechanization.
25	IPARC	18 On-farm testing & evaluation of technology generated by experiment stations & constraints their adoption especially at small farms.
26	IPARC	19 Methodologies for transferring information to farmers, fields & linkages between research and extension.
27	IPARC	20 Strategies for improving farm production and processing skills of rural women.

TABLE 3.1. ECONOMIC RESEARCH TOPICS PROPOSED FOR 1987-88 UNDER THE ECONOMIC ANALYSIS NETWORK PROJECT
(CONTINUED)

TOPIC NO.	NAME OF INSTITUTE PROPOSING TOPIC	PROPOSED TOPICS OF RESEARCH
28	PARC	21 Technologies of production of traditional and non-traditional oilseeds and constraints in the adoption of improved technologies.
29	PARC	22 Impact of public sector interest free loans on production and income with special reference to small farms.
30	PARC	23 Economic Analysis of Public and private investment in the agriculture sector.
31	PARC	24 Returns to investment in agricultural research.
32	PARC	25 Production capacity of different farm sizes under differential rates of technological transformation in different agro-ecological zones of Pakistan.
33	PARC	26 Rural labour market studies.
34	PARC	27 Emerging occupations in rural areas.
35	PARC	28 Employment and wages of rural women in farm production and processing.
36	PARC	29 Marketing of milk with special emphasis of on designing models of integrating milk collection and processing with producer associations for delivery of inputs and scientific information.
37	PARC	30 Production and marketing of live-stock fodders and feeds.
38	PARC	31 Impact of price support and procurement policies on resources allocation, production, income and employment in different agro-ecological zones.
39	PARC	32 Domestic & cooperative advantage in the production and export of food commodities.
40	PARC	33 An analysis of procurement and price policy of potato, onion and pulses.
41	PARC	34 Impact of wheat subsidy on processing and consumption, by different socio-economic classes of the population.

TABLE 3.1. ECONOMIC RESEARCH TOPICS PROPOSED FOR 1987-88 UNDER THE ECONOMIC ANALYSIS NETWORK PROJECT
(CONTINUED)

TOPIC NO.	NAME OF INSTITUTE PROPOSING TOPIC	PROPOSED TOPICS OF RESEARCH
42	3 National Fertilizer Development Centre, Islamabad	1 Application of Fertilizer and yield responses of important crops by size of farm and mode of irrigation for different ecological zones.
43	INFDC	2 Constraints in the flow of credit with particular reference to small farmers.
44	INFDC	3 Impact of price policy on cropping pattern and farming system-estimation of short, medium and long term price elasticities of supply for major crops.
45	INFDC	4 Study on farm productivity by size and tenure and crops-estimation of domestic resources costs for major crops.
46	4 Agriculture & Cooperation Department, Government of Baluchistan, Quetta	1 Study on methods to improve salable cultivation in Baluchistan.
47	A&CD, GOB, Q	2 Study on determining most economic cropping pattern under various farming systems in Baluchistan.
48	A&CD, GOB, Q	3 Study on consumptive use of water for important cash crops.
49	A&CD, GOB, Q	4 Study on economic and effective use of farm machinery.
50	A&CD, GOB, Q	5 Impact of irrigation projects on productivity, farm income and employment in various ecological regions of Baluchistan.
51	A&CD, GOB, Q	6 Role of private sector in marketing of fruits and vegetables in Baluchistan.
52	5 UNIVERSITY OF AGRICULTURE, FAISALABAD	1 Evaluation of Major Crop Procurement/Price Policies
53	UOA, F	2 Evaluation of Appropriate Water Pricing Policies
54	UOA, F	3 Study the Impact of Rural Electrification on Farm and Off-Farm Sectors
55	UOA, F	4 Study of Trends in Farm Profitability Over Time

TABLE 3.1. ECONOMIC RESEARCH TOPICS PROPOSED FOR 1987-88 UNDER THE ECONOMIC ANALYSIS NETWORK PROJECT
(CONTINUED)

TOPIC NO.	NAME OF INSTITUTE PROPOSING TOPIC	PROPOSED TOPICS OF RESEARCH
56	IUDA,F	5 Identification of Optimum Combinations of Crop and Livestock Enterprises
57	IUDA,F	6 Comparative Study of Public and Private Ownership of Tubewells
58	IUDA,F	7 Study of the Economies of Small versus Large Tractors
59	6 ECONOMIC COORDINATION COMMITTEE	1 Diversification of Agricultural Exports
60	IECC	2 Economic Evaluation of Agricultural Procurement System
61	7 MINFA	1 Study of the pesticide industry for industry viability and product pricing, quality, and effectiveness.
62	MINFA	2 Study of the availability and uses constraints on specialized agricultural machinery.

PARTICIPANT TRAINING PLANS FOR FY -88

Project No. and Title: Food Security Management Project (391-0491) - FSM

Training Field	No. of Participants	Length of Training	Degree/non-Degree/Country	Training Commencement Date	Nominating Agency/Deptt. Federal/Provincial	Pro. Implementing Agency	Project Agree. Signed	Date Nom. Required at USAID
Cooperative Development & Management Seminar	1	6 W	ND/US	Aug. 88	1 Ag. Univ. Paisalabad	EAD/AID	8/26/86	Feb. 88
Economics/Agriculture Economics	9	24 M	M.S/US	Sep. 88	2 MINFA(Dap) 1 Punjab, 1 NWFP 1 Baluchistan	EAD/AID,	8/26/86	Feb. 88

TABLE 18

PARTICIPANT TRAINING PLANS FOR PY -88

Project No. and Title: Food Security Management Project (391-0491) - FSMUS
LT= 24
ST= 48TOTAL= 72

Training Field	No. of Participants	Length of Training	Degree/non-Degree/Country	Training Commencement Date	Nominating Agency/Deptt. Federal/Provincial	Pro. Implementing Agency	Project Agree. Signed	Date Nom. Required at USAID
<u>AGRICULTURE DATA COLLECTION:</u>								
Agricultural Statistics	3	24 M	MS/US	Sept. 88	1 FBS, 1 Sind 1 Agricultural University Paisalabad	EAD/AID	8/26/84	Feb. 88
Agricultural Statistics	11	4 M	ND/US	May 88	2 Punjab, 2 Sind 1 NWFP 4 FBS, 1 Agricultural University Tandojam 1 Baluchistan	EAD/AID	8/26/84	Feb. 88
Agricultural Statistics	3	9 M	ND/US	May 88	2 FBS, 1 Agricultural University P. Abad	EAD/AID	8/26/84	Feb. 88
<u>ECONOMIC POLICY ANALYSIS:</u>								
Micro-computer Applications in Agriculture & Resources Management	3	4 W	ND/US	July 88	1 MINEFA, 1 Punjab 1 Sind	EAD/AID	8/26/84	Feb. 88
Agriculture	3	4 W	ND/US	July 88	1 NWFP, 1 Federal	EAD/AID	8/26/84	Feb. 88

TABLE 19

INDONESIA: SELECTED ECONOMIC INDICATORS

	81/82	82/83	83/84	84/85	Pre 1971 85/86	Est'd 86/87	Post 87/88
<u>Annual Production Changes (%)</u>							
1971/70, at market prices,	6.0	7.7	5.0	7.1	7.5	6.1	4.7
1971/70 factor cost	7.0	6.4	2.1	9.1	7.5	7.0	6.2
1971/70 index (59/70 prices)	3.7	3.5	-0.2	12.2	0.6	3.9	1.7
Wheat (metric tons)	1.5	9.8	-12.5	7.5	19.0	2.4	n.a.
Rice (metric tons)	9.8	0.4	-3.0	-0.7	-13.0	20.6	n.a.
Cotton lint (bales)	4.7	10.1	-40.0	103.9	20.5	9.1	n.a.
Sugarcane (metric tons)	15.0	-11.0	5.4	-6.3	-13.5	6.9	n.a.
<u>Gross Domestic Expenditures (% of GNP)</u>							
Gross dom. fixed cap. formation	14.5	14.3	14.0	14.0	11.1	n.a.	15.0
Private gdfcf	5.2	5.5	5.7	5.5	5.2	n.a.	6.5
Public gdfcf	9.1	8.8	8.3	8.2	5.3	n.a.	3.4
Consumption	88.1	85.8	87.4	89.2	87.7	n.a.	n.a.
Gross national savings	11.9	14.2	12.3	10.3	12.2	n.a.	n.a.
Gross domestic savings	5.5	5.8	4.9	4.3	6.1	n.a.	n.a.
Gross nat'l sav. as % gdfcf	71.6	88.3	80.4	68.6	78.0	n.a.	n.a.
Gross dom. sav. as % gdfcf	32.9	36.0	31.5	29.0	38.9	n.a.	n.a.
<u>Private Agricultural Investment (gdfcf)</u>							
% of total private invest.	25.7	25.2	26.2	24.2	25.2	n.a.	1.3.
% of total investment	9.4	9.7	10.0	10.0	9.5	n.a.	5.2.
Ratio to public ag. invest.	n.a.	n.a.	n.a.	5.5	n.a.	n.a.	n.a.
Ratio to pub. ag. + rig. invest.	n.a.	n.a.	n.a.	1.3	n.a.	n.a.	3.2.
<u>State Finances as % of GNP (current prices)</u>							
Gov. revenues	15.5	15.7	13.0	11.2	17.1	16.3	n.a.
Tax revenues	2.8	2.8	3.4	7.1	5.2	5.2	n.a.
Grants & interest on loans	0.5	0.0	0.0	0.5	0.7	0.0	n.a.
Sub-total:	16.7	16.5	17.3	19.7	17.7	16.1	n.a.
Current expenditures	-14.4	-15.5	-17.5	-17.3	-16.2	-16.1	n.a.
Capital savings	2.5	0.4	3.2	4.7	1.7	2.1	n.a.
Current expenditures	-7.6	-7.9	-10.7	-12.1	-12.2	-12.2	n.a.
Overall deficit	-5.3	-7.1	-4.5	-7.7	-7.5	-8.3	-7.5
Internal financing (net)	1.6	1.4	3.2	5.7	2.9	2.4	n.a.
Govt financing	1.7	1.7	1.9	5.8	1.1	1.3	n.a.
External financing (net)	2.0	4.0	2.1	2.7	4.7	4.0	n.a.

	<u>81/82</u>	<u>82/83</u>	<u>83/84</u>	<u>84/85</u>	<u>Prelim</u> <u>85/86</u>	<u>Est'd</u> <u>86/87</u>	<u>Frctd</u> <u>87/88</u>
<u>Balance of Payments (\$ mil.)</u>							
Current account balance	-1,609	-557	-387	-1,860	-1,236	-749	-1037
Trade balance	-2,450	-2,999	-5,321	-5,552	-3,042	-2293	-2245
Exports, f.o.b.	<u>2,310</u>	<u>2,527</u>	<u>2,669</u>	<u>2,457</u>	<u>2,942</u>	<u>3539</u>	<u>4125</u>
Imports, f.o.b.	-5,760	-5,526	-5,990	-6,009	-5,984	-5852	-6370
Services (net)	-546	-607	-717	-815	-1,016	-1035	-1136
Private transfers (net)	2,387	3,039	3,044	2,687	2,822	2579	2521
Noter remittances	(2,224)	(2,886)	(2,737)	(2,446)	(2,596)	2300	2070
Capital account balance	1,020	1,238	917	982	1,255	n.a.	n.a.
Errors and omissions	9	18	-6	-31	-26	n.a.	n.a.
Overall balance	-580	699	-36	-819	-7	192	-38
Net foreign assets	<u>580</u>	<u>-699</u>	<u>86</u>	<u>819</u>	<u>7</u>	<u>-192</u>	<u>38</u>
<u>Memorandum items:</u>							
Gross off. res. (\$ mil., 6/30)	809	1,910	1,752	668	915	734	n.a.
Gr. off. reserves (import wk)	<u>6.9</u>	<u>15.2</u>	<u>13.9</u>	<u>5.5</u>	<u>7.5</u>	<u>6.5</u>	<u>n.a.</u>
Gross off. MLT disb. (\$ mil.)	<u>671</u>	<u>874</u>	<u>830</u>	<u>876</u>	<u>1073</u>	<u>1276</u>	<u>1722</u>
Project aid	<u>451</u>	<u>629</u>	<u>608</u>	<u>726</u>	<u>856</u>	<u>977</u>	<u>1037</u>
Food aid	78	30	170	72	155	68	31
Other commodity aid	142	265	102	78	61	231	280
Refugee assistance	293	178	155	150	135	190	190

Source: Official government statistics/estimates as reported to international organizations for years through 1985/86; official government sources and/or American Embassy estimates for 1986/87 estimates and 1987/88 forecasts.

Notes: Ratios for private agricultural investment to public agricultural investment and for private agricultural investment to investments in agriculture plus irrigation refer to the three-year period 1983/84 to 1985/86.

Financing of the overall budget deficit in 1986/87 was based on a deficit estimated at 7.8% of GDP. The larger (8.6%) deficit figure shown in this table is a more recent estimate, for which revised financing estimates are not available.

n.a. = not available.

TABLE 20

A.I.D. Project No. 391-0491
Food Security Management
Project Agreement No. 85-10

SUMMARY OF PROJECT COSTS BY EXPENSE CATEGORY AND SOURCE OF FUNDING
(in 000s)

ILLUSRTATIVE

Expense Category	Cumulative FY 83, 84, 85, 86 and FY 87 to Date		Life of Project Funding *	
	A.I.D. Grant (in \$)	G.O.P. (in Rs.)	A.I.D. Grant (in \$)	G.O.P. (in Rs.)
	Technical Assistance	9000	0	9200	0
Training	4100	1150	4440	1485
Commodities	2678	135	2678	135
Storage Rehabilitation	2000	13096	6500	25488
Economic & Policy Studies	1500	0	3100	0
Evaluation	100	0	288	0
Other Costs **	7367	5698	8000	30200
Sub-Total	26745	20079	34206	57348
Contingency	255	487	794	2862
Total	27000	20566	35000	60210

- * Subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of both parties to proceed at the of each subsequent increment.
- ** Other Cost line item include cost of project implementation support activities procurement of aerial photographs, project coordination unit and other project related activities

Source: AID

TABLE 21

PIPELINE SUMMARY REPORT BY COMMITMENT DETAIL
 FOOD SECURITY MANAGEMENT PROJECT
 AS OF 01/31/88

ELEMENT NAME	OBLIGATED/ COMMITTED		DISBURSED PIPELINE	
	EARMARKED			
(FIRST YEAR ACTIVITY)				
1. TECHNICAL ASSISTANCE	2,278,000	2,220,456	1,829,479	448,527
2. TRAINING	522,000	486,643	264,823	257,177
3. COMMODITIES	1,247,000	1,141,380	892,598	254,702
4. OTHER COSTS *	952,700	950,157	693,691	259,009
SUB-TOTAL I	5,000,000	4,798,636	3,680,591	1,319,415
(SECOND YEAR ACTIVITY)				
1. TECHNICAL ASSISTANCE	360,000	360,000	32,093	327,907
2. TRAINING	700,000	386,898	112,754	587,246
3. COMMODITIES	390,000	249,523	152,065	237,935
4. OTHER COSTS *	50,000	50,000	38,467	11,533
5. ECONOMIC & POLICY STUDIES	500,000	0	0	500,000
SUB-TOTAL II	2,000,000	1,046,421	335,379	1,664,621
(THIRD YEAR ACTIVITY)				
1. TECHNICAL ASSISTANCE	6,869,226	6,818,795	1,767,506	5,101,720
2. TRAINING	2,878,000	2,391,813	8,454	2,869,546
3. COMMODITIES	1,040,700	695,683	210,949	829,751
4. OTHER COSTS *	5,857,074	3,573,578	229,166	5,627,908
5. ECONOMIC & POLICY STUDIES	1,000,000	1,000,000	75,095	924,905
6. STORAGE & REHABILITATION	2,000,000	0	0	2,000,000
7. EVALUATION	100,000	0	0	100,000
8. CONTINGENCY	255,000	0	0	255,000
SUB-TOTAL III	20,000,000	14,479,969	2,291,170	17,708,330
PROJECT TOTAL (I+II+III) **	27,000,000	20,325,026	6,307,134	20,692,866

Notes:

* Other costs element also includes purchase cost of aerial photographs

**Obligation of 8,000,000 in the 3rd year is delayed due to 90 day aid suspension

Source:AID

TABLE 22

FOOD SECURITY MANAGEMENT PROJECT
 Estimated Project Expenditures for FY 1988 and 1989

Component Category	FY 88				Total	Total FY 88
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr		
Technical Assistance	600	700	800	950	3,050	2,100
Training	150	300	250	200	900	1,900
Commodities	100	150	150	225	625	700
Economic & Policy Studies	60	100	100	100	360	500
Rehabilitation	0	0	0	500	500	2,000
Evaluation	70	0	0	0	70	0
Other Costs	200	450	500	750	1,900	1,900
Total	1,180	1,700	1,800	2,725	7,405	9,600

Reference: C:\FSM DATA\EPE88 -->10/08/87

Source: AID

TABLE 23

GOVERNMENT OF PAKISTAN
 REPORT OF EXPENDITURE AND/ OR COMMITMENT AGAINST RUPEE RELEASE
 BY U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT/ PAKISTAN

Project Coordination Unit
 Food Security Management Project.
 Economic & Policy Analysis.

Report from 1 - 10 - 1987 to 31 - 12 - 1987

Date of report 2 - 2 - 1988

Expenditure by Budget Line Item.	Allocation Received by PCU.	Budget for 6 months from _____ to _____	EXPENDITURE		COMMITMENT		REMARKS
			Current Expenditure From <u>1-10-19 87</u> To <u>31-12-19 87</u>	Commulative	Goods and Services Delivered but not paid.	Goods and Services Contracted but not delivered.	
Expense Category.							
1. Commodities							
a. Office Equipment or Furniture.	US\$ 15,000-Rs. 255,000		Rs.	Rs.			
b. Audio Visual Aids/ Information.	US\$ 35,000-Rs. 595,000		7,750.00	194,515.00			
c. Economic Research/ Training Publications.	US\$ 45,000-Rs. 765,000		---	---			
Sub-Total	US\$ 95,000-Rs. 1615,000		7,750.00	194,515.00			
2. Economic Research Programme							
a. EAN Contract Research.	US\$620,000-Rs. 10540,000		7,743.00	807,493.00			
b. Special Research Programs.	US\$210,000-Rs. 3570,000		---	---			
Sub-Total	US\$830,000-Rs. 14110,000		7,743.00	807,493.00			
3. DAP Personnel and Operations							
a. Personnel.	US\$ 37,000-Rs. 695,000		8,856.00	60,685.70			
b. Vehicle Operation/ Maintenance.	US\$ 12,000-Rs. 204,000		15,174.76	78,023.03			
c. Expendable Office Supplies.	US\$ 8,000-Rs. 136,000		38,221.25	145,212.18			
d. Printing EAN Publications.	US\$ 18,000-Rs. 306,000		---	103,106.00			
Sub-Total	US\$ 75,000-Rs. 1,275,000		62,252.01	387,026.91			
Grand Total	US\$1,000,000-Rs. 17,000,000		77,745.01	1,389,034.91			

SIGNATURE _____
 Title:- **Project Director**
 Location: **PROJECT DIRECTOR**
Food Security Management
Economic & Policy Analysis
Islamabad

Source: AID

ANNEX 2
 FSM Proj. 391-0491
 P/L 7 11

VE PERCENT
URE EXPENDED

667	47
9.5	55
7.4	76

GOVERNMENT OF PAKISTAN
REPORT OF EXPENDITURE AND/ OR COMMITMENT AGAINST RUPEE RELEASE
BY U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT/ PAKISTAN

Project Coordination Unit
Food Security Management Project.
Economic & Policy Analysis.

Report from 1 - 10 - 1987 to 31 - 12 - 1987

Date of report 2 - 2 - 1988

Expense Category	Expenditure by Budget Line Item.	Allocation Received	Budget for 6 months from	EXPENDITURE		COMMITMENT		REMARKS
				Current Expenditure From 1-10-19 87 To 31-12-19 87	cumulative	Contracted but not paid.	Goods and services Contracted but not delivered.	
1. Commodities				Rs.	Rs.			
a. Office Equipment or Furniture.	US\$ 15,000-Rs. 255,000			7,750.00	194,515.00			
b. Audio Visual Aids/ Information.	US\$ 25,000-Rs. 595,000			---	---			
c. Economic Research/ Training Publications.	US\$ 5,000-Rs. 765,000			---	---			
Sub-Total	US\$ 45,000-Rs. 1,615,000			7,750.00	194,515.00			
2. Economic Research Programme								
a. EAN Contract Research.	US\$ 620,000-Rs. 1,054,000			7,743.00	807,493.00			
b. Special Research Programs.	US\$ 210,000-Rs. 3570,000			---	---			
Sub-Total	US\$ 830,000-Rs. 14,110,000			7,743.00	807,493.00			
3. DAP Personnel and Operations								
a. Personnel.	US\$ 37,000-Rs. 695,000			8,856.00	60,685.70			
b. Vehicle Operation/ Maintenance.	US\$ 12,000-Rs. 204,000			15,174.76	78,023.03			
c. Expendable Office Supplies.	US\$ 8,000-Rs. 136,000			38,221.25	145,212.18			
d. Printing EAN Publications.	US\$ 18,000-Rs. 306,000			---	103,106.00			
Sub-Total	US\$ 75,000-Rs. 1,275,000			62,252.01	387,026.91			
Grand Total	US\$ 1,000,000-Rs. 17,000,000			77,745.01	1,389,034.91			

SIGNATURE

Title:- Project Director

Location: Islamabad

ATTN: PSM Proj
11/2/88

TABLE 25

EXPENDITURE STATEMENT OF AGRICULTURE DATA COLLECTION FBS, ISLAMABAD

Expense Category	Total Allocation for the year 1986-87	This invoice April to June, 1987	Comulative up to June, 1987.	BALANCE-
1	2	2	4	5
I. Payment of Salary and Allowances including TA/DA of Officer and Staff.		1,98,541-42	3,22,035-01 ✓	R11
II. Purchase of POL Stationery, Furniture & Fixture, Accessories required for establishing area sampling frame, Discs, Ribbons etc. required for Micro Computer.		1,64,255-95	1,73,600-49 ✓	R11
III. Maintenance of Vehicles, Printing equipment, Typewriter, Furniture/Fixture etc.		3,213-00	3,523-00 ✓	R11
IV. Payment of Postal charges and telephone charges etc.		45-00	45-00 ✓	R11
V. Any other expenditure in connection with the work of the ADC Scheme.		453-50	996-30 ✓	R11
TOTAL EXPENDITURE:-	5,00,000-00	3,66,508-87	5,00,000-00	R11

Source: AID

Approved for
 2/6/87
 9-7-87
 P-1100

EXPENDITURE STATEMENT OF AGRICULTURE DATA COLLECTION LAHORE (PUNJAB)

Expense Category	Total Allocation for the year 1986-87	This invoice April to June, 1987	Expenditure Cumulative up to June, 1987.	BALANCE.
	2	3	4	5
I. Payment of Salary and Allowances including TA/DA of Officer and Staff.		2,71,592-49	3,02,252-44	Nil
II. Purchase of PQL Stationery, Furniture & Fixture, Accessories required for establishing area sampling frame, Discs, Ribbons etc. required for Micro Computer.		7,36,617-05	1,55,891-59	Nil
III. Maintenance of Vehicles, Printing equipment, Typewriter, Furniture/Fixture etc.		26,382-40	29,430-40	Nil
IV. Payment of Postal charges and telephone charges etc.				
V. Any other expenditure in connection with the work of the ADC Scheme.		72,424-67	72,425-57	Nil
TOTAL EXPENDITURE:-	5,00,000-00	4,47,016-61	5,00,000-00	Nil

9-7-87
 [Signature]
 [Signature]

EXPENDITURE STATEMENT OF AGRICULTURE DATA COLLECTION HYDERABAD (SIND).

Expense Category	Total Allocation for the year 1966-67	This invoice April to JUNE, 1967	Expenditure	BALANCE
			Cumulative From up to June, 1967.	
	2	2	4	5
I. Payment of Salary and allowances including TA/DA of Officer and Staff.		1,17,929-95	2,06,167-00	Nil
II. Purchase of PDL Stationery, Furniture & Fixture, accessories required for establishing area sampling frame, Discs, ribbons etc. required for Micro Computer.		1,91,370-50	2,06,590-50	Nil
III. Maintenance of Vehicles, Printing equipment, Typewriter, Furniture/Fixture etc.				-
IV. Payment of Postal charges and telephone charges etc.				-
V. Any other expenditure in connection with the work of the ADC scheme.		27,242-50	27,242-50	Nil
TOTAL EXPENDITURE:-	4,50,000-00	2,36,542-55	4,50,000-00	Nil

7-1967
T/S/Sec

128

AGRICULTURE DATA COLLECTION (ADC) PROJECT SIND HYDERABAD.

EXPENDITURE STATEMENT FOR THE MONTHS OF JULY 1987 TO
NOVEMBER 1987.

EXPENDITURE STATEMENT FOR G.O.P. FIELD OFFICERS AND AGRICULTURE
DATA COLLECTION CELL (IN SIND RS. 1,50,000/-).

SR. NO.	MONTH	EXPENSES CATEGORY	PREVIOUS EXPENDITURE	EXPENDITURE DURING THE MONTH.	TOTAL EXPENDITURE
1.	July 1987	-	NIL	NIL	NIL
2.	August 1987	-	NIL	NIL	NIL
3.	Sept: 1987	-	NIL	NIL	NIL
4.	October 1987	-	NIL	NIL	NIL
5.	November 1987 upto 19.11.1987.				
1.	Pay.	i) Pay of Hgtts:	64,748.00	NIL	64,748.00
		ii) House Rent Allow:	19,444.00	NIL	19,444.00
		iii) Deputation Allow:	5,700.00	NIL	5,700.00
		iv) Conveyance Allow:	3,030.00	NIL	3,030.00
		v) Medical Allow:	3,000.00	NIL	3,000.00
		vi) Washing Allow:	300.00	NIL	300.00
2.	Contgs	i) Pay of Contg: Staff:	3,992.00	NIL	3,992.00
			1,00,224.00	NIL	1,00,224.00

SUMMARY.

1. The total allocation for 1987_88	Rs.	1,50,000.00
2. The total Expendt upto 30.11.1987:	Rs.	1,00,224.00
Balance	Rs.	49,776.00

PROJECT DIRECTOR
AGRICULTURE DATA COLLECTION PROJECT
SIND HYDERABAD.

MEMORANDUM

✓
TO: Mr. A.M. Khalid, FSM/ADC Project Officer
FROM: G. Eric Waldhaus, Survey Statistician, FSM/ADC
DATE: June 30, 1987
SUBJECT: PLA Accounts Invoices

Attached are the first invoices that have been received from the FBS/ADC Cell, Punjab and Sind for their PLA accounts. I have reviewed them, and they appear to be in order.

Please do what you can to facilitate payment to GOP.

Thanks.

Attachment:

FILE (PLA)
65.

Handwritten signature

EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION ISLAMABAD

Expense Category	Total allocation for the year 1986-87	This Invoice December to March 1987.	Cumulative / upto March, 1987	Balance
I. Payment of salary and allowance including TA/DA of officer and staff.	5,000,000.00	123,493.59	123,493.59	
II. Purchase of PUL stationary furniture & fixtures, accessories required for establishing areas sampling frames, discs, ribbons etc. required for micro-computer.		9,344.54	9,344.54	
III. Maintenance of vehicles, printing equipment, typewriter, furniture/fixtures etc.		810.00	810.00	
IV. Payment of postal charges and telephone charges etc.			543.00	
V. Any other expenditure in connection with the work of the ADC scheme.		543.00	543.00	
	5,000,000.00			
Total Expenditure	5,000,000.00	133,491.13	133,491.13	366,508.97

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EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION ISLAMAEAD

	Total allocation for the year 1986-87	This Invoice April, 87 to May, 1987.	Commulative upto May, 1987.	Balance
I. Payment of Salary and allowance including Tn/Dn of Officers and Staff.	5,00,000.00	75,100.81	198,594.50	
II. Purchase of FOI Stationery Furniture & Fixture, Accessories required for Establishing Area Sampling Frame, Discs, Ribbons etc. Required for Micro-Computer.		45,999.34	59,343.88	
III. Maintenance of Vehicle, Printing Equipment, Typewriter, Furniture/Fixture etc.		2,473.00	2,583.00	
IV. Payment of Postal Charges and Telephone Charges etc.		5,046.00		
V. Any other expenditure in connection with the work of the ADC Scheme.			543.00	
Total Expenditure	5,00,000.00	127,573.15	261,064.26	238,935.72

EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION PUNJAB (ACTUAL FIGURES)

Expense Category	Total allocation for the year 1986-87.	This invoice Dec. 86 to March, 1987.	Cumulative upto March, 87.	Balance
1	2	3	4	5
I. Payment of Salary and allowance including TA/DA of Officers and Staff.		30,659.95	30,659.95	
II. Purchase of PQL Stationery Furniture & Fixture, Accessories Required for Establishing Area Sampling: Erase, Discs, Ribbons etc. Required for Micro-Computer.		19,274.54	19,274.54	
III. Maintenance of Vehicle, Printing Equipment, Typewriter, Furniture/Fixture etc.	5,00,000.00	5,048.00	5,048.00	
IV. Payment of Postal Charges and Telephone Charges etc.		0.90	0.90	
V. Any other expenditure in connection with the work of the ADC Scheme.				
Total expenditure	5,00,000.00	52,983.39	52,983.39	4,47,016.61

EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION PUNJAB (ACTUAL FIGURES)

Expense Category	Total allocation for the year 1986-87.	This invoice April, 87 to May, 1987.	Cumulative upto May, 1987.	Balance
1	2	3	4	5
Payment of Salary and Allowance including T/DA of Officers and Staff.		111,450.65	142,110.60	
Purchase of FOL Stationery Furniture & Fixture, Accessories Required for Establishing Area Sampling Frame, Discs, Ribbons etc. Required for Micro-Computer.	4,50,000.00	12,764.56	32,038.90	
Maintenance of Vehicles, Printing Equipment, Typewriter, Furniture/Fixture etc.	5,00,000.00	5,943.00	6,991.00	
Payment of Postal Charges and Telephone Charges etc.			10,000.00	
Any other expenditure in connection with the work of the ADC Scheme.		2329.17	2330.07	
Total Expenditure	5,00,000.00	130,457.16	183,470.57	316,529.43

EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION SIND (ACTUAL FIGURES)

Expense Category	Total allocation for the year 1986-87.	This invoice Dec. 86 to March, 1987.	Commulative upto March, 1987.	balance
1	2	3	4	5
I. Payment of Salary and Allowance Including TA/DA of Officers and Staff.		86,237.05	86,237.05	
II. Purchase of FOL Stationery Furniture & Fixture, Accessories Required for Establishing Area Sampling Frame, Discs, Ribbons etc. Required for Micro-Computer.	4,50,000.00	13,220.00	13,220.00	
III. Maintenance of Vehicle, Printing Equipment, Typewriter, Furniture/Fixture etc.	25,000.00			
IV. Payment of Postal Charges and Telephone Charges etc.				
V. Any other expenditure in connection with the work of the ADC Scheme.		10,000.00	10,000.00	
Total Expenditure	4,50,000.00	111,457.05	111,457.05	3,38,452.95

EXPENDITURE STATEMENT OF AGRICULTURAL DATA COLLECTION SLD

ACTUAL FIGURES

Expense Category	Total allocation for the year 1986-87.	This Invoice April, 87 to May, 1987.	Cumulative upto May, 1987.	Balance
1	2	3	4	5
I. Payment of Salary and Allowance Including TA/DA of officers and Staff.		90,449.95	176,687.00	
II. Purchase of POL Stationery Furniture & Fixture, Accessories Required for Establishing Area Sampling Frame, Discs, Ribbons etc. Required for Micro-Computer.	450,000.00	10,670.00	23,690.00	
III. Maintenance of Vehicle, Printing Equipment, Typewriter, Furniture/Fixture etc.				
IV. Payment of Postal Charges and Telephone Charges etc.				
V. Any other expenditure in connection with the work of the ADC Scheme.		17,565.50	27,565.50	
Total Expenditure	450,000.00	118,685.45	230,142.50	219,857.50

TABLE 26

Project		1974		1975	
Description		Personnel	Equipment	Personnel	Equipment
		Number	Value	Number	Value
1. For computer training		4	0	0	0
2. For Survey Statistician		4	0	0	0
3. For Ref development		1	0	0	0
4. For computer training		4	0	0	0
5. For computer training		4	0	0	0
6. For computer training		4	0	0	0
7. For computer training		4	0	0	0
8. For computer training		4	0	0	0
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Source: AID

Best Available Document

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SCHEDULE				
	NO.	BY	AMOUNT	TOTAL
LONG TERM CONSULTANT				
1. Long term consultant	1	36	0	36 HAS SCHEDULED
2. vertebrate pest	1	48	0	48 HAS SCHEDULED
SHORT TERM CONSULTANT				
3. Long term consultant	1	36	0	36 HAS SCHEDULED
4. vertebrate pest	1			1.25 months
(RFS/VEPA COMPONENT)				
LONG TERM CONSULTANT				
1. Economist	1	48	0	48 HAS SCHEDULED
2. Economist	1	24	0	24 HAS SCHEDULED
SHORT TERM CONSULTANT				
3. Accounting system	3	3	0	3 HAS SCHEDULED
4. Accounting design	3	1	0	1 HAS SCHEDULED
5. House hold study	2	12	0	12 HAS SCHEDULED
6. Wheat economy	1	12	0	12 HAS SCHEDULED
7. Projection model	1	8	0	8 HAS SCHEDULED
8. Workshop	11	3 weeks		33 weeks
9. Study & analysis	5			48 weeks
10. Seminars	5			9 weeks
11. Model design & Eval.	7			24 weeks

TABLE 27

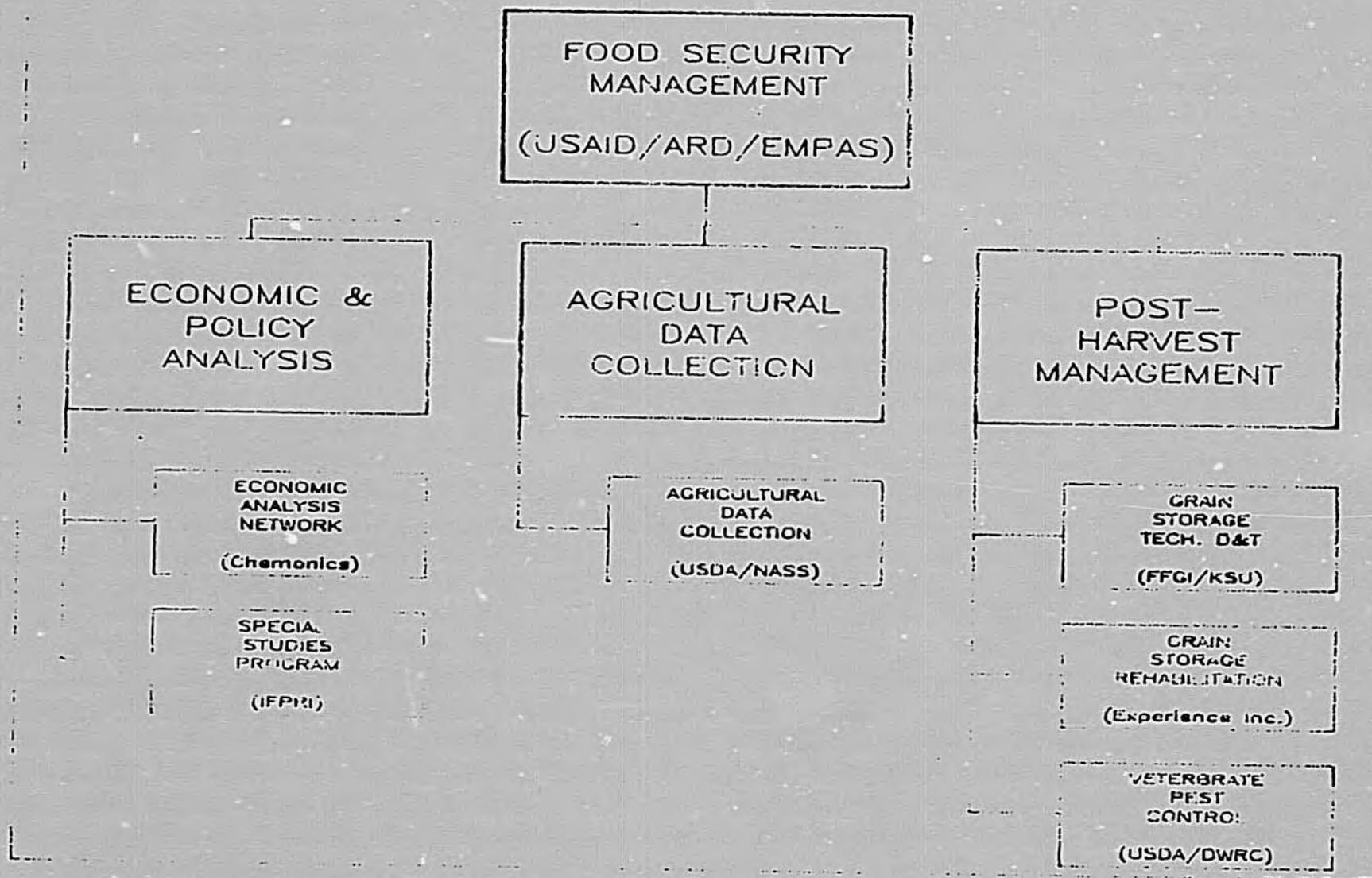
		1970	1971	1972	1973	1974	1975
Ag Statistics		1	1	1	1	1	1
Computer		2	2	2	2	2	2
Subtotal		3	3	3	3	3	3
YEAR 1	Ag Statistics (AS)	1	10	10	10	10	10
	Ag Statistics (SI)	1	11	11	11	11	11
YEAR 2	Ag Statistics (AS)	1	16	16	16	16	16
	Ag Statistics (SI)	2	12	12	12	12	12
YEAR 3	Ag Statistics (AS)	2	11	11	11	11	11
	Ag Statistics (SI)	2	12	12	12	12	12
	Ag Statistics (AS)	2	11	11	11	11	11
YEAR 4	Ag Statistics (AS)	1	11	11	11	11	11
	Ag Statistics (AS)	2	8	8	8	8	8
	Ag Statistics (AS)	4	12	12	12	12	12
YEAR 5	Ag Statistics (AS)	4	12	12	12	12	12
Sub-Total:		24		250	1		24
Total:		28		293.5	2		24.25

Source: AID

Best Available Document

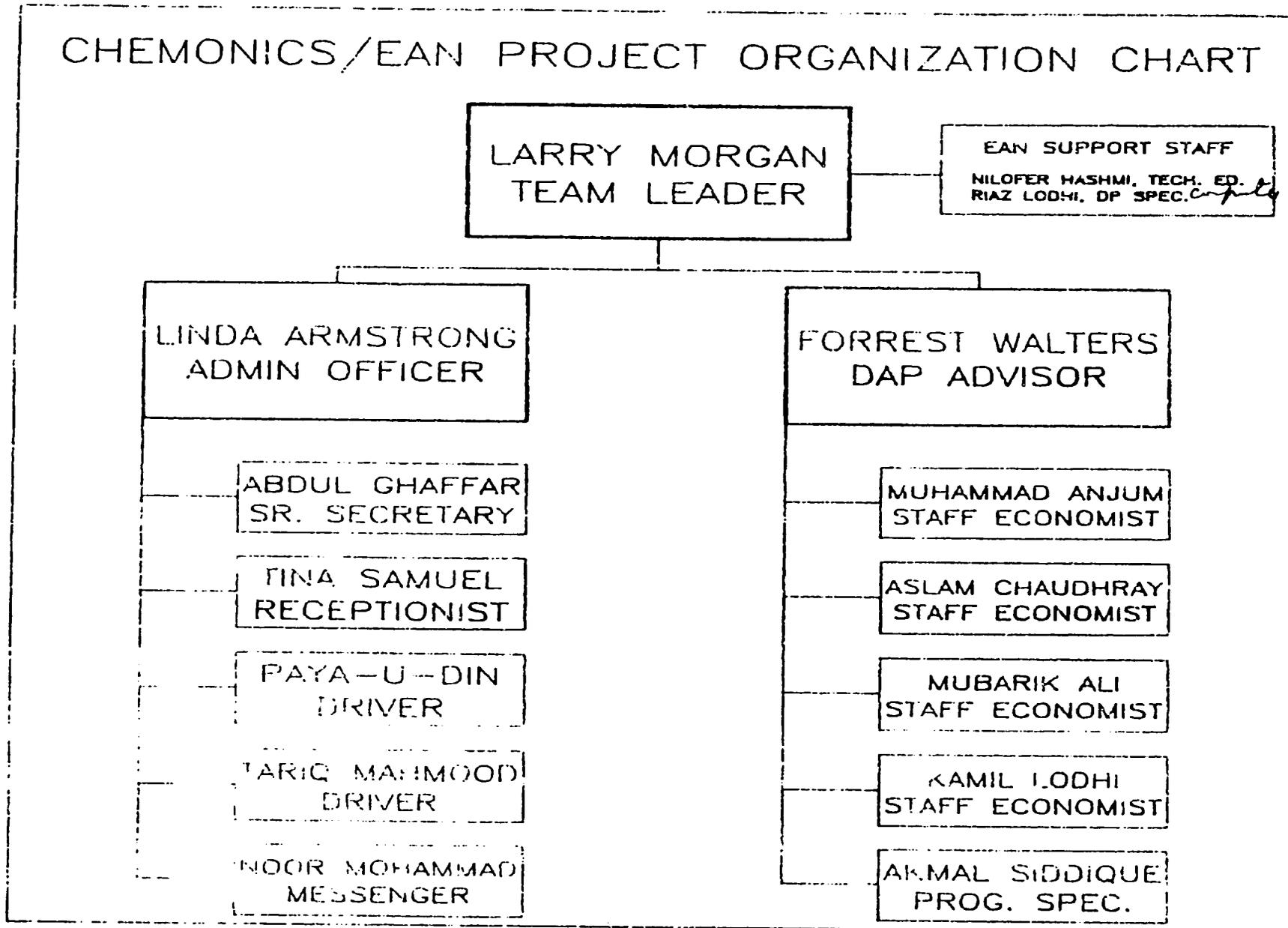
CHART 1

FOOD SECURITY MANAGEMENT PROJECT ORGANIZATION



Source: EAN

CHART 2



Source: EAN/DAP

GOVERNMENT OF PAKISTAN
 FOOD & AGRICULTURE DIVISION
 DIRECTORATE OF AGRICULTURAL POLICY

Project Director
 Dr. A. H. Maan

Funded by CHEMONICS

Funded by GOP

Research Co-ordinator
 Vacant 19

Economist (Legal)
 Tajammal Rauf 18

Section Officer
 M. Mobaraz Khan 18

Deputy Director
 M. S. Siddiqi 18

Sr. Research Economist
 Shahab Qureshi 18

Sr. Research Economist
 Miss Nuzhat Iqbal 18

Stenographer
 Vacant 15

Stenotypist
 Intisar Ahmed 12

Asstt. Dir. (Prog.)
 Kamran Raff 17

Program Officer
 Miss Fatimah Afzal 17

L. D. C.
 Miss Nasim 5

Office Asstt.
 Khalid Javed 11

Driver
 Mohsin Raza 4

L. D. C.
 Miss Rukhsana 5

Research Economist
 Vacant 17

Research Economist
 Agha Abbas Raza

Research Economist
 Rao Shafique 17

Research Economist
 Ijaz Ahmed 17

N./Qaida
 1. Khan Mohd. (1)
 2. Sumander Shah (1)

Drivers
 1. Umar Hayat (4)
 2. Mahd. Yamin (4)

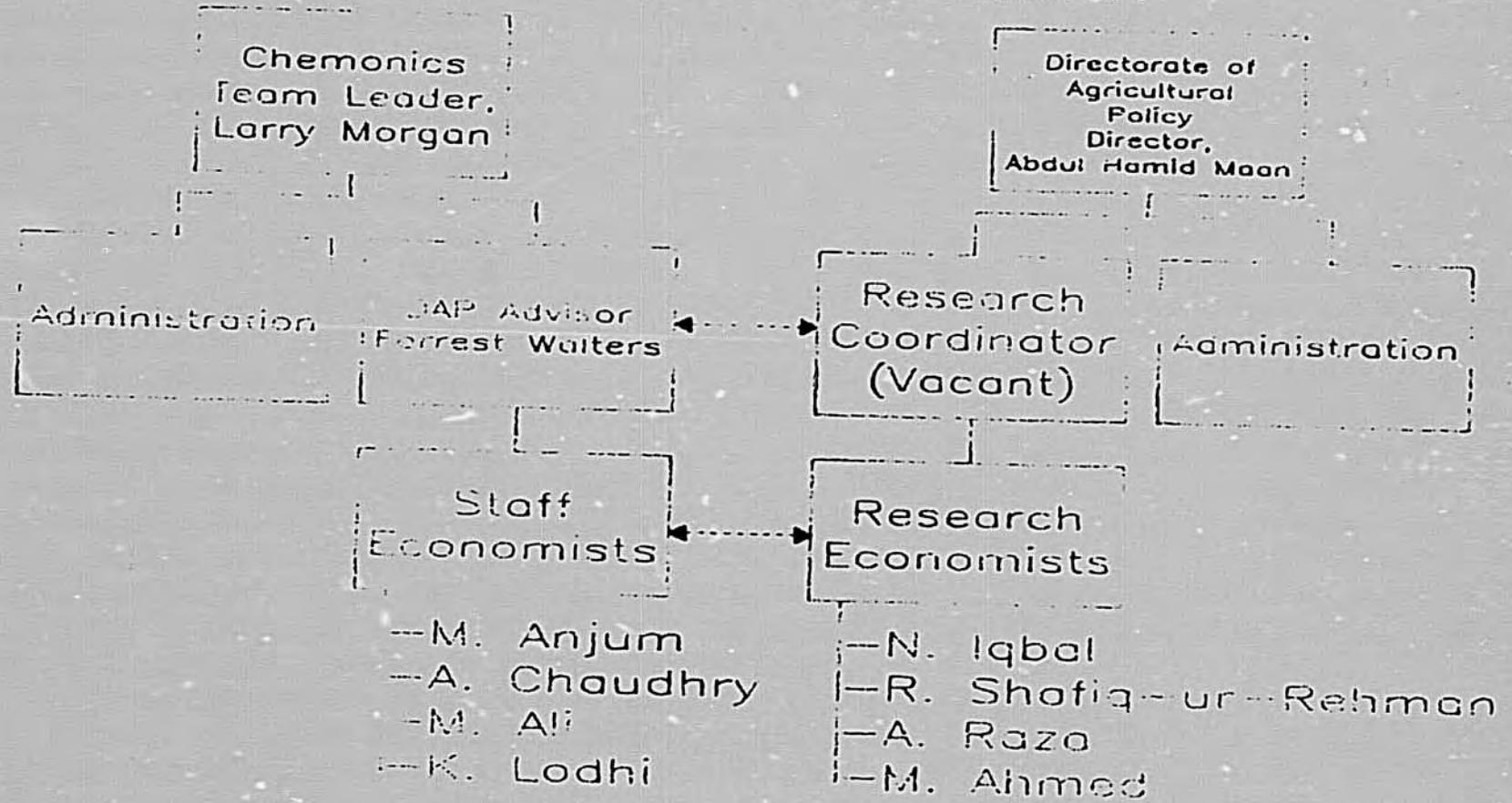
Admn. Officer
 M. Javed Iqbal 18

Asst. A/C Officer
 Mohd. Aslam 16

N./Qaid
 Yousof 1

CHART 4

EAN PROJECT ORGANIZATION



Source: EAN/DAP

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EVOLUTION OF MINFA/EAN PROJECT ORGANIZATION

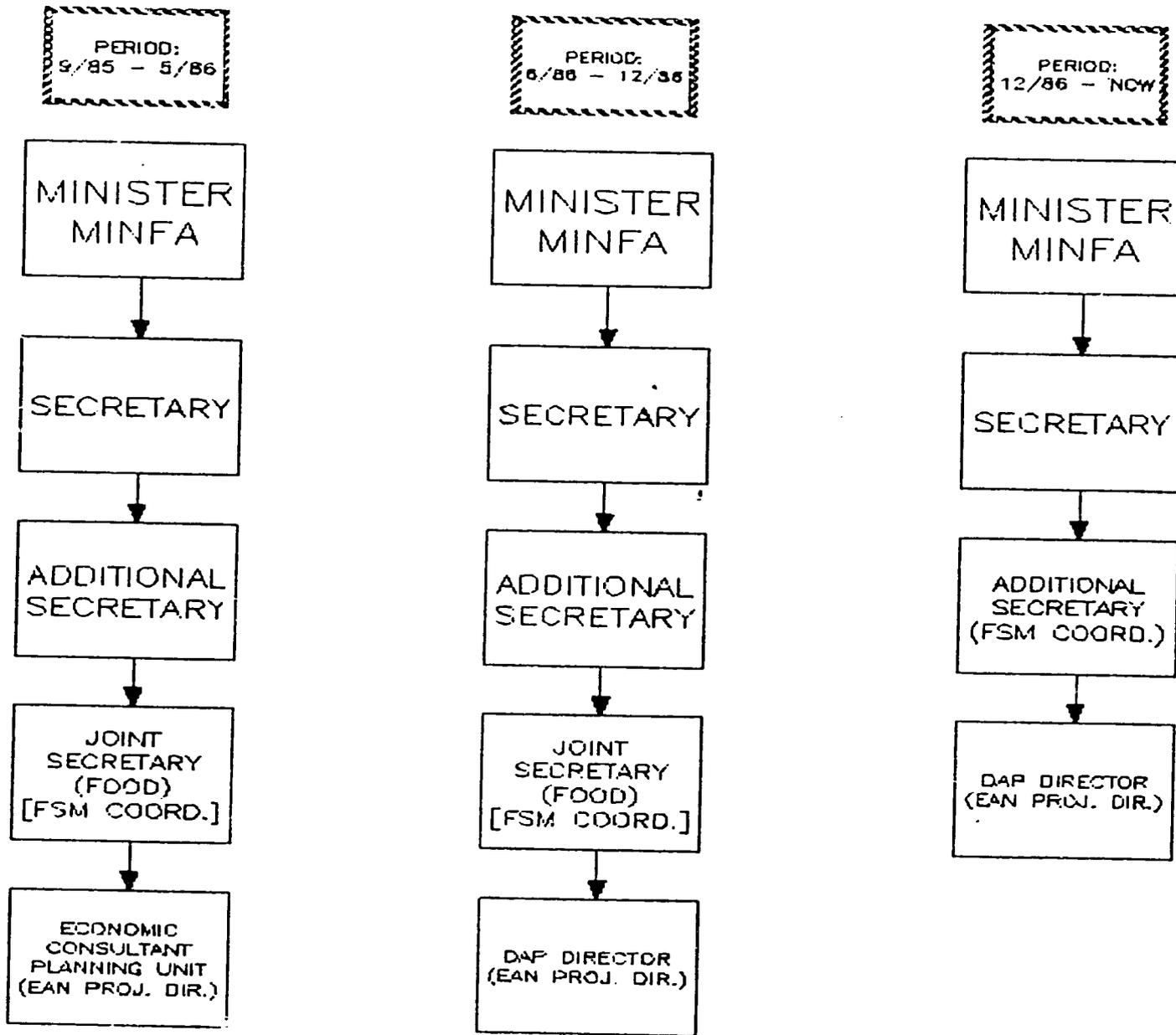
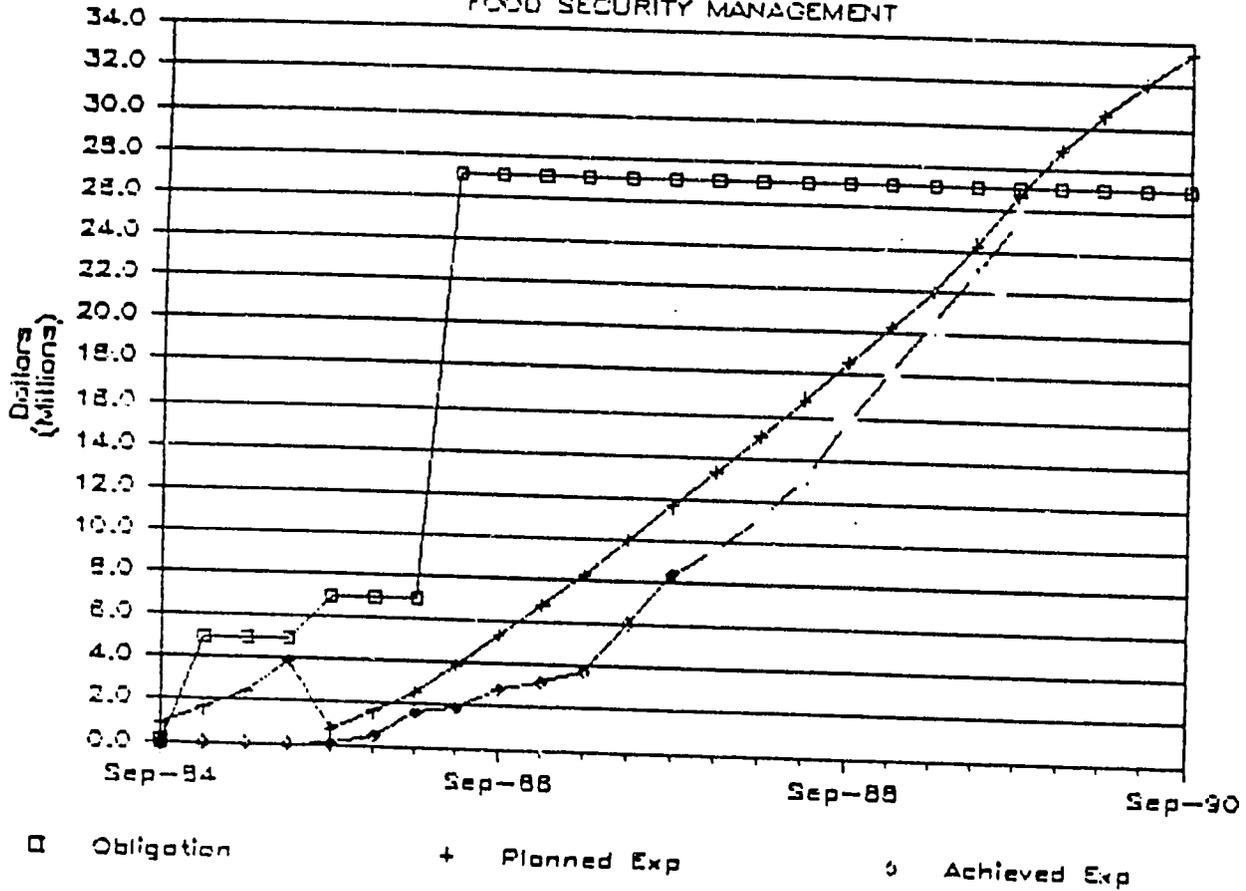


CHART 7

PLANNED VS. ACTUAL EXPENDITURES

FOOD SECURITY MANAGEMENT



OVERALL PROJECT STATUS

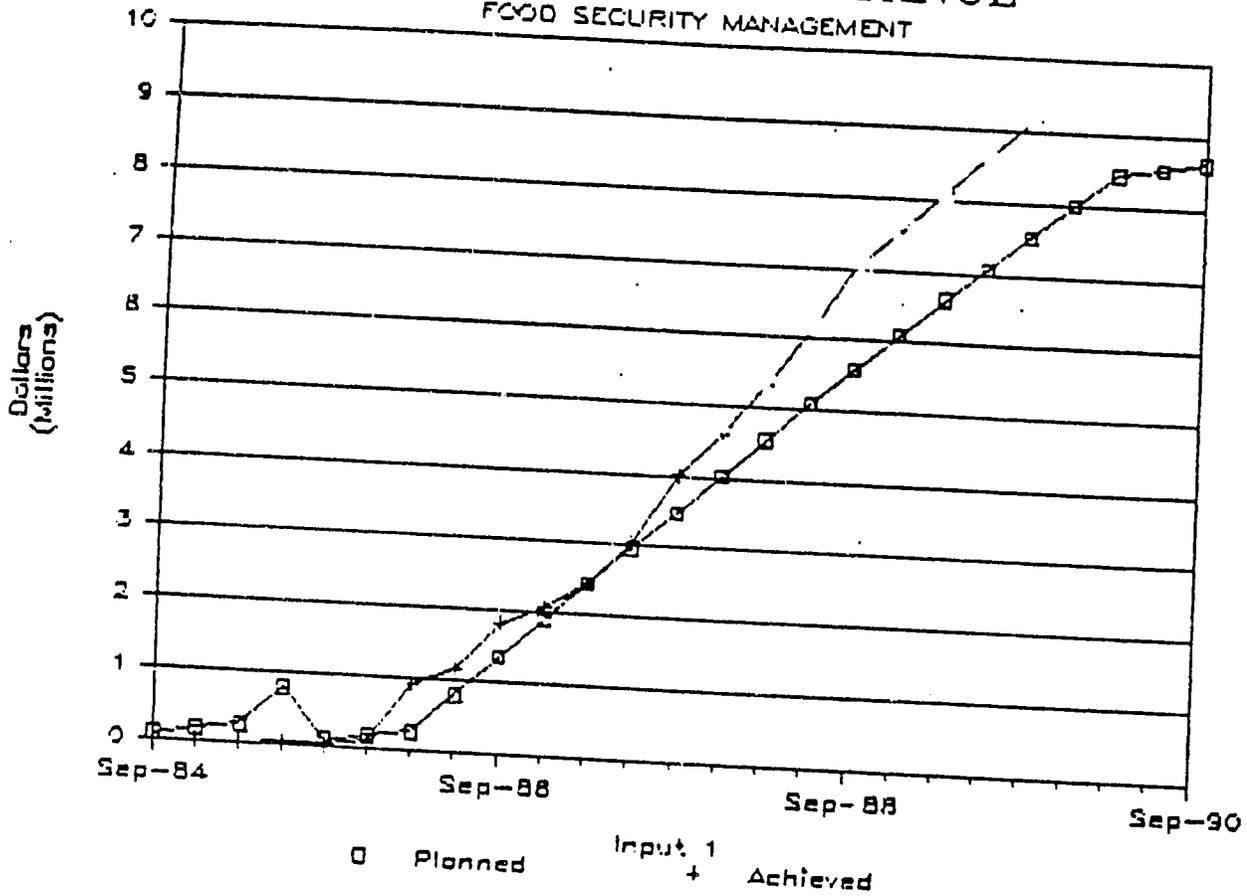
Barring Storage rehabilitation, various components of the project are proceeding at an even pace. The range varies from faster than expected, right on schedule, behind schedule, and far behind schedule. Given the project's overall policy emphasis, however, the recent GOP decision to deration wheat and not to subsidize the export of poultry products indicates that the project is having a measurable policy impact. For instance the wheat derationing should reduce the GOP subsidy to agriculture by 40 to 60 million dollars in the coming year. GOP has agreed in principal to finance OSM cost of food godown and PASSCO has been declared central agency for rehabilitation work. Due to the recent budget cut, project implementation is suffering for want of seed money in the PLA.

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CHART 8

TECHNICAL ASSISTANCE

FOOD SECURITY MANAGEMENT



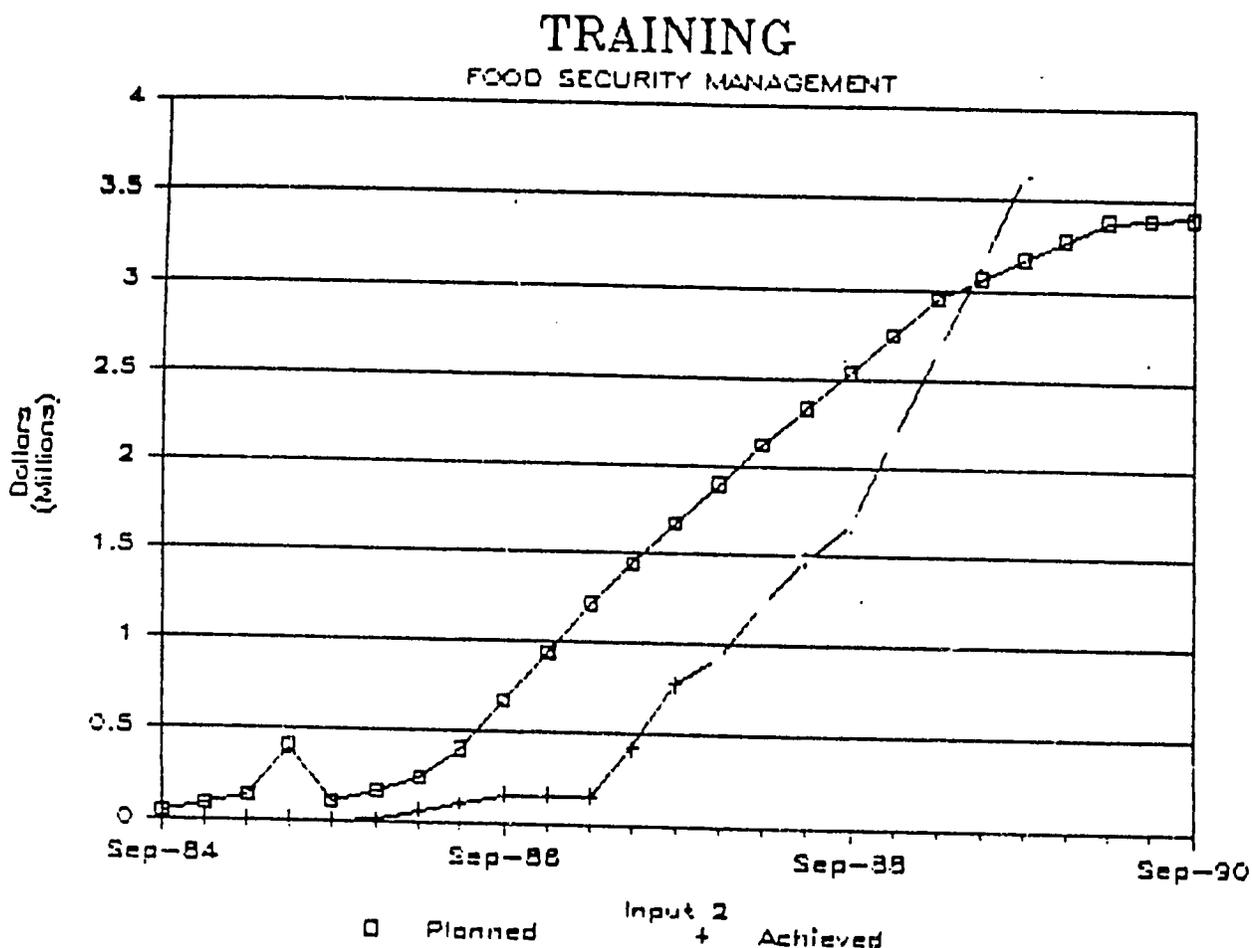
PROGRESS : Long-Term TA is on board. ST TA is arriving as planned. MINFA begins to understand the importance and utility of ST technical assistance. In fact, Statistics Division have asked for more ST TA than planned.

PROBLEMS : None.

ACTIONS PLANNED : None.

Source: AID/ARD

CHART 9



PROGRESS : Training planned and achieved figures given in Output 5. Two participants are leaving shortly and 35 are ready to leave for U.S. Incountry training includes Economics, Ag. Economics, Statistics, Pest Management, Storage Management and Micro-Computers.

PROBLEMS : None.

ACTIONS PLANNED : Will continue efforts to place 30 participants including seven in MS and Ph.D programs. Four hundred participants obtained incountry training. Possibilities for expanding incountry training in the form of workshops, seminars, and conferences explored.

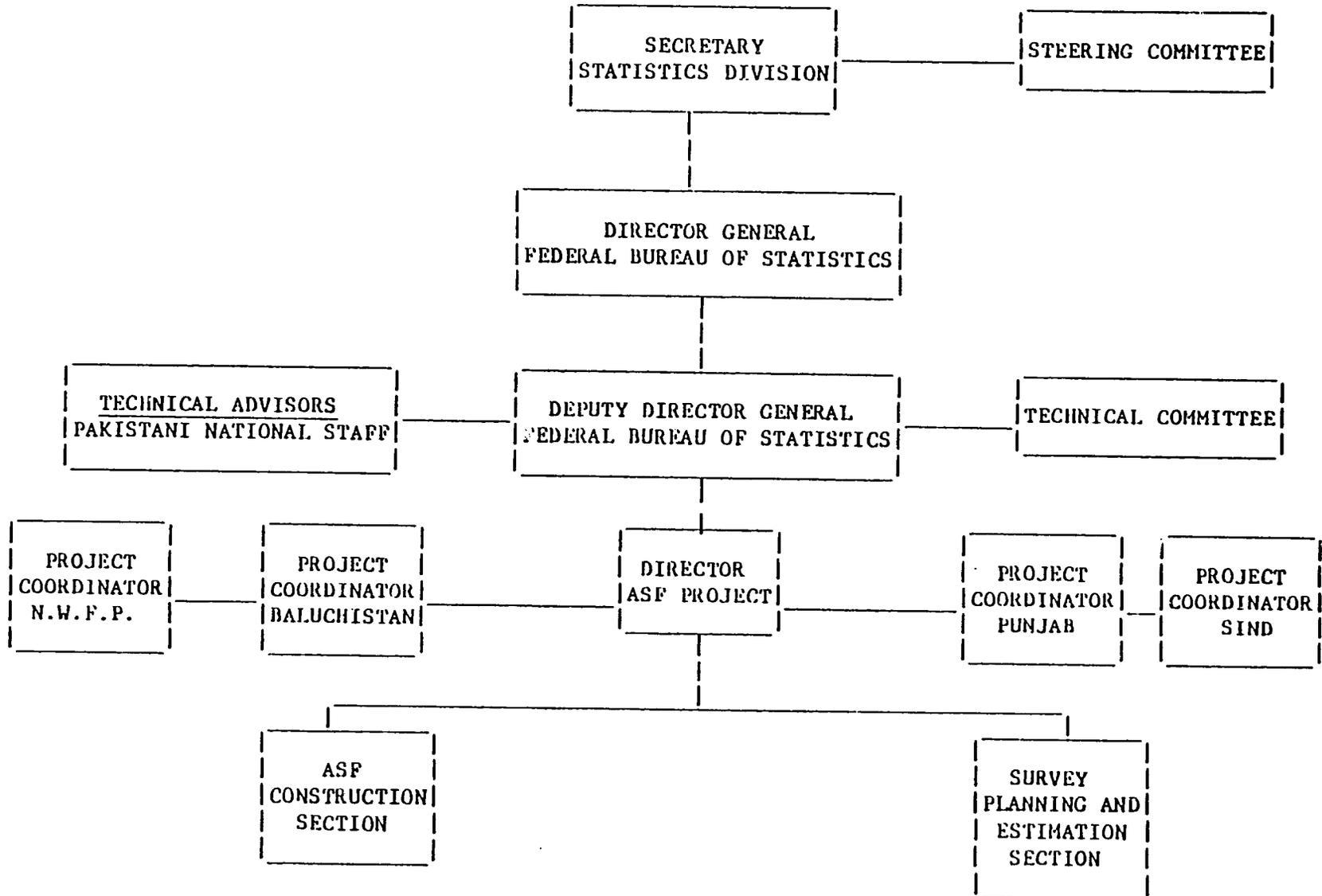
Source: AID/ARD

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CHART 10

ORGANIZATIONAL CHART

FOOD SECURITY MANAGEMENT PROJECT
AGRICULTURAL DATA COLLECTION COMPONENT



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LIST OF PERSONS INTERVIEWED

Government of Pakistan and Public
Autonomous Institutions

Sartaj Aziz
Special Assistant to the Prime Minister
Ministry of Agriculture

Amir Mohammad
Secretary
Agricultural Research Division, MINFA
Ex-Officio Chairman
Pakistan Agricultural Research Council

Akhtar Mahmood
Secretary
Statistics Division
Ministry of Finance

Chaudhry Shafi Niaz
Chairman
National Agricultural Prices Commission

Sheikh Abdul Rauf
Additional Secretary, MINFA

M. Tariq Janjua
Additional Secretary (Food), MINFA

Sheikh Mohammad Ishaque
Director General
National Bureau of Statistics (FBS)
Statistics Division
Ministry of Finance

Muhammad Mohammad Chaudhry
Economic Consultant, MINFA

M. H. Maan
Director
Directorate of Agricultural Policy (DAP)

Mirajuddin Ahmed
Secretary
Special Cell, MINFA

M. Iqbal Siddiqui
Director, EPA and DAP

M. Iqbal Aftab Ahmad
Director General

USAID Contractors - Project Consultants

28. Mr. Larry Morgan, Chief of Party, FSM/EAN
29. Mr. Forrest Walters, DAP Advisor, FSM/EAN
30. Mr. T.J. Byram, Chief of Party, FSM/ADC
31. Mr. Eric Waldhaus, Survey Statistician, FSM/ADC
32. Mr. Joe E. Brooks, DWRC Research Biologist, FSM/VPC
33. Mr. Ejaz Ahmad, Research Specialist, FSM/VPC
34. Mr. Richard C. Maxon, Chief of Party, FSM/STDT
35. Mr. Cecil E. Fuller, Experience, Inc.

World Bank

36. Mr. Abdul Qaiyum Sheikh

AID/Washington

37. Ms. Helen Gunther, ANE
38. Ms. Marhis Buckhaus, DP (Evaluation)
39. Pat Matheson, Project Development Officer
40. Mike Crosswell, DP (Econ.)
41. Chris Herman, DP (Evaluation)
42. James Manley, Project Development Officer

IFPRI Washington

43. Harold Alderman
 44. Susan Gnaegy
 45. Marito Garcia
 46. Thomas C. Pinckney
 47. Alberto Valdes
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SCOPE OF WORK

I. ACTIVITY TO BE EVALUATED

The Mission requests an evaluation of the FSM project, from the date of the project authorization, May 1984, to end of FY 87. Evaluation to commence mid-November, 1987. The FSM project activity completion date is June 30, 1990, with an authorized LOP funding of \$35 million. The project is composed of three discrete activities namely: Ag Data Collection (ADC) - \$8.5 million, Post-Harvest Management (PHM) - \$15.5 million, and Economic Policy Analysis (EPA) - \$11 million.

II. PURPOSE OF EVALUATION

The purpose of the evaluation is to review and assess the effectiveness of the mission's FSM project. More importantly the evaluation team should assess the institutional processes and analytical capacities of GOP entities involved in project activities. The evaluation report should also focus on the consultants' efforts to help establish the desired institutional framework within the GOP to make policy decisions based on solid, empirical data. Specifically, the evaluation will measure the impact of the project on specific GOP policy reforms in various agricultural sub-sectors and on the analytical and policymaking capabilities within the GOP, and whether these capabilities are correctly targeted within the GOP. The evaluation should cover main areas of each sub-component to assess the management and economic development impact of the project and the integration of sub-components to the achievement of policy reform. The evaluation will guide mission management in the implementation on FSM during the post 87 period and should include a list of conclusions and recommendations based on the analysis appearing in the main body of the report. This evaluation is the first of three formal external evaluations scheduled over the five-year project and has already been scheduled in the current ANE Bureau Evaluation Plan.

III. BACKGROUND

The Food Security Management project was developed under the FY 82-87 U.S. assistance package to Pakistan to assist in achieving the food security objectives of the Government of Pakistan (GOP) in a manner consistent with the rational and efficient use of national resources, overall economic development of the country and improve the standard of living for farm families and the population at large.

The project was designed to improve the analytical and policy formulation framework, managerial capabilities and the physical capacity of the GOP to manage the national food security system efficiently and effectively through three related components: Agricultural Data Collection (ADC), Economic and Policy Analysis (EPA) and Post-harvest Management (PHM). Under the ADC component, an improved system for the collection of basic agriculture data is being implemented by the Federal Bureau of Statistics, Statistics Division, Ministry of Finance and Economic Affairs in collaboration with the provincial Departments of Agriculture. A PASA agreement was signed with USDA to supply TA Team. The Area Sampling Frame (ASF), developed by the United States Department of Agriculture's (USDA) National Agriculture Statistic Services (NASS), is expected to provide more accurate data on a timely basis than is currently available.

Under the PHM component, management of the provincial food grain storage network is to be improved by: introduction of better management systems and training; rehabilitation of approximately 750,000 metric tons of grain storage capacity; strengthening the system of technology transfer for storage design, grain quality maintenance and pest control technologies, - pre and post-harvest - through Ministry of Food, Agriculture and Cooperatives (MINFA) with the collaboration of PARC and the provincial food departments and research institutes. The Storage Technology Development and Transfer (STDT) sub-component has been awarded to Food and Feed Grain Institute (FFGI)/Kansas State University (KSU); the Vertebrate Pest Control (VPC) sub-component was awarded to Denver Wildlife Research Center (DWRC)/USDA Under PASA; and the two first phases of the Storage Rehabilitation (SR) sub-component were awarded to Experience, Inc. to survey the godowns to be rehabilitated. A determination is now being made for the award of a third and final phase of the SR sub-component.

The EPA component is assisting the GOP to establish an Economic Analysis Network (EAN) composed of the public and private institutions of Pakistan that produce or utilize agriculture analysis. An expansion of analytical activities and capabilities within the network are being coordinated by MINFA through the Directorate of Agriculture Policy (DAP). The contract has been awarded to Chemonics International Consulting Division. The other sub-component is the Special Studies Program (SSP) which is being implemented by the International Food Policy Research Institute (IFPRI). IFPRI is conducting studies on: 1) projections of long-term demand for food commodities up to year 2000; and 2) a study of food supply management with particular reference to partial provisioning system of wheat in the context of food security and minimum food requirements of the poor.

FSM implementation is planned to be continued under the newly designed agricultural sector support program (ASSP) slated to be approved late FY 1987. The ASSP builds on the FSM

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experience in fostering policy reforms. The evaluation team will assess the FSM project with an eye to effectively integrate its activities into the design and implementation of the new ASSP.

IV. STATEMENT OF WORK

The Evaluation Team will review the performance of ADC, PHM AND EPA components of the FSM project under the FY 1982-1987 program with a view to: A) assessing effectiveness of the program implementation; B) analyzing the economic and development impact of the program; C) reviewing the effectiveness of the program in promoting the agencies policy objectives in the three components of the project; and D) analyzing in depth the degree to which the three components are coordinated, integrated and focused to achieve overall program goals.

The evaluation shall include but not be limited to the following areas:

A) Management assessment, effectiveness of the interaction among main entities involved (USAID, GOP, contractors) in managing the project.

B) Coordination in terms of providing necessary inputs in a timely fashion for attaining the project objectives.

C) Economic and development impact:

(1) Where appropriate and feasible reference to other programs shall be built into the analysis of the impact of the AID program on Pakistan's overall balance of payment position and institutional performance.

(2) Impact on targeted sectors in terms of policies and stated GOP/USAID sector objectives.

(3) Impact of FSM on policy dialogue particularly on derationing, recurrent costs for public sector godowns, and privatization and technology transfer.

Specifically, the evaluation effort should address the following questions:

Question 1: What evidence exists to date that the economic analysis network as planned in the PP is a viable concept for economic policy analysis and the policy-making process?

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Question 2: What are the key indicators in assessing the impact of the post harvest management component on wheat processing, storage and distribution system? Assess and describe the extent to which this component is improving the ability of public or private institutions to store wheat.

Question 3: What evidence exists that institutional capacity to analyze policy issues and effect policy change has increased?

Question 4: Analyze existing evidence on how the GOP has adopted policy recommendations and implemented reform and, based on GOP demonstrated ability to respond to economic and policy analysis, discuss how future project activities can be made more effective.

Question 5: Identify and analyze real or perceived constraints that impede integration of the sub-components of the project.

Question 6. Are the kinds of project inputs appropriate and sufficient to ensure project effectiveness? Would an increase in inputs enhance overall project implementation?

Question 7: How successful is the area frame sampling methodology in providing timely and accurate statistics to the policymakers? The analysis should be limited to the pilot project only.

Question 8: Identify project performance indicators and assess the degree to which project performance contributes to the desired economic improvements. What are some of the key economic indicators that reflect these improvements?

V. TEAM COMPOSITION

The evaluation team shall include three (3) members having skills described below. One team member will act as team leader, with full responsibility for coordinating evaluation and drafting and presenting the final evaluation report. Strong writing skills and evaluation experience are essential for all the three members of the evaluation team.

Economist: One economist with strong micro/macro economic background, experience in evaluating both public and private research projects, primary responsibility for: analyzing economic and developmental impact of the program, assessing effectiveness and impact of policy dialogue, initiatives and examining the impact of all the three components of the project.

Statistician: One Statistician with strong survey design, data collection and analysis background, working experience in developing countries and evaluating both public and private development projects in the field of statistics, primarily responsible for: analyzing the long term developmental impact of the program, assessing effectiveness and impact of policy dialogue initiatives and examining the impact of all the three components.

Agriculture Expert: One local agriculture expert preferably agricultural economist with strong background and experience in agriculture development projects, institutional development and evaluation of such projects. The individual should have strong background in agriculture data collection, economic analysis and expertise to analyze the impact of donor assisted development projects. In addition the expert is fully acquainted with the GOP rules of business.

VI. METHODS AND PROCEDURES

The evaluation will require five weeks (30 working days) of effort by a three-person team. Evaluation methods will include reviewing secondary source data and collecting some primary source data through interviews and field visits. The team will divide their time among different evaluation tasks as it judges best. A possible division of effort might be as follows: consultation with ANE/DP/E: one day; in-country information gathering: thirteen days; data analysis: five days; report writing, editing and presentation: six days; and final report: five days. Resource personnel are likely to include representatives from Directorate of Agriculture Policy (DAP), Food Division/MINFA, Federal Bureau of Statistics, Pakistan Agricultural Research Council (PARC), Provincial Food Departments and Provincial Agriculture Research Institutes, as well as A.I.D. and the technical assistance teams.

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VII. REPORTING REQUIREMENTS

A. Format of the Report

The final report shall be well written and 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, conclusions and recommendations.
- (3) The main body of the Report shall review and analyze the issues and questions raised in the Statement of Work.
- (4) A "lessons learned" section.
- (5) A matrix of major findings, conclusions, recommendations and identification of the entity that will carry out the recommendations.

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.

Annexes will include at a minimum:

- (1) The evaluation scope of work.
- (2) A bibliography of individuals and sources consulted.
- (3) A summary of procurements (value, quantities, items, entity/area benefitting, etc.) made under the FSM project.
- (4) A completed evaluation summary in the format provided by AID/W.
- (5) FSM logical framework, together with a brief summary of the current status/attainment of original or modified inputs and outputs.

Twenty copies of the final Report shall be submitted to USAID/Islamabad for distribution within the Mission and to the concerned GOP agencies in Pakistan.

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B. Other Requirements:

U.S. members of the evaluation team shall meet in Washington prior to leaving for Pakistan to meet with ANE/DP/E. The evaluation shall be completed within four to six weeks. Six-day work weeks are authorized. Individual members of the team shall coordinate simultaneous arrivals and departure times, to ensure that all members are involved in conducting the evaluation, preparing the final Report, and presenting 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 AID/Islamabad. The draft Report shall be conducted at least seven working days prior to the departure of the final member of the evaluation team for review and comment. A final report shall be submitted to and accepted by the Mission before the evaluation team leaves Islamabad. Prior to departure, the evaluation team will be requested to meet with the Project Committee and/or Mission Management Staff for debriefing. If necessary, a separate briefing shall also be provided to the GOP. The complete and edited evaluation document requires that one or more team members stay in Islamabad for a sixth or possibly seventh week - this should be authorized. If a firm is used the firm may review the final document and submit an "official" report under letterhead at its own expense if it so wishes. Firms not willing to leave a final report in Islamabad should be considered unresponsive.

Transposed from Islamabad 18754 and revised by Marlies Backhaus, ANE/DP/E. Wang 2088L October 8, 1987.

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FSM EVALUATION
OUTLINE AND WORK PLAN
(Internal Working Paper of Evaluation Team)

I. OUTLINE

This outline contains some tentative ideas (at this early stage) regarding the substantive issues of the evaluation, and is subject to change as the evaluation team becomes more familiar with the statistical, analytical and policy issues. Once the substance of the evaluation has been prepared, it would be transcribed into the evaluation format recommended by AID/W and USAID/Pakistan.

Section A (the setting) contains a brief review of the history and purposes of FSMP and of the evaluation methodology. All the subsequent sections will basically follow the AID format and contains factual background, analysis, findings, conclusions, and recommendations for all the issues in each section.

A. THE SETTING

1. What is FSM? Good working definition in Post-FY 1987 Ag. Strategy (AS), p.13. Brief history.
2. Progress towards increasing food security or reducing food insecurity is to be made by lessening/moving constraints on agricultural growth through institutional development, policy reform, technology transfer, and increased private sector participation (AS, p.20).
3. FSMP addresses all four "generic challenges" cited in CDSS (p.34): reform of policy environment; rehabilitation/expansion of physical infrastructure; development of human resources; and improvement of institutional performance.
4. The basic mechanism is the policy dialogue which is oriented towards economic liberalization, deregulation, and expanding the scope of private sector activity (CDSS, p.34). Through the policy dialogue, FSMP expects to contribute to the achievement of the overall AID program objectives of increasing agricultural productivity, reducing the budget deficit and improving the balance of payment performance (CDSS, p.38) - for example by cutting the cost of wheat storage, by reducing the need for food imports, etc.
5. Evaluation - purpose, scope of work (summary), methodology and approach.
6. Team composition and work plan.

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B. EVALUATION ISSUES COMMON TO ALL FSMP COMPONENTS

1. Compare the FSMP Log Frame contained in the Project Paper (PP) with actual outcome in terms of FSMP goals, purposes, assumptions, outputs, inputs (PP, pp 28-29 & Annex E). Assess validity and realism of initial assumptions (including expectations of achievement in a given time horizon), and make allowances for unforeseen developments.
2. For each component, compare actual year-by-year progress with that envisaged in PP (pp 60-64). Reasons for deviation, lessons for future.
3. For each component, compare the AID and GOP responsibility as envisaged in PP (pp. 67-70) with actual fulfillment of such responsibility. Reasons for deviation. Lessons for future.
4. For each component, appraise the status of fulfillment of conditions precedent (CPs) and covenants (PP, pp. 110-112). Reasons for non fulfillment.

C. EVALUATION OF ECONOMIC AND POLICY ANALYSIS (EPA) COMPONENT

1. Describe actual accomplishments in terms of installation of the Economic Analysis Network (EAN), and evaluate the results with reference to expectations (PP, pp. 29-30, 83-97).
2. Assess the extent of "institutionalization" of EAN in GOP decision making structure with respect to ag. policies. Evaluate the viability of this concept in the GOP analytical and policy making process, in the light of experience in Pakistan. For this purpose, analyze the functioning of Advisory Committee on Agriculture, Steering Committee, EAN Group (EANG), Planning Unit (PU), Agricultural Prices Commission (APCOM), Directorate of Ag. Policy (DAP). First EAN Conference? Lessons for future.
3. Evaluate the role of EAN and Special Studies Project (IFPRI) in implementing policy reform, in the light of existing evidence--for example, derationing of wheat and partial deregulation of oilseeds trade (See AS, pp. 19-20, Annex B, D, E and Attachment 1). To what extent have other AID programs and programs of other donors contributed to the policy reform (for example, the role of PL-480 and of the World Bank in convincing GOP to implement some liberalization of oilseeds trade)? Lessons for future.

D. EVALUATION OF AGRICULTURAL DATA COLLECTION (ADC) COMPONENT

1. Summarize the status of introduction of the Area Sampling Frame (ASF) in the pilot project (delineation of segments, initiation of surveys). Is it possible to evaluate the

feasibility and the merits of the ASF on the basis of the limited experience with the pilot project ? Comment on the reliability, timelines, and cost of present agricultural data collection and on possible problems of coordination between federal and provincial agencies concerned with collection and compilation of ag. statistics.

E. EVALUATION OF POST-HARVEST MANAGEMENT (PHM) COMPONENT

1. Evaluate the PHM inputs in terms of implementing policy changes that would reduce the cost of wheat storage and stimulate private sector participation.
2. Evaluate the progress made, and the problems encountered, in the rehabilitation of wheat storage facilities, so as to reduce losses.
3. Review the reports on the needed policy changes in the PHM system, the definition of policy objectives, and new financial management policies, as required by the CP (PP, pp.49-50).

F. OVERALL EVALUATION OF FSMP

1. Analyze the impacts of FSMP on targeted sectors, on institutional performance, and on the balance of payments position. State reasons for lack of accomplishments.
2. Evaluate the training program as a contribution to improved institutional performance.
3. Assess the effectiveness of communications and dissemination of information regarding FSMP at federal and provincial levels as well as outside the public sector.
4. Evaluate the management capacity of AID and GOP in relation to FSMP and the effectiveness of coordination among AID, GOP and the FSMP contractors. Establishment of PCU within USAID/ARD?
5. Make recommendations regarding FSMP activities that may be absorbed in the ASSP (CDSS, p.40; AS, p.22).
6. Evaluate the extent of coordination among the FSMP components and analyze the constraints that have impeded such integration.

II. WORK PLAN

The work plan, based on the above outline, would consist of assembling the factual basis, analysis, findings, conclusions and recommendations for each evaluation issue. The activities would include assimilation of available material, obtaining additional data, and analytical and policy discussions with AID and GOP officials, and with FSMP contractors. The

evaluation team plans to undertake at least one field trip to learn, at first hand, the experience with the ASF pilot project in the ADC component.

The approximate division of responsibilities among the evaluation team members would be as follows:

Beller/Tucker	ADC evaluation (including training) PHM evaluation (including training)
Jafri	Section A (The Setting) EPA evaluation (including training) Overall FSMP evaluation Integration of different pieces into one report Executive summary Evaluation summary and evaluation matrix
Mian Saheb	Background--situation existing prior to FSMP His own perception of GOP response to FSMP and of institutional problems. Checking the facts in the different pieces.

The above division is not rigid. The team members will obviously work like a team and will contribute to each other's work.

The deadlines are as follows:

Jan. 21	First draft, minus findings, conclusions, and recommendations (FCR).
Jan. 26	First draft including FCR.
Jan. 27-30	Integration of various pieces into one draft; conversion of this draft into AID format; inclusion of executive summary.
Jan. 31	Presentation of complete first draft to AID.
Feb. 1-9	Oral presentation before AID (and GOP?); incorporation of AID and (GOP?) comments into first draft.
Feb. 10	Presentation of final draft to AID.
Feb. 10	Team departs.

No. 3(25)EG/PD/77
GOVERNMENT OF PAKISTAN
PLANNING AND DEVELOPMENT DIVISION

Islamabad, the 4th June, 1986

NOTIFICATION

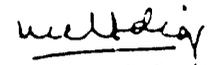
Mr. Mohammad Hanif, Deputy Chief (BPS-19) a member of Economists Group, presently working in the Planning and Development Division, has been transferred to the Food and Agriculture Division against the post of Deputy Agricultural Commissioner (Agricultural Credit) (BPS-19) with immediate effect vice Dr. Abdul Hamid Maan whose services are placed at the disposal of Food Security Management Project of that Division for posting as Director Agricultural Policy (Project Director of Economic Policy Analysis), with effect from the date, he relinquishes charge of the same post in the same Division and until further orders.


(MUHAMMAD ASHRAF)
Deputy Secretary
Government of Pakistan
Tels. No. 826106

To
The Manager,
Printing Corporation of Pakistan Press,
University Road, Karachi

Copy to:-

1. A.G.P.R., Islamabad.
- 2-3. Food and Agriculture Division (Mr. Muhammad Munir, D.S.), Islamabad.
- ✓ 4. Joint Secretary (Mr. Inamul Haq), Food and Agriculture Division, Islamabad.
5. Dr. Abdul Hamid Maan, Deputy Agricultural Commissioner (Agri. Credit), Food and Agri. Division, Islamabad.
6. Establishment Division, Rawalpindi.
7. Establishment Division (Mr. S.T.A. Qadri, Director), Rawalpindi.
8. Estate Office, Islamabad.
9. Mr. Mohammad Hanif, Deputy Chief (SC&T) & Supports Culture and Tourism Section.


(Muhammad Sadique)
Section Officer

EVALUATION MATRIX
ECONOMIC POLICY ANALYSIS COMPONENT

FINDINGS	CONCLUSION	RECOMMENDATIONS
EAN Installation		
The Chemonics/EAN organization had a good start and has remained productive and dynamic, due mainly to the effort of the Team Leader.	Credit is due to the Chemonics Team Leader for an excellent performance, particularly in organizing the EAN in the first year (up to June 1986).	No recommendation needed.
The Pakistani EAN counterpart organization (DAP) started slowly and was lagging seriously up to May 1986. The pace picked up with the appointment of the current DAP Director and of the Research Economists in June 1986. Further progress should result with the appointment of the Deputy Director in December 1987. At present, DAP accomplishments are in line with expectations.	After a slow start, the pace of implementation picked up, after the appointment in June 1986 of the present full-time Project Director, EPA (Director DAP) who has put in an outstanding performance in building up EAN/DAP and getting it increased recognition. At this time, the EAN/DAP accomplishments are approximately in accordance with the programmed level.	No recommendation needed.
The Chemonics/EAN team and the DAP organization have been built up adequately. The two organizations have a close coordination and have such good working relations that they can be considered as one EAN/DAP organization.	Both the Chemonics/EAN team and the DAP organization are functioning effectively and are working well together, almost like one EAN/DAP organization. The experience is important, since the two organizations would need to be merged on the departure of the Chemonics expatriate team towards the end of the project.	No change is recommended.
The involvement of private consulting firms in policy analysis in Pakistan is a departure from tradition. Because of this lack of experience and because they have had to recruit specialized staff for this purpose, the work of these firms on the contract studies has proceeded slowly and has required close monitoring by EAN/DAP. The first batch of 3 contract studies will be ready by mid-1988.	It will be important for the EAN/DAP to ensure the high quality of the contract studies, through intensive monitoring of the first batch of 3 studies which will be ready by mid-1988 after a long delay. There is room for EAN/DAP to reduce the preparation time of the next batch of 3 studies, without sacrificing their quality, by strengthening its monitoring capability.	EAN/DAP should intensively monitor the 3 contract studies due mid-1988, so as to ensure their high quality. (EAN/DAP) EAN/DAP should strengthen its monitoring capability in order to reduce the preparation time of the next three studies without sacrificing their quality. (EAN/DAP)

EAN/DAP has prepared good quality studies, commissioned by MINFA and ECC. The time lag between the request for and delivery of these studies has been rather long.

The evolution of the policy briefing papers and other staff studies, undertaken by EAN/DAP at its own initiative, has been satisfactory.

The workshop and seminar program has done well in providing training in analytical methods and policy analysis to public sector officials and in projecting a good image of EAN/DAP.

EAN project funds have financed diversified but essentially short-term and ad hoc training.

The EAN membership campaign has shown good results and the publication of the Directory and the Econogram are good accomplishments.

The analytical and policy content of the commissioned studies has been good, but they have taken too long a time. There is room for EAN/DAP to do some "quick and dirty" policy analysis for the GOP.

The quality of the policy briefing papers and other staff studies undertaken at its own initiative by EAN/DAP has been good, but some reduction should be possible in their preparation time.

The EAN/DAP workshop and seminar program has been effective and deserves to be continued and diversified.

The financial and technical problems delaying EAN/DAP publications have been resolved for the present, but a more viable solution would be to use PLA funds to have the printing done at private printing presses.

The success of the membership campaign and the publication of the EAN Membership Directory and the Econogram have been worthwhile. There is need to build on this by convening an EAN Conference, where papers would be presented and discussions organized and which (if successful) may be held annually, which would build an EAN "constituency".

EAN/DAP should reduce the preparation time of its commissioned studies without prejudice to their quality. (EAN/DAP)

EAN/DAP should update the policy briefing papers and other staff studies undertaken at its own initiative and should initiate new ones in line with GOP policy needs. (EAN/DAP)

EAN/DAP should undertake some "quick and dirty" policy analysis for the GOP. (EAN/DAP)

EAN/DAP should continue its workshop and seminar program on a more diversified basis. (EAN/DAP)

EAN/DAP should persist in its efforts to use the PLA funds for the printing of its studies at private printing presses. (EAN/DAP)

EAN/DAP should convene an EAN Conference, which may, if successful, be made an annual event. (EAN/DAP)

In EAN/DAP, there is a modest representation of women in the professional staff and a fair sprinkling in support roles.

"Institutionalization" of EAN

There are pressing reasons for the formal "institutionalization" of DAP within MINFA (to be shown in its organization chart) with recurring annual budgetary provision for the salaries of all Pakistani professional and support staff in EAN/DAP. EAN Staff Economist would have to accept a cut in nominal salary as a trade-off for a permanent appointment, but this loss of real income may not be serious considering substantial GOP fringe benefits. The head of DAP would have the rank of Director General.

At present, the Project Director, EPA (Director DAP) reports to AS, MINFA. If any intermediate level of authority is placed between the proposed Director General, DAP and AS, MINFA, it will hurt the EAN/DAP organization.

ACPAA has not met even once since its creation in February 1985. DAP has requested a meeting of ACPAA for early 1988 and has prepared a working paper for the meeting. This reluctance to meet may partly be due to a misunderstanding among some members that the agenda would

The modest representation of women at EAN/DAP in both professional and support roles essentially reflects the limited availability of qualified women candidates.

The formal "institutionalization" of DAP, which means making DAP (headed by a Director General) formally a part of MINFA with recurring annual budgetary provision, is urgently needed.

It is important for the new Director General of DAP to report directly to the AS, MINFA, without having to go through an intermediate level of authority.

No consensus has been reached on convening a meeting of the ACPAA in early 1988, as requested by DAP. There is urgent need for such a meeting to make recommendations on a broad agenda.

EAN/DAP should make more diligent efforts to increase the representation of women in both professional and support roles.

GOP should urgently take the following steps for formal "institutionalization" of DAP:

- Make DAP formally a part of MINFA, (to be shown in its organization chart) with recurring annual budgetary provision. (GOP)

- DAP should be headed by a Director General (BPS-20) and a Deputy Director General (BPS-19). (GOP)

- The budgetary provision should provide funds not only for the Director General and the Deputy Director General, but for all the Pakistani professional and support staff in the EAN/DAP organization, including EAN Staff Economists and the DAP Research Economists. (GOP)

The new Director General should report directly to the AS, MINFA, without having to go through an intermediate level of authority. (GOP)

A meeting of ACPAA should be convened urgently. (GOP)

- There should be a meeting of ACPAA once a year henceforth. (GOP)

- The agenda for the ACPAA should be broadened to

consist of largely organizational matters and the contract studies program, as in the case of the high-level committee meeting of February 1985.

The Technical Sub-Committee met once a year during 1985 to 1987, mainly to consider the award of contract studies.

There exists a certain degree of resentment among the EAN "Cooperating Institutions" towards EAN/DAP which is a newcomer. This feeling wears off in time provided that the newcomer convinces the existing institutions that it is not out to encroach on somebody else's "turf", that it has been created to fill a vacuum, and that its role is to supplement their work, not to compete with them. EAN/DAP has had considerable success in developing good relations with the "cooperating institutions".

Role of EPA in Influencing Policy Reform

EAN and IFPRI Special Studies have influenced GOP policy reform in several areas. It is, however, not possible to gauge the extent of such influence since other donors and GOP policy advisors have made similar recommendations.

There is need to broaden the role of the Technical Sub-Committee to include the formulation of specific recommendations for the implementation of the policy guidelines issued by ACPAA.

The onus is on EAN/DAP as a newcomer to improve communication and collaboration with the "cooperating institutions".

Policy analysis can be effective in generating policy reform if it is of good technical quality, and is prepared at the right time and at the request of the government. Those EAN/DAP and IFPRI studies that met these criteria have influenced GOP policy reform in various areas.

include: review of the work of the EAN/DAP organization; assessment of the policy analysis needs of the public agricultural sector; and issuance of policy guidelines

The TOR of the Technical Sub-Committee should include the making of specific recommendations to implement the policy guidelines issued by ACPAA. (GOP)

The Technical Sub-Committee should meet at least twice a year. (GOP)

EAN/DAP should persist in its efforts to improve communication and collaboration with the "cooperating institutions". (EAN/DAP)

No recommendation needed.

Future Role of EPA

EAN/DAP has matured and is ready to take on new challenges, but is still "on probation" as far as the GOP is concerned.

The EAN/DAP organization has come of age but it has to earn GOP confidence by producing studies of high quality, by being responsive to GOP needs, and by being prompt in meeting these needs. It is equally important for GOP to show its confidence in EAN/DAP by according it formal institutionalization, and by giving it exacting policy analysis assignments.

In order to earn GOP confidence, EAN/DAP must make every effort to produce studies of high quality, to be responsive to GOP needs, and to be prompt in meeting these needs. (EAN/DAP)

GOP should show its confidence in EAN/DAP by according it formal "institutionalization" and by giving it exacting policy assignments. (GOP)

EAN/DAP has less than two years, until Chemonics winds up its operations, to establish a solid reputation for itself.

EAN/DAP has less than two years' time, until the termination of Chemonics operations, to establish a solid reputation which would lead to its being accepted in the GOP hierarchy and would enable EAN/DAP to attract high-quality staff.

In order to gain full acceptance within MINFA and to attract high-quality staff, EAN/DAP must work hard to establish a solid reputation is less than two years before Chemonics leaves the scene. (EAN/DAP)

It is probable that GOP budgetary provision for DAP, after its formal "institutionalization", would not be adequate, because of fiscal stringency.

Given that EAN/DAP activity is worthwhile and keeping in mind the possibility that GOP funding after the formal institutionalization of DAP may be inadequate because of budgetary squeeze, it will be desirable for AID to provide some supplementary financing for future EAN/DAP activities through ASSP.

If budgetary austerity make it impossible for GOP to provide adequate funding to a fully "institutionalized" DAP, AID should make provisions in ASSP to finance a certain percentage, say 40% of DAP's ordinary or recurring annual expenditures plus certain big-ticket foreign exchange costs, which would decrease by, say, 10% each year. (AID)

CPs and Covenants

All CPs and Covenants have been substantially fulfilled.

GOP is in substantial compliance with all the CPs and Covenants.

No recommendation needed.

AID and DAP Responsibilities

Within EMPAD/ARD, the management and coordination of EPA has been handled by the Program Specialist in-charge of EPA, under the overall supervision

AID management and coordination of EPA has been competent and imaginative.

No recommendations needed.

of the Division Chief, EMPAD/ARD, who is also the Project Officer for FSMP.

GOP appointed the Project Director and Deputy Director in the first year of the project but they worked part-time. The EAN Coordinator helped the Chemonics Team Leader in the first year of the project, but the position of EAN Coordinator was deemed unnecessary by GOP after the appointment of the present full-time Project Director in June 1986. The present full-time Deputy Director was appointed in December 1987, after a long delay.

After many procedural problems and delays, the PLA mechanism is now working satisfactorily.

Comparison of Project Paper "Log Frame" with Actual Outcome

Some of the EOPS conditions (indicators of progress) already exist in a substantial way, showing significant progress towards the improvement of the analytical and policy formulation framework.

The institutional capacity to carry out economic and policy analysis has been improved, according to objectively verifiable indicators.

GOP has substantially implemented the responsibilities it assumed in the PC-I for EPA, but there have been avoidable delays, as detailed in the findings.

In spite of problems encountered during the first year, substantial progress has been made towards achieving the project purpose for EPA. The assumptions for achieving project purpose and outputs for EPA, are realistic and are still valid, subject to some reservations.

Progress has been made towards achieving the project output for EPA. The objectively verifiable indicators of the magnitude of output, show encouraging progress, except in one case. The quantitative target for training is far from being met (also see Conclusions for Evaluation Issue V.E.1).

GOP should ensure that avoidable delays in project implementation do not occur during the LOP in future. (GOP)

No recommendation needed.

EAN/DAP should pay more attention to the training activity, so as to bring the achievement up to the target (also see Recommendations for Evaluation Issues V.E.1).

AGRICULTURAL DATA COLLECTION COMPONENT

FINDINGS	CONCLUSION	RECOMMENDATIONS
<p><u>Pace of ASF Construction</u> Frame construction critically behind schedule. Some streamlining of procedures was noted to save estimated 20% of time. Work plan needs further review. Current pace will not achieve FSMP goal.</p>	<p>Pace of construction needs to be improved. Work plan and procedure review. Work plan with weekly milestones are needed.</p>	<p>Conduct review of procedures, work flow for efficiency. (Contractor)</p>
<p>Project completion date using current plans is projected to be year 2000. This is not reasonable. Additional staff to those promised will be needed. Current staff required in survey operations nearly one third of the time. Doesn't appear to be any specialization in work unit. Material availability has slowed frame construction.</p>	<p>Substantial improvements in pace of work needed. Organization, materials, and staffing should be reviewed.</p>	<p>Additional staff, long range procurement planning for materials, reorganize to create specialization, develop long range plan with milestones, make completion of pilot a priority. (FBS)</p>
<p>Not enough concern has been shown to completing Phase-II after Phase-I. A disproportionate amount of time is being spent on Phase-I. Decision on new photographs slow. Other sources of frame material have not been researched.</p>	<p>Phase-I activities need to be expedited and alternate sources of frame material investigated.</p>	<p>Make Phase-II decision using results thru January 89, investigate availability & source of frame material and decide what will be used. (FBS, Contractor)</p>
<p><u>ASF Methodology Approval Process</u> No Phase-I review and approval process prepared and is needed to expedite the decision process among several agencies.</p>	<p>Phase-I review and approval process, official review and detail needed.</p>	<p>Approval process, workplan agreement and review officials named by July 1, 1988; approval decision to start Phase-II by March 1, 1989. (FBS)</p>
<p><u>FBS and Provincial ADC Coordination</u> ADC coordination is started FBS and PADs; existing survey organization, system, expertise vary greatly by province; future coordination on a national basis could be a problem.</p>	<p>A central agency should direct surveys to assure timely, reliable results; ASF survey will work well. Need to review unsanitized data, additional training and monitoring needed as ASF is implemented in less experienced Provinces. Coordinating units needed.</p>	<p>Give sufficient coordinating authority to FBS to be able to obtain timely, reliable agricultural data, emphasize ASF survey training, quality control, performance. Coordinating units meet regularly to resolve problem. (FBS)</p>

Implementation of ASF in Non-Pilot Project Districts

Phase-I procedures inefficient and sample sizes larger than needed for provincial or national level estimates.

Efficient implementation procedure needed, in Phase II.

For Phase-III complete ASF construction sampling for entire province before survey procedures are initiated. Survey province at reduced size (FBS, Contractor)

District Vs. Province Level Statistics

Province data systems independent; timeliness and forecasting are key data needs, however, district estimates are required for proper evaluation of phase I.

Need annual national data system; minor crops need other system at district level.

Define annual national data plan when ASF construction is complete. (GOP)

Cps and Covenants

CP to provide all necessary photographic material and maps met in principle.

CP were not clearly worded and did not specify level of use of necessary materials.

FBS continued to dialogue with MOD to secure timely cooperation providing needed material.

Strengthening Infrastructure for Statistics ^{1/}

ADC Counterpart have made significant contributions to improving sampling and survey methodology in areas outside ASF.

This is an important step in improving reliability of the country's statistics on agriculture.

No recommendations needed.

ADC funds and consultants have provided essential, high quality short term and ad-hoc in country training.

In country is 125% of goals.

No recommendations needed.

Introduction of microcomputer technology at the provincial and federal levels has been a major success.

Improved data processing capabilities will lead to more reliable and timely statistics and prepare counterparts for administering ASF.

No recommendations needed.

^{1/} Delays in meeting funding commitments slowed project implementation.

GOP did not include local currency funding in the ADP for two of the first three years of project operation. Revolving account established only after AID agreed to fund with grant money.

Strengthen the annual budgeting process.

AID Responsibilities

Within EMPAD/ARD, the management and coordination of ADC have been handled by the Program Specialist in-charge of ADC, under overall supervision of the Division Chief, EMPAD/ARD.

AID management and coordination of ADC have been good.

No recommendations needed.

POST HARVEST MANAGEMENT COMPONENT

FINDINGS	CONCLUSION	RECOMMENDATIONS
<u>Financing O&M Costs</u> The storage sector has been characterized by rapid stock deterioration and large losses of grain quality. Insufficient lapsable funds were allocated to PFDs who delayed transfer to C&Ws who placed O&M at low priority.	Project was effective in bringing about a major policy change in budgeting & financing procedures. A single organization with expertise is now responsible for repair & maintenance.	--- ---
<u>No Loss Position of GOP</u> The policy assures the same amount of wheat comes out of storages as goes in. This causes outrageous adulteration practices to grain which are dangerous to consumer's health. PHM objective is to reduce storage losses.	Proposed report will examine conflicting no loss GOP position with PHM objectives to reduce storage losses and hopefully resolve conflict.	---
<u>Policy Implementation</u> The GOP has a policy of privatization of the grain storage sector. In order to achieve this policy they must provide incentives. Studies were conducted on the ration shop system and price differentials.	The studies were timely and tightly targeted. They were instrumental in helping achieve policy change.	---
<u>VFC - Content of Program</u> Early surveys of public sector storage indicated losses were minimised & correctable with proper structure maintenance. At GOP request work was started on preharvest losses.	Public storage sector losses are minimal. Project moved out of envisioned scope of work.	Develop work plan to show activity in preharvest area and obtain GOP & AID approval
<u>VPC Methodology used in Statistics</u> Sampling procedures varied between studies and were not always random. Extrapolations to province and national levels were not technically feasible and unqualified.	Methods used in selecting samples, quantifying losses, and extrapolations are technically suspect.	Work plans developed for each study; avoid or qualify extrapolations; use of ADC objective yield procedure is a future possibility.

VPC Institutionalization

Project located at NARC, working with PARC. Counterpart staff slow in being assigned. Planning documents did not clearly state institutionalization as a goal.

GOP slow in providing professional staff. Not clear that they planned to carry on work after project ended.

Efforts should be taken to formally locate units in PARC or NARC. The 2 reassigned professionals from Karachi lab. should be assigned to the project.

STDT - Organization Structure During Balance of Project

Research staff from World Bank project lost as they were not sanctioned in PC-I. Modified plan developed with approval pending. Chairman of PARC views modified plan as as interim arrangement.

Substantial time already lost. Further revisions of work plan could cause further delays.

Future change in work plan should strongly consider impact on progress and institutionalization.

STDT In-Country Training Program

The three sub-components generally operate on an independent basis. Limited training has been approached on an "ad hoc" basis largely because of project delays.

Training program not well defined or coordinated due largely to project delays.

Increased coordination between sub-components.

Training responsibility placed in STDT.

The PP and STDT work plan vaguely defined management training with reference to short term training. Rehabilitation will introduce improved system of cost accounting and a need for computerizing inventory. PASSCO has expressed their need for management training. PASSCO and PFDs have a total of 5,700 employees.

There is a need for management training. PP and current STDT work plan weak in this area.

Revise work plan with more emphasis on management; develop counterpart in PARC PASSCO, or agricultural universities, consider training center with permanent staff providing continuous training; operational manuals a by-product of training.

While FSMP has focused on wheat there are other important food crops that are faced with problems similar to wheat. In many cases the same resources are affected regardless of the crop under consideration. Quality of all food grains a problem.

Project focused on wheat but other major food crops have similar problems.

Consider extending training and research to additional food grains; develop program to monitor quality of grain in storage.

STDT - Overall Strategy for Storage Sector

The GOP has been moving towards more reliance on market and an increased role for the private sector. More reliance on market prices is in the infant stage and price differential as an effort to provide private sector incentives has not started. Other factors of concern is the spatial distribution of storages, new construction, rehabilitation, bulk storage, infrastructure, no loss position, coordinating several donors, quality issues, etc. Current GOP & AID activities generally "ad hoc" in nature.

The storage sector is dynamic and planning is "ad hoc" in nature. There is no coordinated policy for the storage sector, no quantification of goals or objectives, and no plan to achieve these goals & objectives for the storage sector as a whole.

Assist GOP in developing an overall strategy for the storage sector.

Develop plan to direct resources for balance of FSMP and earmark those activities to be transferred to ASSP.

STDT - Bulk Storage

A review of studies related to bulk storage presented weak results. No solid basis developed for need of a full bulk chain pilot. Pilot proposal estimated to cost \$48 million. General consensus that a pilot is needed. An economic feasibility report has been suggested.

Some preliminary concern of cost of the proposal in light that there was no solid basis for the pilot.

Conduct the proposed "Economic Feasibility of Bulk Storage Project" report. Extend report to include impact of bulk storage on balance of sector.

STDT Postharvest Information System

Staffing has been a problem but part time person in NARC is continuing activity.

Progress is continuing.

A full time person should be devoted to the activity.

Rehabilitation - Availability of Funds

The funds available to carry out rehabilitation sufficient to complete only half of proposed 750,000 MT. Two priority lists have been developed.

Phase-II costs will be affected by number of godowns considered.

Establish plan on how to handle two priority lists in Phase-II.

Establish cut off for approval of extra funds required for all 750,000 MT.

OVERALL FSMP EVALUATION

FINDINGS	CONCLUSION	RECOMMENDATIONS
<u>Coordination Among the 3 Components</u>		
The conceptual linkage among its three components is reflected in the implementation of FSMP, even though they have been treated as separate for management purposes.	Separate management for each of the three components of FSMP has proved to be efficient and has not detracted from the conceptual linkage among the units.	On a regular basis, perhaps quarterly, the appropriate GOP officials should be invited to the monthly meeting of EMPAD/ARD and the Chiefs of Party. An agenda item at these quarterly meetings should be possible ways to improve the linkage and coordination among the counterparts. (AID and GOP)
<u>Management of FSMP by AID & GOP</u>		
EMPAD/ARD is responsible for overall management of FSMP and coordination among the 3 components within AID, between AID and the contractors, and between AID & GOP. The AID management and coordination is performed in a fashion similar to that envisaged for the PCU in the PP. On the GOP side, the FSM Project Coordinator (AS, MINFA) is assisted by the GOP Coordinators for the three components.	The PCU was never formally established due to inability to locate a suitable expatriate. The present AID management is similar to the PCU and is working well. On the GOP side, management is conceptually the same as in AID but much more dispersed	No changes are recommended.
<u>Summary Evaluation of FSMP</u>		
Progress is uneven among the 3 components, with the achievement factor being the highest for EPA, followed by ADC, then by PHM. The potential benefits of the three components are expected to be quite valuable in terms of the impact on Pakistan agricultural sector performance and economic development in general.	After an uncertain start, progress is generally being made in varying degrees in all the three components. Too little time has elapsed since the project start to make a meaningful statement concerning economic benefits of the project. Potential benefits through policy reforms, more reliable and	Monitor the progress in each component to guard against future underperformance. (AID & GOP)

timely data, and storage improvements can be valuable and thus it is important to monitor pace of future progress.

There is no doubt about the potentially valuable contribution of the three components and, on this basis, a good case can be made for the incorporation of some of the FSMP activities into the ASSP.

In view of the potential benefits, there is good justification for the incorporation of some of the FSMP project activities, specifically mentioned in the evaluation of the individual components, into the ASSP. Care must be taken, however, to restrain the natural tendency for the pace of FSMP in the final stages to be slowed down pending the start of the ASSP.

Incorporate specific FSMP activities as recommended in the evaluation of individual components, into the ASSP without permitting a slow down in these FSMP activities in the final stages pending their incorporation into the ASSP. (AID)

Tables 20 to 27 show that the performance of the inputs has been pari passu with the implementation of the project.

After a slow start, the performance regarding inputs has kept pace with the evolution of the project.

No recommendation needed.

VI. CONDITIONS, COVENANTS AND NEGOTIATING STATUS

A. Conditions Precedent to Disbursement

1. Conditions Precedent to First Disbursement

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish to A.I.D., in form and substance satisfactory to A.I.D.:

- a. A written opinion of Counsel acceptable to A.I.D. that this Agreement has been duly authorized and/or ratified by, and executed on behalf of the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms; and
- b. A written statement setting forth the names and titles of the persons holding or acting in the Office of the Grantee and representing that the named person or persons have the authority to act as the representative or representatives of the Grantee, together with a specimen signature of each such person certified as to its authenticity.

2. Condition Precedent to Disbursement for Activities under the Agricultural Data Collection Component

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project for activities under the Agricultural Data Collection Component of the Project, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, through its Survey of Pakistan, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., written assurance that use of aerial photos and topographical maps required for implementation of the Area Sampling Frame Methodology will be made available to project-financed consultants and/or A.I.D. designated and Grantee approved GOP staff.

3. Conditions Precedent to Disbursement for Research Studies under the Economic and Policy Analysis Component to be Undertaken by Exclusively Local Research Entities

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project for research studies by exclusively local, non-expatriate research persons or entities under the Economic and Policy Analysis Component of this Project, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made,

the Grantee shall furnish, in form and substance satisfactory to A.I.D.:

- a. Documentation that the Grantee has established a Steering Committee* and an Economic Analysis Network Group; and
- b. A Work Plan setting forth, in detail, the proposed implementation of the local research program. Requirements for this Work Plan shall be established by A.I.D. in Project Implementation Letters.

4. Condition Precedent to Disbursement for Rehabilitation of Grain Storage Facilities

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project for any engineering or construction services related to the rehabilitation of grain storage facilities, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish to A.I.D., in form and substance satisfactory to A.I.D., a long-term plan for meeting the operation and maintenance (O&M) recurrent costs for all existing and planned public sector grain storage facilities, including policy measures to be implemented and performance targets to be achieved over the life of this Project, which takes into account the findings and recommendations of the comprehensive study, to be financed by A.I.D. to, amongst other things, analyze O&M recurrent cost and management issues in the sector and identify specific policy options and recommendations to address such problems in the sector.

5. Conditions Precedent to Disbursement for Rehabilitation of Grain Storage Facilities in a Specific Province

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project for any construction services related to the rehabilitation of grain storage facilities in a specific Province, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish to A.I.D., in form and substance satisfactory to A.I.D.:

- a. Written confirmation of the Grantee's acceptance and agreement with the results and findings of the study, to be financed by A.I.D., to develop a rehabilitation plan of existing grain storage facilities over five years old for that Province including a definition of

*This Committee may be the GOP's existing Federal Committee on Agriculture.

rehabilitation needs and priorities and estimated costs; and,

- b. Documentation that the Department of Food and Agriculture for that Province where the rehabilitation work is to be carried out has entered into an agreement with the Department of Communications and Works of that Province for rehabilitation of existing grain storage facilities under this Project.

6. Conditions Precedent to Disbursement for Grain Storage Research Studies Under the Post-Harvest Management Component to be Undertaken by Exclusively Local Research Entities

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project for grain storage research studies by exclusively local, non-expatriate research persons or entities to be implemented under the supervision of the Pakistan Agricultural Research Council (PARC) through the Post-Harvest Management Component of this Project, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish, in form and substance satisfactory to A.I.D.:

- a. Documentation that the Grantee has established a Coordination Unit for Post-Harvest Management Research and Technology Transfer;
- b. Documentation that the Grantee, through its PARC has appointed a Program Coordinator for the Coordination Unit mentioned above; and
- c. A Work Plan setting forth, in detail, the proposed implementation of the local research program. Requirements for this Work Plan shall be established by A.I.D. in Project Implementation Letters.

B. Covenants

1. The Grantee agrees

- a. to make all reasonable efforts to obtain necessary GOP budgetary allocations for maintenance of all grain storage facilities rehabilitated, in part or in whole under this Project; and
- b. to maintain in good operational condition all grain storage facilities rehabilitated, in part or in whole, under this Project.

2. The Grantee agrees to furnish to A.I.D., no less than every twelve (12) months from the date of the signing of this Project Agreement, a report, in form and substance satisfactory to A.I.D., setting forth how operation and maintenance (O&M) recurrent costs are being met by the Grantee for all existing and newly built grain storage facilities.

3. The Grantee agrees to assure that adequate non-professional staff are provided for the Planning Unit/Ministry of Food and Agriculture throughout the life of the Project.

4. With regard to additional administrative and professional staff hired with project funds for the Planning Unit/Ministry of Food and Agriculture, the Grantee agrees to establish a mutually agreed number of permanent posts and to reflect these in the regular recurrent budget of the Ministry of Food and Agriculture, except as A.I.D. may otherwise agree in writing.

5. The Grantee agrees to make all reasonable efforts to secure adequate GOP budgetary allocations to continue economic and policy analysis studies by local institutions after the life of the Project.

6. Except as the Parties may otherwise agree in writing, the Grantee, acting through its Ministry of Food and Agriculture, shall make all reasonable efforts to require that each person trained under this Project works in activities related to agricultural data collection, post-harvest management and/or agricultural economic and policy analysis in Pakistan for not less than three times the length of time of his or her training program provided, however, that in no event shall such an individual be allowed to work in agricultural data collection, post-harvest management, and/or agricultural economic and policy analysis activities for less than one year, nor be required to work in agricultural data collection, post-harvest management, and/or agricultural economic and policy analysis activities for more than five years from the date of that individual's completion of training.

C. Negotiating Status

The Project as described in this Project Paper has been fully discussed with appropriate GOP officials. The GOP supports the Project as designed and there is no reason why the Project cannot proceed to implementation as soon as the Project Agreement is signed. No legislation is necessary to implement the Project as described.

ANNEX E
PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Project Title and Number: Food Security Management (391-0491)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
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Program of Sector Goal:	Measures of Goal Achievement:	Assumption for Achieving Goal Targets:
<p>The broader objective to which this project contributes:</p> <p>To achieve GDP food security objectives in a manner consistent with the national and efficient use of national resources, overall economic development of the country, and an improved living standard for rural families and the population at large</p>	<ul style="list-style-type: none"> - Improved foreign exchange situation - Improved quality of development projects & programs benefitting a substantial portion of rural inhabitants - Increased production and availabilities of food and fiber - Increased per capita incomes 	<ul style="list-style-type: none"> - Published data on national income accts. - GDP planning budget documents - Basic socio-economic data - AID project reports - Field observations
		<ul style="list-style-type: none"> - Continued GOP commitment to improve national food security

Project Purpose:	Conditions That Will Indicate Purpose Has Been Achieved: (EOFS)	Assumptions for Achieving Purpose and Outputs:
<p>To improve the analytical and policy formulation framework, the managerial capabilities and the physical capacity of the GOP to manage the national food security system effectively and efficiently.</p>	<ul style="list-style-type: none"> - A national network of analytic resources is in place addressing priority policy issues in food security management through quality, relevant economic analysis - An improved ag. data collection system based on the HSF methodology is in place and providing reliable data on a systematic and continuous basis - The provincial storage system is operating with reduced grain losses at a lower cost per unit stored due to the enhanced state of godown repair, better trained personnel, with access to modern and appropriate storage technology, and improved management practices including an effective maintenance program with a sufficient budget. 	<ul style="list-style-type: none"> - Project evaluations - Special economic surveys, studies and reports - Ag. area and production data published - AID and GOP project records - Field observations
		<ul style="list-style-type: none"> - Technologies proposed are cost effective and appropriate - Acceptable quality control of data collection, godown rehabilitation & economic studies can be enforced - Continued commitment of federal & provincial governments to improve ag. sector planning & operations through improved data collection, economic analysis and management - The analytical work will be utilized by decision makers

Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Magnitude of Outputs:		
<ul style="list-style-type: none"> - A role & mandate agreed upon by all government institutions for the economic analysis network; an Economic Analysis Network Group that is well organized & fully staffed with qualified personnel; an ongoing economic and policy analysis program based on an annual research agenda developed by a high level GOP steering committee; completion of at least two major specific policy analyses; and 239 persons trained (62 p.m.) in-country or abroad - Establishment of a national area sample frame; 408 persons trained (297 p.m.) in-country and abroad; publication of production statistics on a scheduled basis; reduction in data collection time & costs and improved planning resulting from more accurate & timely ag. statistics - A long-term plan with performance targets for meeting O&A recurrent costs of public sector godowns established; rehabilitation of up to 0.75 MMT of cereal grain godowns; 1,888 persons trained (312 p.m.) in-country and abroad; improved maintenance & management of godowns; reduced storage losses; improved pest control & storage design research; and an improved MOFA in-service training capacity in FHM 	<ul style="list-style-type: none"> - Project evaluations - Special economic surveys, studies and reports - Ag. area and production data published - AID and project records - Field observations 	<ul style="list-style-type: none"> - Sufficient GOP staff and resources will be made available - Project advisors are successful in transferring skills and technology to government agencies and selected private sector firms - GOP prepares and approves PC-Is as needed - Qualified staff are selected for training - Necessary skills and materials are available locally for all civil works activities

Important Assumptions

Options for Providing

... & GOP funding levels proposed are improved and disbursements are made on a timely basis

... appropriate overseas training programs can be identified

... instruction is undertaken according to need upon standards and practices and is certified for 80 percent reimbursement by AID

... IP meets the conditions precedent

... appropriate consultants can be recruited to provide required technical assistance

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET	1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number _____	DOCUMENT CODE 3
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2. COUNTRY/ENTITY Pakistan	3. PROJECT NUMBER <input type="checkbox"/> 391-0491 <input type="checkbox"/>
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4. BUREAU/OFFICE Asia <input type="checkbox"/> 04	5. PROJECT TITLE (maximum 40 characters) <input type="checkbox"/> Food Security Management <input type="checkbox"/>
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <input type="checkbox"/> 0 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 0 <input type="checkbox"/> 8 <input type="checkbox"/> 9	7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4) A. Initial FY <input type="checkbox"/> 8 <input type="checkbox"/> 4 B. Quarter <input type="checkbox"/> 3 C. Final FY <input type="checkbox"/> 8 <input type="checkbox"/> 7
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8. COSTS (\$000 OR EQUIVALENT \$1 = RS 13.50)						
A. FUNDING SOURCE	FIRST FY <u>84</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	3,500	1,500	5,000	12,907	22,093	35,000
(Grant)	(3,500)	(1,500)	(5,000)	(12,907)	(22,093)	(35,000)
(Loan)	(-)	(-)	(-)	(-)	(-)	(-)
Other U.S.						
1.						
2.						
Host Country	-	19	19	-	4,460	4,460
Other Donor(s)	-	-	-	-	-	-
TOTALS	3,500	1,519	5,019	12,907	26,553	39,460

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF	189	052	-	-	-	35,000	-	35,000	-
(2)									
(3)									
(4)									
TOTALS				-	-	35,000	-	35,000	-

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each) 013 053 063	11. SECONDARY PURPOSE CODE 150
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12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)					
A. Code	RGEN	NUTR	TECH	TNG	
B. Amount					

13. PROJECT PURPOSE (maximum 480 characters)

To improve the analytical and policy formulation framework, the managerial capabilities, and the physical capacity of the GOP to manage the national food security system effectively and efficiently.

14. SCHEDULED EVALUATIONS Interim MM YY MM YY Final MM YY <input type="checkbox"/> 04 86 <input type="checkbox"/> 10 87 <input type="checkbox"/> 04 89	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input type="checkbox"/> Other (Specify) _____
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

Source: FSM Project Paper

Cleared by: FM - Leon Vaughn

17. APPROVED BY	Signature: Jimmie M. Stone Title: Acting Director USAID/Pakistan	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION Date Signed: MM DD YY <input type="checkbox"/> 0 <input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 4 MM DD YY
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PUBLICATIONS AND DOCUMENTS CONSULTED

1. Letter to Mr. Eugene Staples from Mohammad Siddique Chaudhary, September 13, 1987. Subject: Sections 4.4 and 4.5 of Conditions Precedent.
2. RFP Department of Interior, Denver Wildlife Research Center, PASA No. I-PAK-0491-P-IF-5017-01.
3. Project Paper, Pakistan, Food Security Management (391-0491) Project, USAID, February 1984.
4. PC-I, GOP.
5. Godown Rehabilitation - Recurrent Cost Analysis and Management Audit of Public Sector Grain Storage (Phase-I), Experience Incorporated, ZOR Engineers and Ferguson and Associates, November 1986.
6. Foodgrain Storage and Processing Study, Volume I, World Bank.
7. Bulk Wheat Handling and Storage - Pilot Project in Pakistan, Food and Feed Grain Institute, Kansas State University, October 1987.
8. Plan of Work, Food and Feed Grain Institute, Kansas State University, October 1986.
9. Review of the Feasibility of Bulk Wheat Handling and Storage in Pakistan - Consultant Report, Food and Feed Grain Institute, Kansas State University, October 1986.
10. The Wheat Economy of Pakistan: Setting and Prospects, International Food Policy Research Institute, November 1987.
11. The Effects of Wheat Pricing on Fiscal Cost and Private Seasonal Storage in Pakistan, International Food Policy Research Institute, December 1987.
12. Household Food Security in Pakistan with Reference to the Ration Shop System, International Food Policy Research Institute, July 1987.
13. Losses Incurred in Stored Food Grains by Insect Pests, Grain Storage Research Laboratory, by Hafiz Ahmed, Pakistan Agricultural Research Council.
14. Technical Report issued by the Vertebrate Pest Control Project, listed as outputs under Section IX.

KAC

15. Post Harvest Losses Research and Extension Training in Pakistan, A Review, PARC Science Division, Pakistan Agricultural Research Council.
16. Post-Harvest Research on Food Grains in Pakistan - A Review, 1986 Pakistan Agricultural Research Council.