PDAAZ531
6:995

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: USAID/PAKISTAN
(ESF 89/2)

B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?
Yes ☐ Slipped ☒ Ad Hoc ☐
Evaluation Plan Submission Date: FY 88 Q 2nd

C. Evaluation Timing
Interim ☒ Final ☐
Ex Post ☐ Other ☐

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)
391-0489	Management of Agricultural Research and Technology (MART)	8/9/84	9/30/91	30,000	25,000

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director — Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
1. Timely implementation of the management recommendations of the Khattak and York consultants reports.	PARC NARC	JUNE 89
2. Amend Technical Assistance Contract with Winrock International.	WINROCK ARD CONTRACTS	MAY 89
3. Amend Project Paper and Authorization for continuation of project to 4/30/94 and new LOP funding of approximately $ 42 million.	ARD/PDM DIR	SEPT 89
4. Process Grant agreement with ICARDA upon USAID/PARC acceptance of proposal for future support to AZRI.	AZRI PARC(GOP) ARD CONTRACTS	SEPT. 89
5. Stronger focus of consultancies on management rather than technical issues.	PARC WINROCK	APRIL 89

(Attach extra sheet if necessary)

APPROVALS

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

G. Approvals of Evaluation Summary And Action Decisions:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer (A)	Mission or AID/W Office Director (A)
Name (Typed)	CURTIS R. NISSLY	AMIR MUHAMMED (PARC)	TANVIR A. KHAN	J. PAUL GUEDET
Signature	Curt Nissly		Tanvir Ahmed Khan	J. P. Guedet
Date	3/20/89		5/11/89	5/11/89

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
6. Emphasis on tailored in-country career development and management type courses at NARC Training Institute and in provincial aea.	NARC PARC	MAY 89
7. Procedure in place to review, decide and implement recommendations of consultants reports.	PARC WINROCK	SEPT 89
8. Provide opportunities for quality/superior research programs for outstanding scientists of high calibre to conduct research on high priority program areas thru competitive small grants program.	PARC ARD CONTRACTS	AUG 89
9. Institutionalize FSR in the national research system and more active participation of PARC Agricultural Economic units in FSR activities.	PARC (GOP)	JUNE 90
10. Additional project recommendations made in the evaluation report are attached to this evaluation summary document.	PARC ARD	JUNE 89

(Attach extra sheet if necessary)

ABSTRACT

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

Background: The mid-term evaluation was completed by five-person team from IQC firm Chemonics in February 1989, four years into the seven-year MART Project. The project purpose is to strengthen the performance of the national agricultural research system which is made up of federal and provincial research institutes who serve to generate and disseminate quality and relevant technologies to the farmers of Pakistan.

The evaluation concluded that the project implementation by the contractors Winrock International, ICARDA and CIMMYT appears to be well managed, on track and relatively free from implementation problems. The evaluators visited the four provinces, interviewed federal and provincial officials and scientists, visited research institutes and field sites and reviewed project documentation and files, work plans, reports and other reference materials. Data collected from secondary sources, first hand observations and interviews were quite adequate and reliable.

Findings: The project is close to schedule. Inputs have been delivered on time and managed to produce programmed outputs. Some new elements added by MART, e.g., FSR and communications are not yet institutionalized, so their impact is not yet evident. Some delays have occurred in in-country training, particularly in training of trainers and management focused short courses. The procurement and commissioning of laboratory equipment has caused concern because of unmet expectations by some recipients.

Conclusion: MART project provides necessary and desired support to national agricultural research system whose products are sorely needed to attain production targets. There is better cohesion now within the agricultural research system, but this is constantly threatened by tendencies towards provincial independence. Donor support would be needed to stabilize and institutionalize this still somewhat would be fragile system.

Lessons Learned: Reorganization of national agricultural research system into a closely coordinated and well integrated federal-provincial cooperative system is a complex, demanding and time-consuming task. Institutional reforms are brought about slowly and should, therefore, be pursued with patient tenacity. The targets should be well defined to permit objective assessment and should be realistic and achievable within the stipulated time. If a particular action is critically needed, it should constitute a condition precedent to specific disbursement.

COSTS

I. Evaluation Costs

1. Evaluation Team Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. $)	Source of Funds
Al (Scafe) Brown	Chemonics Inter.	37		
Charles Pereira		31		
John Woods	University of ILL.	31		
Kenneth Brengle	(retired) C.S.U.	31		
Mahbub Ali	(retired) Ministry of Food & Agric.	33		

2. Mission/Office Professional Staff Person-Days (Estimate) 24

3. Borrower/Grantee Professional Staff Person-Days (Estimate) 24

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:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:	Date This Summary Prepared:	Title And Date Of Full Evaluation Report:
USAID/PAKISTAN	FEBRUARY 25, 1989	MART PROJECT EVALUATION REPORT FEBRUARY 1989

1. Purpose of the MART Project: The purpose of MART project is to strengthen the performance of the national agricultural research system to generate and disseminate quality and relevant technologies to the farmers of Pakistan to increase agricultural production, farm income and rural employment. The project has introduced FSR designed to identify and analyze the factors in the farming system causing significant difference in production level obtained by better farmers and the average farmers and bridge the yield-gap by the application of site-specific improved technologies.

2. Purpose of Evaluation and Methodology: (a) The mid-term evaluation was conducted to determine progress to date, assess the extent to which the project objectives have been met, and recommend whether or not to continue the project as envisaged in the project paper. Specifics tasks called for included an assessment of contractors' performance to determine as to whether or not continue with the present contractors. The team was also charged with evaluating the nature and extent of commitment to and support of MART project by the host country. Finally the team was asked to make recommendations as to modifications/improvements in the project.

(b) This evaluation was conducted between January 5 and February 11, 1989 by a team of five professionals, who visited all the four provinces, interviewed both federal and provincial key officials and scientists, inspected research institutions, agricultural universities, laboratories, and field sites, and reviewed project documentation, files, work plans, reports, and other reference materials. All five components of MART project were evaluated separately and the observations made were applied to the national agricultural research system and MART's role in its improvement.

3. Findings and Conclusions: The project provides necessary and desired support to national agricultural research system whose products are sorely needed to obtain production targets. The project is close to schedule, most inputs have been determined on time and managed to produce programmed outputs. Component-wise major findings may be summarized as follows:

(a) Research Management and Administration. The PARC strategy is sound, and MART's major management interventions are directed at this strategy, but small in relation to the problem. A stronger focus of consultancies on management rather than technical issues and a more rapid and measured response to consultants recommendations is needed.

(b) Information Transfer. Excellent progress because of well defined tasks, superior advisor, strong PARC support. Although work right on schedule, its sequential nature will not yield stated level of outputs until after PACD. Remaining tasks: extend advisor's contract, complete and train staff, install equipment in building.

(c) Training. Participant training ahead of schedule, in-country training somewhat behind, due to ill-defined focus and advisor's early resignation. Excellent recent consultant report recommends HRD focus and other improvements. In-country short courses to emphasize management rather than technical subjects.

(d) Arid Zone Research. Component has expanded research output from very weak base, but staff still lacks training and experience for independent research. Recommend strong focus on range management/livestock and water spreading agriculture, subdividing agronomy into crops and soils divisions, and restructuring advisory staff to fit.

(e) Wheat and Maize Coordinated Programs. Pakistani scientists have assumed full responsibility. CIMMYT agricultural economist still needed to help analyze causes of productivity gap between yields obtained by best farmers and national average.

MART will not achieve its full stated purpose because (1) the problems it is to address and the indicators of EOP are open ended, and (2) the interventions are incongruent with regards to adequacy, sufficiency, and sequencing. The management problems upon which the project design is based are inherent to the nature of the agricultural research system. That system, like that of the U.S., is a loose alliance of independent provincial entities led by a federal coordinator which seeks to achieve cohesion by its own scientific excellence, provision of useful services, and ability to represent the system and generate resources for it. MART has been useful in supporting these efforts.

4. Principal Recommendations : The evaluations report includes a long list of project level recommendations as follow-up actions (copy attached). Particularly significant recommendations include: (a) that MART project be amended to continue; (b) that Winrock International and ICARDA be maintained as contractors with some modifications in level of effort and scope of work of TA team; (c) that a high degree of flexibility be applied in implementation of a complex project like MART; and (d) that purpose and EOP indicators be revised to provide a more precise definition of what may actually be accomplished by revised PACD.

5. Lessons Learned: (i) Most of the management problems addressed under MART project stem from (1) provinces' independent responsibility for agriculture within a national agricultural research system which continues to be a loose alliance rather than an integrated national system; and (2) inflexible government-wise controls, which will change only by consensus.

ii) Proper sequencing of inputs and expected outputs requires authentication to the time logs to be realistic.

iii) Procurement of scientific instruments and equipment requires careful resource allocation and informed consent of scientists who will use it.

iv) If a condition is critical to success it should be included as Condition Precedent to special disbursement rather than a Covenant.

v) Flexibility in implementation is essential for managing large complex projects. Variations from the prescribed designs, as mutually agreed, should be recorded in project log for the benefit of subsequent project officers and evaluation teams.

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.)

(1) Evaluation Report.

(2) Evaluation recommendations for specific Project area.

COMMENTS

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

The Evaluation Team closely followed the scope of work. No overt omissions in implementation of the project as designed were pointed out on the part of technical assistance teams. However, the need for minor adjustments / modifications to the project paper were indicated. These are realistic and achievable and will be in an upcoming project paper amendment.

The Evaluation Team demonstrated a thorough knowledge of MART project, its goals, purposes, and implementation issues involved in the implementation of a highly complex project of this nature. Host country personnel were actively involved in evaluation process and have indicated general concurrence with the evaluation findings. They were actively involved in the draft review process which led to the final draft. Minor omissions pointed out by USAID and PARC staff were rectified.

The final document is in general agreement with the conclusions reached by USAID staff regarding MART's future. The final report reinforces a need, recognized by USAID, PARC and TA contractors for adjustments to the project paper that reflects changes in management, training, information transfer and arid-zone research components.

EVALUATION RECOMMENDATIONS

The following recommendations are summarized from information provided in the assessment of individual components and other chapters of the report:

1. Management

PARC has been given a substantial degree of autonomy, but has been slow to break away from the bureaucratic system. For the progress of Pakistan's agricultural prosperity, all research institutes need the delegation of administrative and financial authority. In spite of discouragingly slow progress, donors should continue to press for genuine autonomy for the research organizations they are assisting. We recommend that in the meantime PARC should get on with the essential steps that lie entirely within its authority. Specifically:

- o Review, decide and implement the recommendations of the Khattak and York reports.
- o Publish and distribute PARC/PAD after review to remove discrepancies.
- o Institutionalize job descriptions for all professional staff, prepared and negotiated at all supervisory levels.
- o Initiate a comprehensive training program for all supervisory levels in supervision and personnel management techniques, program planning, budgeting and monitoring, and principles of organizational development and change. This basic training is essential to build the confidence, responsibility and authority of the management cadre.
- o Undertake a very careful investigation of the management systems of the public sector to determine the areas of flexibility within that system and use it to inform all levels of management of the limits and range of their authorities.
- o Encourage other organizations to emulate the PARC/NARC example of promotion based on performance rather than seniority.
- o Strengthen the PARC Project Implementation Unit through advisory assistance to help develop a computerized monitoring and reporting system. A study tour to Egypt to observe the PIU established by the GOE Agricultural Research Center for the National Agricultural Research Program would be useful.

2. Information Transfer

a. Status

This component has generally been successful because the goals were clearly specified, the technical assistance was of high quality, and PARC was fully

committed to developing this program. The Multi-Media Production Center is under construction, the equipment is available or on order, a skeletal staff under a competent but inexperienced director is undertaking a practicum, information transfer training courses have been given to 250 individuals at national and provincial levels, and a Technical Transfer Coordination Committee is functioning. Considerable effort has been given to improving library information search capability, including bibliographic reference summaries.

b. Recommendations

- o Additional staff must be recruited as the Multi-Media Production Center nears completion.
- o The assignment of the information transfer advisor should be extended until at least June 1990, until the center is operational.
- o The incipient inventory of people, programs and resources available for work in information transfer at federal and provincial levels should be formalized.
- o Data base compatibility among library bibliographic programs should be assured, as well as in other areas where data bases and specialized computer programs are being developed.
- o Overseas degree training should be provided for five to nine participants from national and provincial levels in agricultural communications.
- o Over the long run, a balanced information focus is needed, with first priority given to serving scientists, but with attention also given to technical transfer to intermediate groups and to information for GOP decision-makers on the value of science to agriculture.

3. Training

a. Status

The participant training program is on track. Considerable documentation has been prepared to orient participants going to the United States for degree programs. The PARC Training Directorate has established a valuable computerized data base with information on participants overseas. Work is under way on constructing the addition to NARC Training Institute facilities. Seventy short courses have been conducted in-country under the MART project. This component has had difficulties related to unclear goals in the PP/PC-1, resignation of the long-

term advisor, and a general lack of understanding of the professional training/human resources development field.

b. Recommendations

- o The issues raised and recommendations made in Frank Byrnes' report should be digested and acted upon as soon as possible. PARC should provide leadership for agricultural research in the human resources development field. In doing so, it should make expanded use of innovative approaches, including recurrent TDYs, twinning arrangements with foreign institutions, and organizational development and change concepts.

- o High priority should be given to implementing a re-entry program for returning scholars and expanding the PARC Training Directorate data base.

- o A consultant should be brought in as soon as possible to help analyze the accumulated survey data, with priority given to developing institutional profiles. A national training plan should not be attempted at this time. Emphasis should be given to training plans for individual institutions, with priority given to NARC and The Agricultural University, Faisalabad.

- o PARC should establish a model computerized personnel data base that can be used by other research institutions and agricultural universities, providing a compatible system.

- o A systematic in-service training program is essential throughout the system. NARC's in-service capacity should be improved and used to assist provincial institutes and universities to organize and conduct this type of training.

4. Arid Zone Research

a. Status

The objective of a fully functional, well-organized and well-managed Arid Zone Research Institute, staffed with competent professionals by the end of the contract, is not feasible by PACD. An estimated four to six years of additional technical and financial assistance will be required to achieve a stable, productive institute. Research has progressed as far as

can be expected in the current time frame of the project, given the staff constraints. Most research sections have been trying to conduct too many field trials, evaluating too many variables at too many locations for effective control. Work planning and reporting documents frequently do not provide a clear picture of the research being done or its expected impact. Current staff and advisers lack the competence to conduct reliable research in the important area of water harvesting. The staff structure proposed in the strategic plan is not related to prospective budgets, physical facilities or the availability of staff.

b. Recommendations

- o Prioritize research within subject matter areas, selecting for study only topics of significance that offer the promise of extendable results within a few years. Hire statistical consultants who can help design simple, effective field trials.

- o Bring new staff on board only to fill essential positions for priority research projects, as described in the professional job descriptions. Each proposed position must be scrutinized in light of anticipated budgets, urgent need, and the availability of highly qualified candidates.

- o Employ consultants with design and construction experience in water harvesting methods before expanding research in this subject. Soil problems affecting both water harvesting and crop production should be evaluated in conjunction with this research.

- o Review and revise the work planning and reporting forms to provide a clear, concise, and accurate presentation of essential material.

5. Coordinated Wheat and Maize Program

a. Status

Pakistani scientists are directly in charge of these programs, having demonstrated the capability for independent collection and maintenance of germ plasm, its manipulation to produce new varieties with desirable characteristics, and testing of their adaptability. There remains a serious gap between the yields obtained on station and by better farmers and national average productivity. The economics of production constraints and proposed solutions remain weaker points of this program. More precise definition of agroecological zones used in wheat and maize production was an intended, but incomplete output of this component.

b. Recommendations

- o Conduct a careful study of the yield gap to identify factors that may be responsible, and undertake specific interventions to overcome the problem. Some possible constraints are continued use of seed of traditional, non-resistant varieties (possibly reflecting the weakness of the seed industry); lack of access to other inputs (possibly reflecting lack of credit and/or delivery systems); and misuse of available water.

- o Continue the services of the agricultural economics advisor to work with AERUs to survey and analyze these problems until NARC's social science capability has been reinforced.

C. Larger Issues

During the course of this evaluation the team has become aware of several issues beyond the scope of PARC, which nevertheless affect its performance. We present them here in the hope this discussion will reinforce PARC's efforts to correct them.

1. Education Standards

The major institutional constraint on the progress of agricultural research in Pakistan is the low educational level of agricultural graduates. Our review of the research management component shows clearly that the nationally coordinated raising of standards in agricultural education must be a major target of further attempts to improve performance in agricultural research. The effort to raise the standards of agricultural education warrants the concentrated attention not only of educators and end users of graduates, but of national and provincial governments and of the donor community.

The recommendations of the "Report on Education in Pakistan" (1983) should be implemented with urgency and with financial support from the federal government.

2. Financing Agricultural Research

The financing of agricultural research is a matter of utmost importance. Donors recognize this far better than most national planners, and have been and may continue to be generous. This support cannot be allowed to obscure the value of research to the nation--a value that should be recognized in national budget allocations. Such recognition will have a salutary effect on donor funding.

- o PARC--as a council and its individual members--should focus and intensify efforts to orient the GOP and the provincial governments to the importance of their support for agricultural science--as reflected in important increases in financial support.

- o Donors should continue their support as long as necessary to achieve the sought-for result of a strong, cost-effective research system.

- o The argument for expanded, better allocated, more timely funding must be reinforced by strong efforts to achieve cost effectiveness by controlling program proliferation, limiting staff to a consistent staff:operations ratio of no more than 70:30, and establishing effective program monitoring and financial controls. These efforts should apply to all elements of the system.

3. Deterioration of Irrigated Land

For at least twenty years, attempts have been made to apply modern methods of irrigation management to Pakistan's ancient and incomplete system of canals and drains. These initiatives remain fragmented and divided by professional and administrative separation of engineering and agricultural agencies. Combined teams of agriculturists and engineers have worked in canal common areas for many years but have lacked research support in soil physics and plant physiology to define watering regimes that would avoid waterlogging and minimize salinity.

Given the seriousness of the continued loss of large acreages of arable land to waterlogging and salinity, we believe that cabinet-level attention should be directed at this problem with a view to assuring coordinated attention, whether in research, construction, or system management.