

PHASE ENDING REPORT ON:
THE RURAL ENTERPRISE PROJECT
OCT '85 TO JUNE '89

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C O N T E N T S

INTRODUCTION	1
Part: I - REP: An Overview	3
Part: II - Work Methodology & Project Status	9
Part: III - Materials Development & Training	23
Part: IV - Consultancies, Technical Assistance & Foreign Tours	26
Part: V - Major Problems Faced During Phase: I	28
Part: VI - Summary of REP Phase: I Evaluation	31
Part: VII - Staff Position	36
CONCLUSION	37

BRAC
RURAL ENTERPRISE PROJECT
PHASE ENDING REPORT
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INTRODUCTION

This report portrays the activities and achievements of the Rural Enterprise Project for Phase I covering the period from October '85 to June '89. REP was initiated by Bangladesh Rural Advancement Committee (BRAC) with funds provided by the Ford Foundation.

REP was formed primarily to explore and introduce new or improved income generating activities for BRAC's target landless groups. Over the last few years REP endeavoured to reach this goal, and in the process, had its fair share of successes and failures. The objectives of higher productivity, profitability and employment and income generation in the traditional settings of rural Bangladesh are indeed challenging. There is little doubt about the vital role that REP can play in achieving these objectives, especially among BRAC landless target groups.

The first part of the report gives a brief overview of REP in terms of objectives, rationale, strategy, structure and so on. The second part covers REP's methodology of work and the status of projects undertaken by REP. This has been done in matrix form on a yearly basis so as to make it easier to follow each project's progress over time. Part three covers the feasibility studies conducted by REP and materials developed for training and extension by BRAC's Rural Development Programme (RDP). Part four gives a brief description of consultancies and technical

assistance received by REP, and foreign tours made by REP staff in Phase 1. Part five discusses major problems faced during this time. Part six gives the summary of recommendations given by REP's external evaluation team at the completion of phase 1. Finally, part seven provides the yearly staff and financial positions of REP.

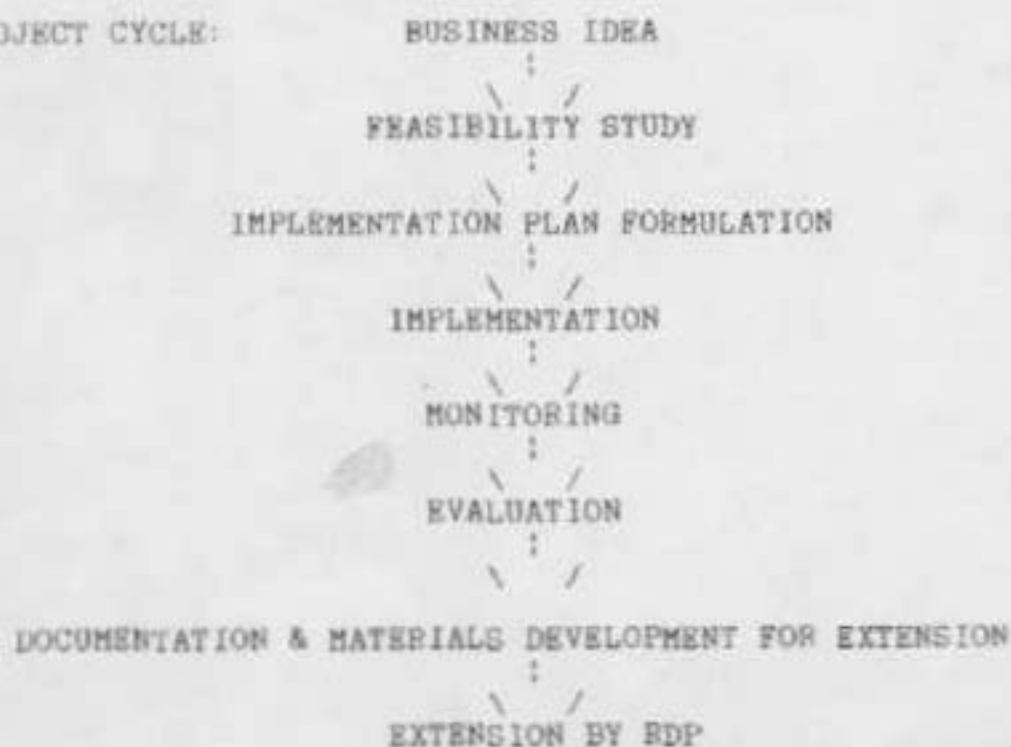
PART: I
REP: AN OVERVIEW

1. INITIATED : SEPTEMBER 1985
2. OBJECTIVE : "To increase the long-term rural income generation prospects of the landless in both farm and non-farm activities"
3. RATIONALE : Slow growth of employment opportunities; involvement in traditional economic activities using traditional technology and management procedures are some of the major causes of rural poverty especially among BRAC landless groups. A need was felt to bring changes in terms of diversity of enterprises, improvement of technology and management procedures to enhance productivity and profitability by increasing efficiency and effectiveness of enterprises. BRAC therefore started the Rural Enterprise Project three and half years ago.
4. STRATEGY: "investigate, test and demonstrate new or improved business, providing training, technical and management support to group organised by BRAC's RDP".

5. STRUCTURE:



6. TYPICAL PROJECT CYCLE:



7. BASIC TYPE OF PROJECTS:



{Pilot Project Fund (PPF) is a risk capital to underwrite pilot project}

8. NET WORKING: REP feels strongly the need to create linkages with various institutions and individuals locally and internationally to bring information, expertise and technology to reach its objective.

REP'S BUSINESS SCREENING CRITERIA
(EVERY IDEA IS CHECKED AGAINST THESE CRITERIA)

CRITERIA	PROBABLE CONSIDERATIONS
01. PRODUCT/SERVICES	What? for whom? Use, Value, Product, history, others.
02. MARKET	Demand (actual/potential), Quality, Price, Elasticity, Competition, channels, Life cycle, Places, Promotion, others.
03. TECHNOLOGY	Local/other, - Low/intermediate/high-appropriateness (need, users, market, availability, transfer), others.
04. RAW MATERIALS/ENERGY	Local/other, supply, price primary/intermediate, channels. Electric, diesel, animal, human, solar, firewood, coal, etc.
05. INVESTMENTS	Fixed and working capital, capital structure, investment per job, risks, others - IRR, NPV, etc.
06. INCOME & PROFITABILITY	Revenue, Costs, Depreciation, G.P., N.P., ROI, BEP, etc.
07. REPLICABILITY	Number, where (national, regional, other), how, etc.
08. EMPLOYMENT	Number, Gender (%), Displacements, Full/Part time.
09. SKILLS	Availability, Degree, Training, Other.
10. GENDER ISSUES	Participation, impact on women, others.
11. OWNERSHIP	Group(s), Individual(s), Male(%)/Female(%), Mode, Structure, others.
12. MANAGEMENT	Intensiveness (Direct/indirect people involved in management), structure, strategy, culture, values.
13. INITIATIVE & INTERESTS	Who (group/individual/BRAC/other)? Why? When? How?

14. COMMUNITY ISSUES

Direct/indirect beneficiaries
forward/backward linkages, environmental
issues, social/cultural impact, economic
impact other.

15. THREATS

Economic cycles, technological change,
change in demand (taste, need,
substitution others) social action
(elites, business class, other),
legislature, landless groups, etc.

PART II:
REP'S METHODOLOGY OF WORK

SECTOR REVIEW & IDEA GENERATION:

To develop new or improved businesses owned, operated and managed by BRAC's target people REP follows a methodology suitable to achieve this goal. Initially sector reviews are done to identify broad areas where REP may intervene. Based on these reviews new ideas are generated from different sources including RDP's field staff and target people, technical staff, local and international NGO's, research institutes, literature reviews and so on. Emphasis is however, given on field level ideas especially those from target people.

PROJECT BACKGROUND AND FEASIBILITY STUDIES:

Once ideas are identified extensive background work is done to assess potentials and problems keeping the target people in focus. Many ideas are dropped at this stage because of inadequate technical information, expertise, experience and unsuitability to RDP groups. Ideas which emerge potential from this preliminary background study are put through a vigorous feasibility study which focuses on technical, financial, socio-economic and management aspects of the business idea.

PROJECT IMPLEMENTATION PLAN:

Business ideas which appear viable in the feasibility study are scheduled for implementation. Here an implementation plan is made consisting of action plan, budgets, staff requirements (technical and non technical), outside expertise etc. A major part of the implementation plan is the monitoring and control mechanism required for proper implementation.

PROJECT FUNDING:

At this time, the funding of the project is finalized. In case of experimental projects funds are provided by REP's experimental project budgets. Experimental projects are those which require controlled testing. Ownership in this kind of projects remain with REP. Other projects which are taken under RDP group ownership may also be funded by REP depending on the risk involved in the business. To determine the funding of such projects REP categories projects under three risk groups these are:

- a. High risk - Ownership is taken by REP. Paying landless groups wages for their labour for a maximum period of 12 months; after which groups would be expected to invest own or RDP loan funds in buying the enterprise at its full start up cost.
- b. Medium risk - Ownership by REP operation by landless groups, pay a lease hire fee of 1% of initial investment per month for a maximum of 12 months, after which groups would be expected to buy the enterprise.
- c. Low risk - Ownership and operation by groups using own or RDP loan funds.

The funds provided by REP for high and medium risk fund comes from REP's Pilot Project Fund (PPF) which was created to provide risk capital to underwrite pilot projects to promote new or improved business.

PROJECT IMPLEMENTATION, MONITORING, EVALUATION & DOCUMENTATION:

After the implementation plan along with funding is finalized it is then implemented, monitored and at the conclusion of the project evaluated. All projects are documented and business profiles, training material etc. are prepared on projects determined successful for extension by RDP. REP also provides technical and other support to RDP during extension.

Besides regular work described above, REP undertakes special assignments requested by RDP or other departments of BRAC in order to contribute to the overall goal of BRAC.

SEP'S PROJECT SUMMARY

No.	Project Name	Year Order Taken	Intervention	Number	Status	Result	Learnings
01.	Nursery Pond	'81-'81	a. Develop para professional b. Introduce 2 crossbreeds c. Increase timely availability of fries & fingerling.	20	Handed over to BIC	Successful	It is possible to develop para-professionals with BIC group members. However to achieve 2 crops per season is difficult.
02.	WV-Gobby Labe	'81-'81	Improved Kentline technology for higher output & better cloth design.	1	Abandoned	Failure	Projects should be taken after preparing proper technical feasibility.
03.	Pilot Cat Fish Production	'81-'81	Introduction of Thai Type Circular Tank Culture	1	Abandoned	Failure	Outside technology should be adapted to local conditions.
04.	Sea Fish Farm	'81-'81	Large water body management with BIC group.	1	Abandoned	Failure	Proper coordination with involved parties is essential for better project management. Also background knowledge is essential for project planning.
05.	Rice Mill	'81-'81	Wagon owned, operate and manage Rice Mill.	1	Handed over to BIC	Successful	It is possible to run a small cooperative industry with BIC member groups.
06.	Brickfield	'81-	Involvement of BIC groups in large business with cooperative ownership and management.	1	Continuing	Successful	It is possible to design and run a large business by mature target groups.
07.	Freshwater Shrimp Cray Extension Pond Culture	'81-'81	Replacement of low priced bottom feeder fish with high price shrimp.	1	Handed over to BIC	Successful	It is possible to replace shrimps with low priced fish for higher returns.
08.	Fish Hatchery	'81-'81	To design and operate a commercially viable hatchery owned by BIC with existing technology to ensure sperm and fingerling supply to BIC groups and outsiders.	1	Handed over to BIC	Not yet determined	Since the technology is low it is possible to establish small hatcheries owned and operated by BIC target people.

Sl. No.	Project Name	Year Under Taken	Intervention	Number	Status	Result	Learnings
10.	HYV Sugar Cane Project	86-87	To introduce HYV Sugar Cane in traditional cultivation.	1	Abandoned	Failure	It is important to determine existing cultivation practice before intervention.
10.	Vegetable Production	86-88	a. Improved cultivation technology b. Improved varieties c. Better marketing production	500	Handed over to growers MP	Not yet determined	It is possible to improve production and profits through HYV seeds and management and crop selection should be market oriented.
11.	Shrimp Seed Intensive Poly Culture Ponds	87	a. Higher density stocking b. Improved feed c. Improved pond management.	4	Continuing	Not yet determined	Culture system is productive and profitable. However social barriers need due consideration before intervention.
12.	Intensive Shrimp Culture Ponds	86-87	a. Maximum density stocking b. Superior technological pond system c. Improved feed and management.	1	Abandoned	Failure	Before trying any intensive production system adequate know how management and control technique are essential.
13.	Seed Intensive Nilotica Mono Culture	87-88	a. New fast growing species for seasonal water body b. Concentration on backyard ponds operated by women.	17	Handed over to MP	Successful	Income generation is possible small seasonal water body with fast growing species.
14.	Livestock Feed Experiment	87-88	Improved Feed to increase milk and meat.	2	Abandoned Experiment	Failure	Proper monitoring and control are essential to come to concrete conclusion in all experiments.
15.	Rustrose Culture	87	Home based higher profit using vegetable cultivation for women.	30	Continuing Growers	Not yet determined	Marketing and market potential should be fully analyzed before introducing a new product.

Sl. No. / Project Name	Year Under-Taken	Intervention	Number	Status	Result	Learnings
16. Fertilizer	'87-'88	Mechanical tillage machine owned and operated by BWC groups to increase profits and provide timely ploughing to farmers.	5	Handed over to BWC	Successful	It is important to develop proper management owned business. In any mechanical intervention adequate support is essential for maintenance and repairs.
17. Dye house	'88	New Cheaper and versatile dyeing technology which can be used by BWC target women.	1	Continuing	Not yet determined	Not working and know how sharing with other NGOs are essential to improve products and profitability.
18. Waste Silk Spinning	'87-'88	Appropriate technology to recycle waste silk by women.	1 Unit	Handed over to BWC	Successful	Before introducing a profitable technology it is essential to determine replicability and availability of machineries.
19. Yarn twisting	'88	Introduction of a local technology to complete a chain of production in silk.	1 Unit	Continuing	Not yet determined	Proper assessment of technology and financial liability is a must for sustainable enterprise development.
20. Sherry Making (Home based)	'88	a. Introduction of better production and management system for a traditional industry. b. Establishments markets channels for sherries produced by women.	10 Women	Continuing	Not yet determined	Sometimes it is easier to provide employment opportunities for women having traditional skills just by improving production, management and marketing system.
21. Improved Block Printing	'86-'88	a. Improvements of Paste making & printing methods. b. Improvement of existing equipments and drying.		Abandoned	Failure	Before intervention in any existing technology for improvement it is useful to determine goals, area of change, concrete plans and expertise of implementor.

Sl. No.	Project Name	Year Under Taken	Intervention	Number	Status	Result	Learnings
22.	Integrated Duck Cul-Fish Pond	'89	Integration of an existing practice with another to recycle wastage to increase profits through synergy.	—	Continuing	Not yet determined	—
23.	Social Forestry	'88	Better use of forest land by agro forestry and homestead forestry.	—	Continuing	Not yet determined	Need. Intervention, Resource & interest identification is essential for longer return projects.
24.	Striped Moray	'89	Involve BNC group members in striped juvenile rearing for profit and timely supply to support the striped culture program.	2	Continuing	Not yet determined	—
25.	Turbid Water Fish Ponds	'89	New fast growing species which thrive in turbid water e.g. newly excavated ponds.	4	Continued	Not yet determined	—
26.	Block Framing Drier	'89	New appropriate drying technology for proper and quick drying of processed fabrics.	1 Unit	Continuing	Not yet determined	—
Total Projects 26		—	—	—	Vended One: 8-311 Abandoned: 7-275 Continuing: 11-425	Successful: 4-125 Failure: 7-275 Not Determined: 17-505	—

THE UNITED STATES DEPARTMENT OF COMMERCE
BUREAU OF COMMERCE

CLASS	NO. 100	NO. 200	NO. 300	NO. 400
1. Iron and Steel	<p>1. Cast iron 2. Cast steel 3. Wrought iron 4. Wrought steel 5. Sheet iron 6. Sheet steel 7. Wire iron 8. Wire steel 9. Iron and steel 10. Iron and steel 11. Iron and steel 12. Iron and steel 13. Iron and steel 14. Iron and steel 15. Iron and steel 16. Iron and steel 17. Iron and steel 18. Iron and steel 19. Iron and steel 20. Iron and steel</p>	<p>21. Cast iron 22. Cast steel 23. Wrought iron 24. Wrought steel 25. Sheet iron 26. Sheet steel 27. Wire iron 28. Wire steel 29. Iron and steel 30. Iron and steel 31. Iron and steel 32. Iron and steel 33. Iron and steel 34. Iron and steel 35. Iron and steel 36. Iron and steel 37. Iron and steel 38. Iron and steel 39. Iron and steel 40. Iron and steel</p>	<p>41. Cast iron 42. Cast steel 43. Wrought iron 44. Wrought steel 45. Sheet iron 46. Sheet steel 47. Wire iron 48. Wire steel 49. Iron and steel 50. Iron and steel 51. Iron and steel 52. Iron and steel 53. Iron and steel 54. Iron and steel 55. Iron and steel 56. Iron and steel 57. Iron and steel 58. Iron and steel 59. Iron and steel 60. Iron and steel</p>	<p>61. Cast iron 62. Cast steel 63. Wrought iron 64. Wrought steel 65. Sheet iron 66. Sheet steel 67. Wire iron 68. Wire steel 69. Iron and steel 70. Iron and steel 71. Iron and steel 72. Iron and steel 73. Iron and steel 74. Iron and steel 75. Iron and steel 76. Iron and steel 77. Iron and steel 78. Iron and steel 79. Iron and steel 80. Iron and steel</p>
2. Aluminum	<p>1. Cast aluminum 2. Cast aluminum 3. Wrought aluminum 4. Wrought aluminum 5. Sheet aluminum 6. Sheet aluminum 7. Wire aluminum 8. Wire aluminum 9. Aluminum 10. Aluminum 11. Aluminum 12. Aluminum 13. Aluminum 14. Aluminum 15. Aluminum 16. Aluminum 17. Aluminum 18. Aluminum 19. Aluminum 20. Aluminum</p>	<p>21. Cast aluminum 22. Cast aluminum 23. Wrought aluminum 24. Wrought aluminum 25. Sheet aluminum 26. Sheet aluminum 27. Wire aluminum 28. Wire aluminum 29. Aluminum 30. Aluminum 31. Aluminum 32. Aluminum 33. Aluminum 34. Aluminum 35. Aluminum 36. Aluminum 37. Aluminum 38. Aluminum 39. Aluminum 40. Aluminum</p>	<p>41. Cast aluminum 42. Cast aluminum 43. Wrought aluminum 44. Wrought aluminum 45. Sheet aluminum 46. Sheet aluminum 47. Wire aluminum 48. Wire aluminum 49. Aluminum 50. Aluminum 51. Aluminum 52. Aluminum 53. Aluminum 54. Aluminum 55. Aluminum 56. Aluminum 57. Aluminum 58. Aluminum 59. Aluminum 60. Aluminum</p>	<p>61. Cast aluminum 62. Cast aluminum 63. Wrought aluminum 64. Wrought aluminum 65. Sheet aluminum 66. Sheet aluminum 67. Wire aluminum 68. Wire aluminum 69. Aluminum 70. Aluminum 71. Aluminum 72. Aluminum 73. Aluminum 74. Aluminum 75. Aluminum 76. Aluminum 77. Aluminum 78. Aluminum 79. Aluminum 80. Aluminum</p>
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4. Brass	<p>1. Cast brass 2. Cast brass 3. Wrought brass 4. Wrought brass 5. Sheet brass 6. Sheet brass 7. Wire brass 8. Wire brass 9. Brass 10. Brass 11. Brass 12. Brass 13. Brass 14. Brass 15. Brass 16. Brass 17. Brass 18. Brass 19. Brass 20. Brass</p>	<p>21. Cast brass 22. Cast brass 23. Wrought brass 24. Wrought brass 25. Sheet brass 26. Sheet brass 27. Wire brass 28. Wire brass 29. Brass 30. Brass 31. Brass 32. Brass 33. Brass 34. Brass 35. Brass 36. Brass 37. Brass 38. Brass 39. Brass 40. Brass</p>	<p>41. Cast brass 42. Cast brass 43. Wrought brass 44. Wrought brass 45. Sheet brass 46. Sheet brass 47. Wire brass 48. Wire brass 49. Brass 50. Brass 51. Brass 52. Brass 53. Brass 54. Brass 55. Brass 56. Brass 57. Brass 58. Brass 59. Brass 60. Brass</p>	<p>61. Cast brass 62. Cast brass 63. Wrought brass 64. Wrought brass 65. Sheet brass 66. Sheet brass 67. Wire brass 68. Wire brass 69. Brass 70. Brass 71. Brass 72. Brass 73. Brass 74. Brass 75. Brass 76. Brass 77. Brass 78. Brass 79. Brass 80. Brass</p>

PROJECT	1983 - 1986	1986 - 1987	1987 - 1988	1988 - UPTO JUNE, 1989
5. Brickfield --	Assisted a federation of Musiganj group plan and operate a brickfield. Proved to be RFP's most successful venture till date. Profits earned was Tk. 2,50,000 on an investment of Tk.11,00,000 provided is upto to 250 workers. Experience used to search further possibilities in Musiganj, Patna, Rangpur. Keys identified for success were (i) Motivated group, (ii) New district town with buoyant market.	2nd season produced over 19 lac bricks profit for the season was around 2.09 lac wages paid amounted to Tk. 4.35 lac and employment provided to over 200 workers.	3rd season production reached over 19 lac bricks. Sales in brick profit target at around Tk. 3 lac.	
6. Ricemill - Jankipur --	RFP assisted a federation of women's group in Jankipur plan and operate a ricemill. Project lost Tk.2,000 in first 9 mths on a Tk. 60,000 investment. Problems identified (1) faulty electricity line, (2) over staffing, (3) Dismotivity of paid male employees.	Performance improved in '87-'88 with accumulated gross profit of Tk.4,000 approx. Tk.2,000 in first 9 mths on a Tk. 60,000 investment. Problems identified (1) faulty electricity line, (2) over staffing, (3) Dismotivity of paid male employees.	It was decided that RFP will withdraw assistance to Ricemill. Business profile and pre-feasibility checklist prepared for extension by RFP.	
7. Fresh Water Shrimp Farming- Jessore- Satkhira (Extensive).	RFP assisted groups in Jessore prepare and manage 30 ponds (approx. 8.5 Acres) for extensive shrimp-cray polyculture. Sampling showed satisfactory growth harvesting planned for first half of 1988. Plans made for 1 acre intensive shrimp farm in Jessore and extension of cray-shrimp-polyculture in Patna, Musiganj, Narshingdi, and Mymensingh. Production reached 5 kg. shrimp and 4.5 kg. fish/bovial in productive ponds.	Project continued in 32 ponds (15 Acres) to determine optimum stocking density.	Training module and pre-feasibility prepared for extension by RFP.	

PROJECT	1985 - 1986	1986 - 1987	1987 - 1988	1988 - UP TO 30th, 1989
8. Hatchery - Kalandraor	--	With ITSC consultant assistance MP designed and started building a hatchery for operation by SSC to supply spawn, fry and fingerling to to SSC group and private pond owners. Completion targeted for March, 1988.	Construction of hatchery completed in July 88 and test operations started in March 89. Production reached 17 kg. spawn and 4.22 lac fry/fingerling. Hatchery had 1500 kg brood and 775 kg table fish. Training Centre is nearly completed.	Fisheries and hatchery and Training Centre handed over to SSC.
9. HYV Sugar Cane - Sakura	--	One acre cultivation of HYV Sugarcane started in Sakura for crushing to gur.	Project failed due to low output and selection of HYV species.	--
10. Vegetable Production - Kaliaganj	--	300 farmer selected and trained for vegetable cultivation in 41.22 acres of land. Average profits shared Tk.75/decimal (approx.)	500 farmers selected and trained for winter vegetable cultivation.	Business profile training manual prepared for extension work.
11. Semi-Intensive Poly Culture - Jessore, Sakhira	--	--	Project undertaken with assistance from ITSC to test semi-intensive shrimp-carp-polyculture. 4 semi-intensive culture ponds started in Jessore- Sakhira with different density for semi-intensive ponds. 2 ponds started with 100 pcs and 2 with 60 pcs/decimal. Improved feed used. Targets set at 4 kg. shrimp and 10 kg. fish for ponds with 100 pcs/dec stocking density and 3.4 kg. shrimp 10 kg fish in 60 pcs/dec. ponds.	Project continued and sampling showed positive results. Harvesting to be completed in August, 1989.

PROJECT	1965 - 1966	1966 - 1967	1967 - 1968	1968 - UPTO JUNE, 1969
12. Intensive Shrimp Culture - Rajmangal	--	--	High input scientific pond culture went into operation in July '68, with target set at 7 Kg. shrimp/ha/ha in 1st year and 11 Kg/ha. in 2nd year. ITOB assisted this project in pond design and complex pond management. Stocking density was 500 pcs/ha. Special feed used for growth.	Project failed due to technical and management problems. The project was abandoned.
13. Semi-Intensive Milkfish Farm Culture - Rajmangal	--	--	Seller and Khowli selected for the project with assistance from IRI, list prepared for IRI extension work. 24 trainees all women, were trained and 17 ponds stocked with improved variety. Sampling showed very good growth i.e. 10 cm in 1st month.	Business Profile and pre-feasibility check-
14. Livestock Feed Experiment- Rajmangal	--	--	Two experimental project was started in Rajmangal to increase milk and meat output by using improved feed including Urea treated straw and Molasses blocks. Results were inconclusive due to technical and management problems.	Fine being able to repeat the experiment.
15. Aquaculture Culture - Rajmangal	--	--	The project was introduced in April '68 in Rajmangal. 30 growers were trained of which 11 started production. Problems identified are (i) water, (ii) space supply.	Project continued with 25 growers for the second season.

PROJECT	1	1965 - 1966	1	1966 - 1967	1	1967 - 1968	1	1968 - UPTO JUNE, 1969
16. Fertilizer - Mulligal	--		--			Project started in Mulligal in October '67 with one machine and proved very successful. 4 new tillers introduced in January '68. Land cultivated 411 acres. Training provided to 20 drivers including 6 female. Trainers were also introduced for carrying. The tillers proved profitable.		Business Profile and pre-feasibility checklist and monitoring forms prepared for NF extension. A training manual was also prepared.
17. Dye House - NF, Mulligal	--		--			The objective of the project is to improve the quality of dyeing in NF and increase the range of products. It came into operation in March '68. The project was undertaken with the assistance of ITN. Two brief trainings conducted in October '67 and March '68 and a 3 months intensive training on reactive dyeing techniques started in July '68 through Sept '68. The training was given by ITN staff. Average production this period was 56 yds fabric and 66 lbs yarn per month. The dye house assisted NF, in developing wider range of quality products.		Production picked up manifold and reached an average of 190 lb yarn and 600 yds fabric per month. Evaluation conducted by ITN on Dye-house. Report not yet received by NF.
18. Waste Silk Spinning - NF, Mulligal	--		--			Project started in Sept. '67. The goal is to recycle waste silk into yarn for new range of products. Average monthly output reached little less than 30 lbs at a cost of around Rs.250/lb. A variety of fabric have been made out of the recycled silk and the future appeared promising.		Production continued at satisfactory level and costs. It was decided to hand over the project to NF.

PROJECT	1985 - 1986	1986 - 1987	1987 - 1988	1988 - UP TO DATE, 1988
19. Ram Weaving - Nazirhat	--	--	<p>The objective was to complete a chain in the processing of silk yarn from cocoon to garments. This was the only section done outside NF and proved to be a bottleneck. The technology involves a combination of winding, twisting and reeling machine made locally in Patna. Production till Sept. '88 was on weekly average: Cotton - 125 lbs and Silk 37 lbs at a cost of 19.50/lb and Tk.125/lb respectively. Capacity utilization was only 13%.</p>	<p>Production continued at 112 lb cotton and 39 lb silk per week at 12% average capacity utilization. Weaving quality fell due to lack of maintenance. It was decided to bring a mechanic from Patna to service the machine on a monthly basis.</p>
20. Sherry Weaving - Nazirhat	--	--	--	<p>Project undertaken in Dec. '88 to revive a traditional craft in Nazirhat. Home based production facility set up with 10 women and a supervisor. Till date 207 pcs (2560 sqft) produced. Income received per woman is Tk.2962 in 4 months.</p>
21. Block Printing Improvements. NF, Naliganj		<p>Block printing improvements undertaken at NF with the assistance of ITIG to improve quality of printing through improved equipment and technique. Tests carried out by ITIG without positive results.</p>	<p>Several test printing undertaken by consultant of ITIG in improvement of posts, printing methods, etc. Not such positive results obtained. ITIG identified the following as improvements to improve block printing quality: 1) Design, 2) Blocks, 3) Equipment, 4) Dyeing, 5) Impression making by women.</p>	<p>Arrangement made with ITIG to send a consultant with hands on experience to assess block printing needs & suggest improvement techniques.</p>

PROJECT	1985 - 1986	1986 - 1987	1987 - 1988	1988 - UPTO JUNE, 1989
22. Integrated Duck-Gee-Fish Husbandry	--	--	--	One 40 decimal pond taken for the project in Bolar to assist pond area profits through integration. 85 ducks and 900 fish were stocked in the pond. Project assisted by FRI Mysore/SP.
23. Social Forestry Programme - Mysore, Sirpur	--	--	Survey completed in hatched forestry of SSC target groups to identify 1) Species preference, 2) Location trees, 3) Gender issues with respect to species and number.	Investigation being done to identify prospects and problems in agro forestry in Sirpur area to determine FRI's probable intervention.
24. Shrimp-Nursery Salkhura	--	--	--	Investigation on setting up of 2 shrimp nurseries in Salkhura is being carried out to ensure timely and quality juveniles supply.
25. Turbid water Fish culture (Red Tilapia) Mysore/SP	--	--	--	4 ponds (45 decimals) were started with Thai shrapiti. The project is assisted by FRI.
26. Block printing dryer - MF, Mysore/SP	--	--	--	A block print dryer introduced in MF with local technology and consultancy. Testing to be undertaken as soon as gas line is connected. The objective is to improve print quality and reduce time involved in drying block printed fabric and improve inventory turnover.
Total Projects Started	4	5	10	7

PART: III
MATERIAL DEVELOPMENT & TRAINING

FEASIBILITY STUDIES

For development of new or improved business REP undertakes extensive feasibility studies. These studies are done both for REP's own projects or at the request of REP for implementation of new businesses at area levels. The feasibility studies conducted so far by REP are given below:

Study On	Number		Projects taken	% of recommended number
	Recommended	Not recommended		
1. Brickfield	2	2	1	50
2. Block Printing & Dyeing Improvement	1	-	1	100
3. Coconut Processing	-	1	-	N.A.
4. Dhurry Making	1	-	1	100
5. Leather Processing	-	1	-	N.A.
6. Power Tiller	4	-	4	100
7. Ricemill	2	2	1	50
8. Tile Factory	1	-	-	0
9. Tractor	-	1	-	N.A.
10. Tempo	2	-	-	0
11. Thresher	-	1	-	N.A.
12. Twisting	-	1	1	-
13. Soda Making	1	-	-	0
14. Sawmill	-	1	-	N.A.
15. Papaya Processing	-	1	-	N.A.
16. Cassava Processing	1	-	-	0
17. Mushroom Culture	1	-	1	100
18. Hatchery	1	-	1	100
19. Vegetable Production	1	-	-	0
20. Intensive Shrimp Culture	1	-	1	100
21. Nilotica Culture	1	-	1	100
22. Livestock Feed Experiment	2	-	2	100
23. Waste Silk Spinning	1	-	1	100
24. Integrated Duck-Fish Farm	1	-	1	100
25. Turbide Water Fish Culture	1	-	1	100
Total	25	11	18	72%

**Pre-Feasibility Checklists Prepared
For Field Level Use**

To assist RDP field staff to make preliminary judgement on various economic activities in an area, REP prepared checklists on eleven schemes. Each checklist contains 10 questions with total 100 points with directions as to what they mean. The checklists are on:

1. Brickfield
2. Carp Culture
3. Deep Tubewell
4. Handloom Factory
5. Galda Poly Culture
6. Mushroom Culture
7. Nilotica Mono-culture
8. Carp Nursery
9. Power Tiller
10. Rice Mill
11. Shallow Tubewell

**Business Profiles Prepared For
Extension Purpose By RDP**

After successful completion of a project, REP prepares Business profiles for extension by RDP. The profiles cover: 1) Technology 2) Market 3) Economics and 4) Management. So far the following business profiles have been prepared.

1. Ricemill
2. Brickfield
3. Powertiller
4. Carp Nursery
5. Vegetable Production
6. Nilotica Culture.

Training Materials Prepared
By REP For Extension Purpose

One of REP's task is to prepare practical training materials based on field level experience for extension purpose. The training materials so far prepared are:

1. Carp Nursery (for farmers)
2. Dyeing and Block Printing
3. Fish Nursery (for para professional)
4. Nilotica Mono-Culture
5. Pond Survey Guideline
6. Power Tiller Training Guideline
7. Project Cost and Profitability Handbook
8. Feasibility Study Guideline
9. Vegetable Training Guideline for Farmer and Extension Worker
10. Reactive Dyeing Training Module.

TRAINING

The following training programs were conducted by REP during Phase : 1

	Course	Sponsors	Participants
1	Power Tiller Driving and Maintenance	BRAC	24 (6 Women)
2	Dyeing	ITDG	4-(3 Women and 1 Man)
3	Block Printing	BRAC	4-All Women
4	Telapia Semi-Intensive Culture	FRI	25- (8 Women)
5	Fish Nursery -Paraprofessional	BRAC	6 Men
6	Shrimp/Carp Polyculture	BRAC	52 (2 Women)
7	Mushroom Culture	MCC	35- All Women
8	Horticulture	BRAC	500 growers
9	Integrated Fish Farming	BRAC/FRI	4
10	Turbid Water Fish Culture	BRAC/FRI	4

PART IV: CONSULTANCIES, TECHNICAL ASSISTANCE & FOREIGN TOURS

For proper technical support during feasibility study and implementation of project, REP has taken consultancies from local and international individuals and institutions. Most of such support was from the Intermediate Technology Development Group (ITDG) under a technical assistance agreement. A summary is given below of consultancies received by REP in Phase I along with areas of work.

	Consultant	Affiliation	Year	Area of Work
1.	Mr. John Foulds	ITDG	'86, '87, '88	Dyeing & Block Printing
2.	Mr. Roy Jenson	ITDG	'87, & '88	Shrimp Culture
3.	Mr. Tristran Bartlet	ITDG	'89	Reactive Dyeing
4.	Mr. David Hadrill	--	'88	Livestock Review
5.	Dr. J. Henry	--	'86	Food Processing
6.	Dr. Manjeet Jolly	CSRTI, India	'86, '88, '88	Sericulture
7.	Mr. Elias Mollah	--	'88	Block Printing Dryer.

Beside regular consultancies REP has taken assistance from individuals and institution for evaluation and development of different projects. These include:

1. Intermediate Technology Development Group,
Rugby, G. Britain : Textile & Fashion
2. Fisheries Research Institute, : Nilotica, Monoculture.
Mymensingh : Integrated fish farm.
3. WINROCK International, USA : Social Forestry.
4. Institute of Leather
Technology, Dhaka : Leather processing
5. Bangladesh Sericulture Board, : Sericulture
Dhaka

- | | | | |
|-----|--|---|--|
| 6. | House Building Research, Institute, Dhaka | : | Low cost housing and hand made paper making. |
| 7. | Mushroom Culture Centre (MCC) Savar | : | Straw and Gystem Mushroom Culture |
| 8. | Bangladesh Agricultural University, Mymensingh | : | Vegetable & Horticulture, Livestock feed. |
| 9. | Swiss Development Cooperation, Dhaka | : | Waste silk spinning. |
| 10. | Mennonite Cential Committee, Dhaka | : | Vegetable and Horticulture |
| 11. | HEED Bangladesh | : | Food Processing, Textiles. |
| 12. | Sterling University, U.K. | : | Fish Hatchery |
| 13. | MIDAS, Dhaka | : | Textiles |
| 14. | Frawn Hatchery & Research Centre, (Allawala) Cox's Bazar | : | Shrimp Culture (Nursery) |
| 15. | Central Silk Research and Training Institute, India | : | Sericulture |
| 15. | Etc. | | |

In phase I a number of foreign tours were arranged for REP personnel to learn and broaden outlook from exposure to international development in various sectors. Major tours were:

	Country	Sector	Year
1.	India	Block Printing & Textiles	'87, '88
2.	India	Sericulture	'88
3.	Thailand	Shrimp Culture	'89

PART V: MAJOR PROBLEMS FACED DURING PHASE: 1

During three and half years of Phase: 1, REP had it's ups and downs. The problem faced during this time were multidimensional; some controllable while others were not. REPs approach to these problems were that of learning and avoiding such problems in future. Some of the major problems during this period were:

1. **High Staff Turnover:** This was beyond REP's immediate control. It is essential to have adequate staff both technical and non-technical for continuity and success of projects. But due to better paying position a number of staff left REP.
2. **Lack of Experienced Technical Staff:** Several projects failed due to lack of experienced technical staff. Since REP is some what technological oriented it is important to have the right technical manpower for project development.
3. **Inconsistent Work Methodology in Project Development:** In three years REP has not been very consistent and thorough in it's methodology of work. As a result several projects were taken without a thorough analysis of technical, financial and managerial aspects of a project, and some failure may be related to this cause.
4. **AD HOC Approach in Planning and Project Selection:** Adequate planning on a period wise basis and proper selection of project ideas were not put in the right perspective. As a result of which plans were inconsistent and project ideas were selected on an ad-hoc basis this gave rise to temporary confusions and indirection to overall activities of REP.

5. **Consultants:** Many times consultants were brought in without clear expectations and number of times the qualification and experience of consultants were not appropriate for the project in question. These contributed to overall ineffectiveness of few projects.
6. **Role of REP:** As this was not clear among departments in BRAC, confusion, duplication and misunderstandings surfaced on several occasions which hindered REP's efficiency.
7. **Coordination with RDP:** Since REP exists clearly to assist RDPs target groups to develop new and improved businesses it is critical that the two coordinate their activities to reach the greater goal of BRAC. However, during Phase: 1 there were several instances where inadequate coordination between REP and RDP was a major embargo to project development.
8. **Staff development:** Since most of REPs technical and non-technical staff are fresh graduates it is vital to develop their abilities through training to fulfill REPs needs. This was not emphasized in Phase 1.
9. **Social consideration:** Many projects were undertaken without giving due consideration to the social dynamic involved. Few projects were in conclusive just due to this.
10. **Appropriate management systems:** Simultaneous to technology development, the develop of appropriate management system for operating projects is essential. This area did not receive the attention it demanded in Phase 1.

11. Enterpreneurship development: Businesses cannot succeed, however the technologies may be, without entrepreneurs. Entrepreneurs are the life blood of business. However, SEP in Phase I could not see this vital component in the right perspective. No efforts were made to identify and or develop this important element in target people.

PART : VI
REP Phase - 1 Evaluation

The phase ending evaluation of REP was conducted by Dr. M. A. Latif of BIDS and Mr. Frank Wiebe of MCC from February 16th to 27th of 1989. The summary of recommendations are given below.

Summary of Recommendations - By Evaluation Team

Organisational Aspect

- I. REP Objective
 - 1.1 Draft a new statement of objectives which narrows and focuses the scope of activities expected of REP staff.
 - A. Prioritize projects in terms of scope for employment and marginal returns.
 - B. focus on more innovative projects.
 - C. Minimize energies devoted to fine-tuning traditional (i.e., well-known and accepted) activities.
 - D. Clarify the division of labor between REP, TARC, RDP and RED. REP should focus its energies on performing research on new projects, and leave the training and implementation for other divisions within BRAC.
- II. Strategy, Structure and Staffing
 - II.1 Provide more direction in overall project planning.
 - II.2 Diversify and enlarge the REP Staff.
 - II.3 Devote REP research resources to the task of developing "appropriate management" technologies for transfer to REP groups.

- II.4 Make a concerted effort to appoint women to the project's upper level decision-making positions, with or without expansion. Although this recommendation comes somewhere towards the middle of this report, we would like to emphasize this as one of the most important criticisms of the current REP structure and strategy, and one which should be among the first redressed.
- II.5 Recognize the limits of REP staff and refuse or delay projects where knowledgeable and competent staff are unavailable.

III. Methodology

- III.1 Increase and formalize the participation of RDP group members, RDP staff, and related BRAC staff in the process of idea generation and work evaluation. REP staff should see RDP group members and the RDP field staff as the primary source of new ideas and of overall project evaluation.
- III.2 Include in feasibility studies the down-stream project-related costs which will be covered by REP, RDP, or other BRAC agencies.
- III.3 Include in feasibility studies predictable "unusual" costs and benefits which are likely to be realized by the groups.
- III.4 Beware of forward and backward linkages, and include these whenever possible in original feasibility study calculations.
- III.5 Avoid replicating projects within REP once a project profile has been completed.

V. Focus on Women

- V.1 Identify the applications of technical assistance before commissioning such input.
- V.2 Use resources available from other NGOs or individuals in-country before investing REP resources.

Economic Aspect

- I.1 Time has not still come to replicate horticulture program to other areas, and REP should experiment further with intensive care.
- I.2 REP should take up alternative crop production under the winter vegetable cultivation program.
- I.3 REP team of economists should evaluate any such program in terms of both economic and social cost-benefit, rather than simply in terms of incremental income.

II. Mushroom Culture

- II.1 REP should assess the feasibility of spawn supply from the existing source before further extension of the activity.
- II.2 Even though the spawn supply is ensured, REP should not expand production beyond 50 growers, at the moment, since there is also a marketing constraint. Attention should be given to marketing also.
- II.3 If production and marketing are expected to rise, REP should take up mushroom preservation facilities of its own in order to facilitate even better marketing.

III. Dye House

III.1 REP should explore the possibility of introducing new product such as lachi (small hank of cotton embroidery thread) thread which can substitute entire import of this type of thread. One REP personnel may be sent to India for learning the technology.

IV. Waste Silk Spinning

IV.1 REP may explore the possibility of increased supply of silk Jute waste from Bholahat silk reeler.

V. yarn Twisting

V.1 The unit may extend twisting services to private silk weavers at Chapai Nawabganj and Shibganj, in order to increase the capacity utilization of the machine and to employ more women in the activity.

VI. Power Tiller

VI.1 This program may be replicate to other areas, and RDP should be involved in replication with minimum involvement of REP.

VII. BRICK-FIELD

VII.1 This program may also be replicated to other areas. REP's involvement, in replication, should be confined to feasibility study and preparation of a management profile, and rest of the work should be handed over to RDP.

VIII. Pisciculture

- VIII.1 Further experiment on shrimp-carp polyculture should be done only with the existing ponds, and new ponds should not be taken up at the moment.
- VIII.2 Programs on carp nursery and semi-intensive *telapia nilotica* monoculture may be extended to other areas.

IX. Sericulture

- IX. REP is advised to go through the book "Sericulture Industry in Bangladesh", by Zaid Bakht et. al. (BIDS, forthcoming) in order to increase the knowledge base for sericulture extension.
- IX.2 Initially, REP should make a realistic target of producing 3-4 cycles of cocoon per year.
- IX.3 Tree type of mulberry plantation in flood-free areas is suggested.
- IX.4 Chawki rearing system should be followed
- IX.5 Hot-air cocoon drying system should be applied.

PART : VII
YEARWISE STAFF POSITION

Position	85-86	86-87	87-88	88-89
Project Manager	1	1	1	1
Expatriate Adviser	1	1	1	-
Staff Economist	1	1	2	2
Fisheries Trainer	1	2	2	2
Horticulturist	-	2	1	1
Textile Technologist	1	1	-	-
Mechanic	-	-	1	1
Mushroom Culture	-	-	1	1
Assistant	-	-	1	1
P.O. Forestry	-	-	1	1

Total	5	8	10	8
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CONCLUSION

The last three and half years of REP's Phase I was mainly a learning period for BRAC in developing new or improved businesses with landless groups. These learnings will help to fine tune REP's approach to work, both strategic and operational. A major challenge of REP in Phase II will be to overcome the problems described earlier and move forward keeping REP's specific objective in focus.

Emphasis in Phase II should be given further on projects involving women, appropriate management development for projects and development of new technology. Social considerations, which was a major weakness in REP in Phase I also needs attention. Finally, efforts must to be made clarify the role of REP within BRAC and improve coordination with other departments, especially RDP.