PD-ABE-115
ISA 771 13

A.I.D. EVALUATION SUMMARY PART I

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

IDENTIFICATION DATA

A. REPORTING A.I.D. UNIT: USAID/Bangladesh (Mission or AID/W Office)

(ES#

B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN? yes ☒ slipped ☐ ad hoc ☐

Eval. Plan Submission Date: FY 92 Q 1

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 #	Project/Program Title (or title & date of evaluation report)	First PROAG or equivalent (FY)	Most recent PACD (mo/yr)	Planned LOP Cost ('000)	Amount Obligated to Date ('000)
388-0051	BRRI/IRRI Project Mid-Term Evaluation, December 1991	6/81	6/93	2.890	2.890

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. IRRI/BRRI Management		
**CIDA, USAID, IRRI and BRRI managers should meet regularly to coordinate their management and oversight of the project. Quarterly reports prepared by IRRI/BRRI for one funding organization should be distributed to the other for review and comment. GOB and donor project support should be focused to enact the recommendations of the report.	BRRI, IRRI USAID & CIDA	On-going
**IRRI and BRRI should focus remaining resources on improving the performance of the regional and subregional stations through training, working conditions and accountability of personnel.	BRRI, IRRI	On-going
**BRRI should strengthen and realign the task force approach and performance-based management system begun in 1974, as discussed in the report.	BRRI	On-going
**IRRI should allocate its core funds to continue IRRI/BRRI collaboration after the PACD for ARP-II.	IRRI	N/A

(see continuation sheet)

(Attach extra sheet if necessary)

APPROVALS

F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION: mo 02 day 17 yr 92

G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Signature				
Typed Name	Raymond H. Morton	A.J.M.A. Islam	J. Rockliffe-King Paul Greenough	Mary C. Kilgour
Date:		Date: 27/5/92	Date:	Date: 6.2.92

Continuation Sheet

E. Action Decision Approved by Mission or AID/W Office Director Action(s) Required	Name of Officer responsible for Action	Date Action to be Completed
2. Varietal Development		
**BRRI should work with the Ministry of Agriculture to streamline the NSB seed registration procedures for earlier release of its new varieties.	BRRI	on-going
3. Farming Systems Research		
**BRRI should continue to make its FSR program more cost-effective by making it less dependent on fixed infrastructure and site-specific field staff.	BRRI	on-going
**BRRI should work harder to incorporate post-harvest rice technology and local private sector firms into FSR and field demonstration activities. More post-harvest technologies for women should be developed.	BRRI	on-going
**More farm management economic analysis should be incorporated into FSR activities.	BRRI	on-going
4. Technology Transfer Systems		
**BRRI should expand the basic agricultural economics knowledge of all of its scientists to improve the adoption of new BRRI varieties and technologies.	BRRI	on-going
**BRRI should expand its collaboration with DAE and NGOs at an earlier stage in the development of new varieties and technologies. Formal MOUs and informal programs with other private sector firms and agencies should be conducted.	BRRI	on-going
**BRRI and IRRI should increase in-country training opportunities, especially at the regional and subregional stations.	BRRI,IRRI	on-going

H. EVALUATION ABSTRACT (do not exceed the space provided)

The BRRI/IRRI Rice Research and Training project was established in 1975 with funding from the Ford Foundation and the governments of Australia and Canada. Phase II of the project began in 1981, with USAID involvement in the consortium of donors. Phase III began in January 1988, and is funded through June 1991 with USAID support in the amount of $2 million and CIDA support of US$1.4 million. The project has been extended until June 1993, with additional U.S. funding of $760,000. Project assistance is provided to strengthen BRRI's institutional capacity to develop and deliver relevant research findings to farmers. The project is well managed and supports BRRI objectives.

BRRI is now a mature research institute with more than 200 research officers. About 60 percent hold M.Sc. degrees and 14 percent hold Ph.Ds. BRRI breeders have developed 26 modern varieties (MVs) since 1970. MVs account for about 50 percent of the area planted to rice and produce about 72 percent of total rice harvested. About 93 percent of rice grown during the dry winter boro season is MV.

BRRI follows accepted international standards of plant breeding. BRRI MVs generally out perform local varieties at low levels of fertilizer use. Present MVs have long straw to feed draft animals and to clear flood waters common during aus and aman seasons.

BRRI pioneered on-farm cropping systems research. The methodology used does not require expensive fixed site infrastructure. It is more cost- effective than other models used in Bangladesh.

In the future, additional priority is needed to develop new, sustainable, disease-resistant, and input-efficient high-yield varieties suitable for growth during the irrigated winter boro season. Additional yield increases can release land now planted to rice to promote needed crop diversity.

BRRI does not require continued technical assistance from IRRI after close of the current project in June 1993. But an IRRI liaison officer, paid from core funds, should still be provided to ensure continuation of professional collaboration between the two institutes. IRRI supported mini-projects are of major benefit to BRRI and should continue.

The following "lessons learned" are noted:

Much more rice technology is available than has been transferred to farmers. BRRI, along with the donor community, should investigate additional technology transfer approaches including expanded training and involvement of the NGO community. Holding regular farmer field days, including demonstrations, as part of the FSR program may promote greater farmer/researcher dialogue and feedback. The potential role of other private sector organizations in the technology transfer process, including input suppliers, should be investigated.

ABSTRACT

I. EVALUATION COSTS

COSTS

1. Evaluation Team Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (US$)	Source of Funds
C. F. Fritsch	Chemonics Int.	IQC Contract No. PDC-1406-00-0033-00	Total $25,991	ARP-II
M. A. Mannan	Former DG/BRRI			
R. Karim	Prof. Dhaka Uni.			
J. W. Tanner	CIDA, Canada		CIDA Funded	CIDA

2. Mission/Office Professional Staff Person-Days (estimate) 20

3. Borrower/Grantee Professional Staff Person-Days (estimate) 2

A.I.D. EVALUATION SUMMARY PART II

J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS (Try not to exceed the 3 pages provided)
Address the following items:

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

Mission or Office: USAID/Bangladesh

Date this summary prepared: May, 1992

Title and Date of Full Evaluation Report: BRRI/IRRI Project Midterm Evaluation, December, 1991

I. Background

The BRRI/IRRI Rice Research and Training project was established in 1975 with funding from the Ford Foundation and the governments of Australia and Canada. Phase II of the project began in 1981, with USAID involvement in the consortium of donors. Phase III began in January 1988, and is funded through June 1991 with USAID support in the amount of $2 million and CIDA support of US$1.4 million. The project has been extended until June 1993, with additional U.S. funding of $760,000. Project assistance is provided to strengthen BRRI's institutional capacity to develop and deliver relevant research findings to farmers.

This joint USAID/CIDA evaluation was conducted just prior to a final two- year extension of the project. The team was composed of one representative each from USAID and CIDA and two Bangladeshi research specialists.

A. Evaluation purposes are: a) to assess project progress and performance in terms of strengthening BRRI's institutional capacity to deliver relevant research findings to farmers; b) to assess in detail results achieved and impact of activities within each of the major components funded by the project; and c) to identify short- and medium-term changes to project strategy essential to improvement of project performance.

B. Methodology used in this evaluation included interviews with USAID, CIDA, BRRI, MOA, BARC, and BARI officials and staff and USAID and CIDA projects including ARP, AST, and CDP. The IRRI technical assistance team was interviewed and several regional research facilities were visited and staff interviewed. Administrative and technical project materials were reviewed and several FSR sites were visited. The team held several in-country debriefing sessions with USAID, CIDA, and BRRI staff as well as with the technical team.

II. Findings, Conclusions, and Recommendations

A. BRRI Research Management, IRRI/BRRI Project Management, and Approaches for Future Donor Collaboration

Findings

1. BRRI administration and professional staff have been unable to reach a consensus on expanding the leadership role of mid-level scientists in project development while retaining control and evaluation of the research program in the hands of senior management.

2. The headquarters station at Gazipur has better infrastructure and better equipped laboratories than regional stations and most of the positions are filled with more highly qualified and experienced scientists.

3. The regional stations do not have required manpower in position, infrastructure development is inadequate, and none has the minimum laboratory facilities to even test soil pH or soil salinity.

4. The IRRI/BRRI project supports mini-projects which are planned and implemented with the assistance of the in-country IRRI representative.

5. The present IRRI/BRRI project reports are well written and provide useful information of work in progress and work completed.

6. Donor representatives are not always up to date on project or BRRI research activities.

Conclusions

1. Lack of GOB funding for research operating costs is likely to remain a serious constraint to development of BRRI after completion of the present IRRI/BRRI project in June 1993.

2. IRRI sponsored in-country training courses can reach a greater number of BRRI scientists at lower cost to the project than complete reliance on overseas in-service training courses.

3. Relating work in progress and work completed to identified objectives and targets could improve usefulness of IRRI/BRRI project reports as a management tool.

Recommendations

1. IRRI field a team of research management specialists similar to the 1974 Russell-Minehart-Freeman team which originally developed the task force approach to facilitate development of a performance-based BRRI research planning and management approach.

2. CIDA and USAID managers investigate and work with BRRI to identify ways to improve research facilities and housing for scientists at remote stations.

3. Future financial support from USAID and CIDA be continued to provide research operating funds, including purchase of vehicles and equipment.

4. An in-country IRRI representative be provided from core funds at the close of the current project to continue the formal liaison between IRRI and BRRI.

5. USAID and CIDA project management officials travel more often to IRRI/BRRI project field sites to gain greater appreciation of results obtained and difficulties encountered.

SUMMARY (continued)

B. National Agricultural Research System Management

Findings

1. BARC does not coordinate closely with member research institutes in developing NARS strategic planning documents. However, member institutes do not systematically develop research priorities as part of their planning documents submitted to BARC.

2. GOB support of research operating costs for the agricultural research institutes (ARI), including BRRI, is about one-fourth of the World Bank standard of one percent of agricultural GDP.

3. BARC administrative and technical management capabilities are weak. Disbursement of research operating funds through BARC is slow and not based on targeted performance indicators. BARC accounting procedures are inefficient.

Conclusions

1. BRRI research scientists are an invaluable national asset. Their work has made it possible for Bangladesh to become almost self-sufficient in rice production over the past 20 years despite annual population increases averaging greater than 2.5 percent per annum. At present rice consumption levels, production will have to increase to 29 mmt from the current 18.5 mmt if self-sufficiency is to be maintained.

2. The existing salary and benefit package provided to ARI scientists is dysfunctional and is the major factor in the recent increase in qualified young professional staff leaving BRRI for other more rewarding endeavors.

Recommendations

1. GOB initiate a program to increase funding of operational research costs to the World Bank standard within the next five years.

2. USAID allocate annual PL 480 Title III research operations funds to a revolving account in a private sector international bank doing business in Bangladesh.

3. CIDA funds for operational research expenditures and equipment be allocated directly to research institutes based on ability to meet objective performance targets.

4. GOB act with urgency and dispatch to provide personnel incentives to stem the flow of qualified scientists leaving the NARS.

C. Varietal Development Research

1. Since inception in 1973, BRRI has released 26 new rice varieties.

2. The marginal internal rate of return on rice research investment in Bangladesh has recently been calculated as 165 percent. Put in different terms, each taka invested in rice research has yielded 39 taka in return.

3. The current process for licensing approved rice varieties through the NSB is cumbersome and delays distribution of certified seed to farmers.

4. The BRRI breeding program incorporates a conscious decision to develop MVs with taller straw to meet farmer needs for fuel and cattle fodder.

5. IRRI has recently defined five major ecosystems as a basis for conducting research.

Conclusions

1. A major increase in boro rice yield could reduce land requirements and increase likelihood of successful expansion in crop diversification.

2. Policy changes supporting private sector input activities contributed to the 14 percent increase in rice production in 1989-90 over the previous year.

3. The special breeding objectives followed by BRRI suggests that the germplasm base may not be as narrow as that of some other countries.

4. The four major ecosystems identified by BRRI researchers describe approximately the same ecosystems recently identified by IRRI.

Recommendations

1. BRRI plant scientists adopt a priority program to develop sustainable, disease resistant and input efficient HYV boro varieties to meet anticipated nutritional needs of projected population growth and release land for needed crop diversification.

2. The present NSB seed registration procedures be streamlined by accepting results from the regional yield trials conducted by BRRI as the basis for registration.

D. Farming Systems Research

Findings

1. The BRRI Rice Farming Systems Research Division pioneered site-oriented systems research in Bangladesh.

SUMMARY (continued)

2. Since the early 1980s donor supported FSR on-farm research activities have been broadened by introducing new technology transfer activities beyond the BRRI crop-based expertise.
3. BRRI FSR methodology promotes development of technology packages reflecting on-farm research results conducted over a wide geographic area. Expensive infrastructure and permanent professional staff at the research site are not needed.

Conclusions

1. Expanded FSR programs requiring expensive infrastructure and permanent site specific professional staffing have increased the cost of on-farm research.
2. The narrower crop and livestock FSR approach used by BRRI is better suited to the technical orientation of the institute and is less costly than fixed site FSR approaches.
3. Major weaknesses in FSR research now conducted by BRRI include: a) lack of systematic economic and financial analysis to assess commercial viability of whole farm systems analyzed under farmer management conditions; b) lack of on-farm testing of improved postharvest rice technologies targeted toward women; and c) weak integration of private sector technical expertise in FSR demonstration activities.

Recommendations

1. Future FSR strategies promote less costly on-farm research activities not dependent on fixed infrastructure and permanent site-specific field staff.
2. BRRI develop an action plan to integrate whole farm production economic and financial analysis into FSR research design and analysis procedures.
3. BRRI develop an action plan to introduce: a) women-based postharvest rice technology; and b) stronger private sector technical expertise into FSR demonstration and field day activities

E. Technology Transfer Systems

Findings

1. There is a major gap between technology available and technology adopted by farmers which indicates a significant problem in technology transfer.

2. A Memorandum of Understanding, updated at regular intervals, is used to formalize working relationships between BRRI and the DAE regarding varietal improvement testing.

3. Farmer field days are not conducted as an ongoing part of the FSR or the varietal improvement testing program.

4. Numerous local and expatriate led NGOs have developed effective technology transfer programs and/or outreach activities across a broad spectrum of agricultural activities.

5. In the early 1980's BRRI achieved wide spread adoption of BR-11 within three years after introduction by direct release of foundation seed to farmers utilizing the outreach capabilities of the extension system.

Conclusions

1. The MOU between BRRI and the DAE does not address joint BRRI/DAE collaboration in coordinating FSR activities.

2. Technology transfer activities can be improved through by vertically integrating the complementary functions of BRRI and private sector outreach organizations.

Recommendations

1. Future MOUs between BRRI and the DAE explicitly provide for BRRI/DAE collaboration in all phases of farming systems research and demonstration activities including working arrangements with NGOs.
2. BRRI include regular farmer field days as part of the expanded FSR technology transfer activities to promote medium-level technology transfer and gain first hand farmer feedback.

K. ATTACHMENTS (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier)

ATTACHMENTS

Evaluation Report

L. COMMENTS BY MISSION, AID/W OFFICE AND BORROWER/GRANTEE

MISSION COMMENTS ON FULL REPORT

Included in Section. E