AQUACULTURE WITHOUT FRONTIERS

PROJECT PROFORMA

Preliminary applications need only complete Sections 1 & 2. If a full application is requested, applications will be asked to complete all Sections

1. PROJECT OUTLINE

Project title:	AwF-RDRS Project: Poverty alleviation through small scale aquaculture
Proponent's name:	Sattyanarayan Roy
Phone:	++ 88 0521 62893, 62863
Fax:	++ 88 0521 62182
Email:	sattya_roy@yahoo.com
Proponent's	Rangpur Dinajpur Rural Service Bangladesh (RDRS
organization:	Bangladesh)
Project Number:	Assigned by AwF
Country/ies:	Bangladesh

Administrative Contact:				
Title and Name	Dr. Syed Samsuzzaman			
Position	Director (Livelihoods)			
Organization	Rangpur Dinajpur Rural Service			
Phone	++ 88 0521 62893, 62863			
Fax	++88 0521 62182			
Email	zaman@rdrsrangpur.org			
Postal Address	RDRS, Dhap, Zail Road, District – Rangpur, Bangladesh			
Street Address	Zail Road, District – Rangpur, Bangladesh			

Funding request (totals for each year)

* 1 US dollar = Tk. 65.00 (BDT)

Currency	Year 1	Year 2	Year 3	Year 4	Total
In US Dollar	4923.0	2,384.5	2,461.5	2,615.3	12,384.6
Bangladesh Tk.	320,000.00	155,000.00	160,000.00	170,000.00	805,000.00

Funding support from contributing agencies/individuals (totals for each year)

Currency	Year 1	Year 2	Year 3	Year 4	Total
In US Dollar	6,923	3,384.6	3,384.6	3,384.6	17,076.9
In Bangladesh Tk.	450,000	220,000	220,000	220,000	11,10,000

>Project	February 2007 to March 2011 (4 years)
Duration:	
Proposed Start	February 2007
Date:	
Proposed Finish Date	March 2011

Project Leader: Partner Country			
Title and Name	Sattyanarayan Roy		
Position	Programme Manager (Fisheries)		
Organization	RDRS Bangladesh		
Phone	++ 88 0521 62893, 62863		
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Email	sattya_roy@yahoo.com		
Postal Address	RDRS, Dhap, Zail Road, District - Rangpur, Bangladesh		
Street Address	RDRS , Dhap, Zail Road , District - Rangpur , Bangladesh		

Key Contacts: Dr. Syed Samsuzzaman

Collaborators:	
Title and Name	Dr. Benoy Kumar Barman
Position	Coordinator
Organization	World Fish Center, Bangladesh and South Asia Office
Phone	++880-2 8813250
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2. PROJECT SUMMARY

2.1 Need

Bangladesh is an agricultural based country and the farmers of northern Bangladesh are very poor with limited resources. Crop based livelihoods cannot supply them square meal for their family members. There is a seasonal food crisis for northern people of Bangladesh and this regular hunger in this region called "Monga". Emphasis has given for rice cultivation but fisheries sector is very much neglected since long. On the other hand, most of the rural resource poor farmers have small ponds [avg. 20 decimal (800 m²)]. These ponds could play a vital role for improving their livelihoods with increased income. The major problems they face and the project intends to address are briefly described below:

Income of the farming people is very poor due to high production cost and poor prices of the product. As a result farmers do not have financial capacity to release fingerlings to stock their ponds in time. So these important resources are under utilized for their livelihoods development.

Inadequate supply of quality inputs- one of the major problem is inadequate supply of quality fish seed the fingerlings to the farmers. Farmers are being looser by stocking less quality fingerlings. Beside, farmers have no knowledge about using lime and supplementary feed for getting good harvest. Poor access into the technology- government sector has very little capacity to extend support for fish culture to the poor farmers. Lack of information as well as skill training and knowledge, and follow up support is absent to get them good harvest from ponds.

2.2 Objectives

The major objective of this project is to alleviate poverty of the resource poor farmers through fish culture by introducing improved fish culture technology in the ponds

The specific objectives are as follows:

- To increase income of the resource poor farmers

-To increase fish production through timely and adequate supply of quality inputs (fish seed, feed etc).

-To increase awareness of the people about improved fish culture.

Methods (summary for each objective)

The farmers will be selected from resource poor farmers having pond. Pre and post baseline survey will be conducted for socio-economic status of the participated families of the project.

The selected farmers will be given pond site training. After training the ponds will be prepared and stocked with quality fingerlings in time. Fertilizer will be applied into the ponds based on water quality as well as productivity of planktons. Supplementary fish feed will be administered at 2-3 % of fish body weight. Fish growth will be monitored monthly basis. Partial fish harvesting will be done and restocking the ponds with required fingerlings. The staff will monitor the farmer's ponds regularly. The fingerling rearers will be trained on quality fingerling production. They will be linked with recognized fish hatchery for quality fish spawn. Emphasis will be given for over wintering fingerlings. So early stocking will be ensured.

Field days will be arranged at pond site for developing awareness of the people who have ponds. Training materials and leaflets will be developed for up scaling the fish culture technology. Government and private sectors practitioners will be invited in the field days and workshops.

Outputs (specify for each objective)

-The annual income increased at least Tk 2000.00 of each of the involved families.

-At least 95 % of the targeted ponds stocked with quality fingerlings in time and harvest 8-9 kg fish per decimal (8-9 kg/40 m²) water bodies.

-At least two field days and two stakeholders' workshops arranged within project period.

Benefits

Implementing this project will increase women and children participation into their household income generating activities by increased knowledge and skill on fish culture. Thus they will contribute in decisions making in family level. This will be a process of empowering women within family as well as community level. Proper utilization the ponds will give extra income to the families. By this increased income they will purchase food for their family in the seasonal food crisis period (Monga). Family fish consumption will be increased that will support family nutrition. With increased income, education support will be improved. The environment friendly culture technology will not damage natural environment rather will improve it.

3. PROJECT JUSTIFICATION AND METHODS

3.1 Background and Justification

Bangladesh is a land of river and ponds. Man made hazards and natural climatic degradation has damages the fisheries sector as a whole. Besides intensification of crop sector by using indiscriminate use of pesticide and insecticides has damaged the natural fisheries resources resulted scarcity of open water fishes. The people of northern part of Bangladesh are poorer than any other part. These resource poor farmers face seasonal food crisis named "monga" regularly. It is a long sorrow for the people of this region. Emphasis on crop diversification cannot support them year round food security for their family. There is no alternative employment opportunity to sale their labor also. This situation falls hungry living of their family. On the hand farmers have their small ponds but have no supports for proper as well as improved fish culture in these ponds. The creation of alternative agricultural interventions in fish culture might be the hopes for improve livelihoods of the resource poor farmers. Not only the income but also the family nutrition status will be increased through increased fish intake.

Resource poor farmers have very poor or no capacity to invest money into their ponds. Agricultural production from their small piece of land cannot provide them sufficient family food in the whole year. So they do not have any surplus income, which they can invest to their ponds.

Lack of quality fish seed is another problem for fish culture in this region. The pond owners do not get various kinds of species for different layers of pond-system. The fry traders are the only sources of fingerlings supply and they push less quality fries to farmers. Timely fingerlings supply is another problem that leads shorter culture period. All these result less fish production.

Technology as well as extension support is completely absent to the resource poor farmers. The government has very less manpower to extend supports. Farmers do not have accessibility into the knowledge and skill for improved fish culture.

Project Context (relationship to other activities).

Number of ponds excavated by the assistance WFP and IFADEP. But these ponds do not have culture support regarding inputs like financial, skill training, fingerlings etc. and ultimately these resources are underutilized. This project will support only limited number of ponds in view to develop a sustainable fish culture system in this area. Linkage between fish hatchery, fingerlings rearers and growers will be strengthened. Thus harvesting and marketing channel will be developed for good price of produced fish. Employment creation will be increased in the backward and forward linkages of fish culture production chain. Mostly the ponds are closed to the farmer's house. The women and children could easily be managed these ponds by giving feed, growth monitoring etc.

3.2 Detailed Methods/Strategy (specify for each objective)

1) A total of 60 ponds will be selected from Kurigram & Lalmonirhat district. A base line survey on socio-economic condition of the selected farmers will be conducted at the beginning of the project. Al the expenses regarding fish culture will be recorded for each pond. Family fish consumption will also be recorded for knowing the actual fish production. The post baseline survey will also be conducted after completion production cycle on yearly basis.

2) Manager (Fisheries) of RDDS and government Fishery Officer jointly will conduct pond site training. These are pond preparation, pond fertilization, feeding, growth monitoring, liming, fingerling stocking, marketing etc. Fingerlings rearers will be trained for quality fingerlings production and linked with recognized fish hatchery for quality fish spawn in time. Emphasis will be given for over wintering fingerlings. Fish growers will be linked with the trusted fry traders. The stocking ponds will be prepared by March-April and will be stocked within May-June. Fertilizer will be applied into the ponds based on water quality as well as productivity of planktons. Supplementary fish feed will be administered at 2-3 % of fish body weight. Monthly fish growth will be monitored. Partial fish harvesting will be done and restocking the ponds with required fingerlings will be ensured. The inputs cost will be revolved in the second year to the same farmers. Thus in the third year this inputs cost will be used for new farmers. Through this a sustainable model will be developed in this region. Manger (Fisheries) will supervise these ponds on regularly basis.

3) The field days will be arranged at pond site for developing awareness as well as technology dissemination for the farmers who have ponds. Training materials and leaflets will be developed and disseminated for up scaling the fish culture technology. The government official will also be invited for training sessions and field visit. The workshops will be arranged for government and private sectors practitioners of this region for further extension in other region.

Objectives	Methods/Activity	Outputs	Timeline
To increase annual income of the pond farmers.	Selection of 60 ponds from resource poor farmers.	A total 60 ponds selected.	Farmer selection by Feb-March 2007
	Socio-economic baseline would be conducted.	Pre and Post baseline conducted	Pre baseline by April 2006 & post baseline by January 2008
		Annual family income increased Tk 2000.00.	
To increase fish production through timely and increased	Arrange pond site training on pond preparation, liming, stocking, quality	Farmers managed their ponds through improved	Training will be conducted in different times when it will be

3.3 Methods and Outputs Table

supply of quality inputs (fish seed, feed etc).	fingerlings identification, fertilization, feeding, harvesting and marketing	knowledge and skill.	required like pond preparation first.
	Training to the fingerling rearer and contact with fish hatchery	Fingerling's rearers produced quality fingerlings in time	Fingerling production by March & April 2007
	Quality fingerling production by 4 nurserers		
	Stocking Pond preparation		Pond preparation by March-April &
	Stocking the ponds with quality fingerlings	All the ponds stocked with quality fingerlings	Stocking by May-June.
	Feeding the fish & growth monitoring regularly		Whole culture period
	Partial harvesting of table size fish & marketing	Adjusted the feeding & fertilization.	Pond will be restocked based on harvesting.
	Restocking the ponds	Farmers had good price of fish.	
	Regular monitoring the farmers by Manager (Fisheries).	Ponds are restocked	Through out the

	Reporting	after partial harvesting.	project period.
		Feedback to the farmers for improving management.	Through out the project period.
		Monthly and quarterly report produced.	
To increase awareness of the people about improve fish culture	Arrange field days	2 field days arranged for outside project farmers.	In October.
nsn culture	Arrange stakeholders workshop	Two stakeholders workshops for GO, NGO & private sectors	In December.
	Published leaflets and training materials	Leaflets and training materials developed and disseminated.	Before training start module will be developed. Leaflets during project period.

3.4 Travel table

Person(s) or position traveling	Approximate date of travel	From / to	Purpose	Duration
Dr. Benoy Kumar Barman	May 2007 October 2007	Dhaka to Rangpur	Technical assistance	2 days in each trip

3.5 Project personnel

Name	Sex M/F	Agency	Position	Time in project (%)	Funded by
Dr. Syed Samsuzzaman	Μ	RDRS	Director (Livelihoods)	5 %	RDRS
Mr. Sattyanarayan Roy	М	RDRS	Programme Manager (Fisheries)	40%	RDRS
Mr. Murad Hossain	Μ	RDRS	Manager (Fisheries)	100%	RDRS+AwF
Mr. Rasheduzzaman	Μ	RDRS	Manager (Fisheries)	100 %	RDRS + AwF
Mr. Kabir Hosain	М	RDRS	Assistant Manager (Fisheries)	20 %	RDRS

(i) List of participants involved in the project

(ii) Summary details of the research capacity, skills and role of each participant and agency

1) Dr. Syed Samsuzzaman –Director (livelihoods), working with RDRS for 11 years. He is a renowned agriculturist. He was involved with Bangladesh Rice Research Institute (BARI) above 10 years. He is leading the sub sectors- Agricultural (Crop, Fisheries & Livestock), Environment & Disaster, and Enterprise development. Besides, he is involved in guiding Ph. D and M. Sc. Students in collaboration with different universities of Bangladesh. A total of 70 agriculturists (agriculture, fisheries & livestock) are directly working under his position for the development of the sectors.

2) Mr. Sattyanarayan Roy- Programme Manager (Fisheries), M.Sc. in Fisheries from Bangladesh Agricultural University working with RDRS Bangladesh for 10 years. This position is as a team leader of 11 Manger (Fisheries) involved in RDRS fisheries sector. Responsible for over all developing the fisheries sector as a whole. He has 15 years experience with various NGOs, project etc (BRAC, DANIDA project, EU project etc). He is involved in project design, planning, implementation, monitoring, action research, strategic planning etc.

3) Mr. Murad Hossain- Manager (Fisheries), B.Sc. in Fisheries (Hons) from Khulna University, Bangladesh working with RDRS. He has total 3 years working experience in aquaculture development. He also involved in action research, PRA training, fingerling rearing, hatchery production etc.

4) Mr. Rasheduzzaman-Manager (Fisheries), M.Sc. Zoology (Fisheries) from university. He is working with RDRS for 7 years. He is exclusively involved in aquaculture development at field level (pond culture, fingerling rearing, rice fish culture, action research etc). He has huge training on fisheries relation and action research.

5) Mr. Kabir Hossain- Assistant Manager (Fisheries), Graduate (BA) working in aquaculture sector for 6 years at grass root level. He is involved in extension, fingerling rearing, training, hatchery production etc.

3.6 Communication and dissemination strategies

This project will work with Government fisheries sector and private sector through integrated resource mobilization approach. Local government fishery officer will be mobilized for skill training and follow up. Stakeholders will be linked with these project activities through workshop, field visit, and campaign. Training materials and leaflets will be developed for disseminating the project activities.

3.7 Intellectual Property and other regulatory compliance

RDRS began life dedicated to the rehabilitation of refugees after the 1971 War of Independence and, over the past three decades, it has expanded its role to challenge the causes of continuing poverty, ignorance and powerlessness. Established as the Bangladesh field programme of the Geneva –based Lutheran World Federation /Department for World Service, RDRS initially relied heavily on expatriate staff, knowledge and funding for senior management and policy. In 1997, RDRS was transformed into an autonomous national NGO, governed by a local Board of Trustees and run by Bangladeshi managers. Rangpur Dinajpur Rural Service Bangladesh (RDRS Bangladesh) registered under the NGO Affairs Bureau of Bangladesh on 22/04/1981, Registration No 003.

RDRS works in 10 northern districts of Bangladesh. A total of 337,661 households with 1.9 million programme participants are involved with this organization. RDRS continues to serve its main target groups, the landless and marginal masses but also focused interventions to assist specially disadvantaged including Ultra poor, tribal communities, Char and Riverine dwellers and Tomorrow's Poor (Small farmers).

4. PROJECT OUTCOMES AND ADOPTION

The purpose of this section is to identify the community benefits that might be expected from the project if its outputs are achieved.

4.1 Social benefits

Women member and children of the families will be encouraged to participate in the pond site training. These will develop knowledge and skill of the farmers' family. Children will have increased knowledge that will help them in extending support to family activities for livelihood improvement without hampering their priority task like education. Women and children will participate in family decision-making process with increased knowledge and information. Pond side training sessions might be a vehicle for disseminating emergency information regarding disaster, family nutrition, and environmental messages. All these will help community people for better livelihood maintain. With increased fish production as well as income, farmers might be able to invest more for education and other household purpose.

4.2 Economic benefits

Culturing fish in their ponds will increase the family income. These resource poor farmers will be purchased food during seasonal food crisis period (called monga) by increased income. Family fish consumptions will be increased that will support family nutrition. The under utilized resources will become proper utilization for improve livelihoods of the people. More fish will contribute an increase national fish production.

4.3 Environmental benefits

This is an environment friendly culture technology. No fish poison /insecticide will be used in ponds. Ponds including the dikes will be cleaned for fish culture that will improve household environment. Farmers will be encouraged for tree plantation in ponds dikes. As a whole community people will be aware about environment friendly culture technology.

4.4 Enhancement of capacity

Through this project, service-rendering capacity by RDRS will be enhanced regarding pond site practical training conduction and mobilizing the farmers for fish culture. Resources mobilization will be increased through strengthening liaison with government and private sector. Fish hatchery production capacity and fry traders capacity in producing fingerling will be increased through skill training and information. Farmers' capacity in stocking quality fingerlings as well as management the ponds for good harvest will be increased.

SECTION 5. BUDGET

5.1 Request from AwF

In Bangladeshi currency Tk.

Item	Year 1	Year 2	Year 3	Year 4	Total
Salaries	80,000.00	85,000.00	90,000.00	95,000.00	350,000.00
On-costs	-	-	-	-	-
Supplies & services	210,000.00	50,000.00	50,000.00	50,000.00	360,000.00
Travel	15,000.00	20,000.00	20,000.00	25,000.00	80,000.00
Capital	15,000.00	-	-	-	15,000.00
Total	320,000.00	155,000.00	160,000.00	170,000.00	805,000.00

5.2 Contribution to project (fill in separate table for each contributing agency or individual)

RDRS contribution:

Item	Year 1	Year 2	Year 3	Year 4	Total
Salaries	150,000.00	150,000.00	150,000.00	150,000.00	600,000.00
On-costs	-	-	-	-	-
Supplies	50,000.00	50,000.00	50,000.00	50,000.00	200,000.00
&					
services					
Travel	20,000.00	20,000.00	20,000.00	20,000.00	80,000.00
Capital	230,000	-	-	-	230,000.00
Total	450,000.00	220,000.00	220,000.00	220,000.00	11,10,000.00

SECTION 6. ADDITIONAL DOCUMENTATION

Letters of support

• Any letters confirming compliance with regulations related to transfer of animals, quarantine on plant, soil and animal movement, biosafety, etc

· Short (half-page) curricula vitae (resumes, biodata) of the key project

Curriculum Vitae of Sattyanarayan Roy

1. Name : Sattyanarayan Roy

2. Father's name : Karuna Kanta Roy

3. Permanent address : Vill-Daulatpur, P.O-Parbatipur Natun Bazar, Upazila -

Parbatipur, Dist- Dinajpur

4. Mailing address : Programme Manager (Fisheries),

RDRS,

Dhap, Zail Road

Rangpur, Bangladesh

Tel-0521-62893, 62863; mob-0156307796

Email: <sattya_roy@yahoo.com>

5. Date of Birth : 04 November, 1963

6. Marital status : Married

7. Nationality : Bangladeshi.

10. Key Qualification

-Mr. Roy is a senior projects manager/coordinator and development expert focusing on Aquaculture development. Presently designated as Programme Manager (Fisheries) in RDRS with over all responsibility to develop fisheries sector of RDRS in northern Bangladesh. A total of 11 Manager (Fisheries) working for aquaculture development under this position.

-He obtained M.Sc. in Fisheries science from Bangladesh Agricultural University. His formal training was in fisheries science and he has undertaken courses in project management, PRA methods, log frame analysis, gender awareness, advocacy, child protection, multi-sectoral extension courses from abroad and in country. He has had over 15 years of experience in development sectors with NGOs and projects.1

-He has a comprehensive background in implementation and design of several

large development projects, planning, networking, partner NGOs capacity development, and alternative income generation especially in fisheries sector.

-Mr. Roy has extensive experience of leading and coordinating the teams of development professionals. As project coordinator/manager of several multilateral and bilateral development projects has been actively involved in donor communication, management, project proposal development, planning, project design, project monitoring, work plan preparation, staff training and management, office and staff administration, financial budgeting, strategic planning and over all field team coordination.

11. Professional Development –major training received

Overseas training received:

	i)	Multi-Sectoral Extension Course	4 months	<u>Vietnam</u> Denmark				
	ii)	Training on Strategic Management	12 days	Search Nepal, India				
	iii)	Project Management	5 days	AMI-Thailand				
In country:								
	i)	Training on Participatory Monitoring & Evaluation	8 days	RDRS				
	ii)	Training Child Protection Policy and Child participation	12 days	SC-Uk, Bangladesh				
	iiii)	Training on Facilitation Skill (PRA methods)	8 days	RDRS				
	iv)	Training of Trainers	15 days	BAFRU				
	v)	Training of Trainers	12 days	BRAC				
	vi)	Gender and good governance	3 days	Step towards, Bangladesh				
	vii)	Livelihood Approach	3 days	DFID Bangladesh				
	viii)	Logical Frame Work Analysis	6 days	RDRS				
	ix)	Training on Advocacy	3 days	RDRS/NCAS, India				
	x)	Gender Awareness course	3 days	RDRS				
	xi)	Training on PRA tools	5 days	RDRS				

SECTION 7. ADDENDA

The following is a record of correspondence on the project, following its evaluation by the AwF Technical Advisory Group (chaired by Dr. Geoff Allan, Chairman, TAG and AwF Director) and prior to the transfer of project funds from AwF to RDRS.

This information forms an integral part of the project document.

A. Extracts from message from Geoff Allan, dated 11-12-2006

The proposal clearly addresses issues that meet AwF's criteria and all our reviewers supported AwF funding. There were a couple of comments that need to be addressed:

 The species to be used need to be listed and more details supplied about how the proponents would establish an effective link with hatcheries supplying eggs/larvae and the small-scale fish farmers involved in the project.
The criteria for selecting farmers should be described.

3. More details are needed about how results will be transferred to other farmers at the conclusion of the project. 4. More details are needed about proposed credit arrangements for the supply of eggs/larvae for small-scale farmers and proceeds from the sale of fish.

I am delighted to report to you that provided the response to these questions is satisfactory, AwF is happy to support your request.

AwF will require a progress report detailing the project activities after the socioeconomic survey has been completed and the small-scale fish farmers have been identified as well as a final report when the project is concluded. We would also appreciate photographs of the project as well as a summary suitable for us to place on the AwF website describing the project. Please send the responses to the questions above, the approximate time when we might expect the reports, the web site summary and photos and an invoice and details of how AwF should transfer funds, to Michael New.

B. Extract from response from Sattyanarayan Roy, dated 3-1-2007

The project will be launched from February 2007 if everything is going well. The farmer selection and socio-economic survey will be completed by February 2007 and report can be send by first week of March 2007. The project summary for website could be sent immediately but photos for the selected farmers engaged with project activities will take little time i.e. till their selection. I think the project photograph could be sent by first week of March 2007. The project closing report must be sent within one month after project completion. We will also submit you six monthly progress reports.

C. Supplementary information provided by Sattyanarayan Roy, dated 3-1-2007

1. The species to be used:

A total of 60 fingerlings of will be stocked per decimal (40 m²) of water area. The selected species are

Silver carp 10 Catla 5 Rui 6 Mrigel 10 Common carp 2

Sarputi 25

Grass carp 2

Linkage between hatcheries and fish farmers

Generally the fish farmers collect their required fingerlings from the fry traders who are not accountable for quality fingerlings. This project will select interested farmers for producing quality fingerlings. A total of 4 (Lalmonirhat 2 & Kurigram 2) farmers will be selected. They will be developed through training and credit support. These trained farmers will be linked with RDRS fish hatchery and Government fish hatchery for quality fish spawn of different species. They will produce the required fingerlings for whole years for this project farmer. The project farmers will collect their required fingerlings from these selected fingerling suppliers only. The project staff will monitor this. Any feedback from the farmers regarding quality and size of supplied fingerlings will be raised to the hatchery operators and to the fingerling rearers. Thus an effective linkage among fish hatcheries, fish growers and fingerling rearers will be developed for ensuring quality fingerlings in the project area.

2. Criteria for selecting farmers:

RDRS works with landless (0.0 - 0.50 acre land), marginal (0.51-1.50 acre land) & small farmer (1.51-3.00 acre land). This project will target the poor farmers. So the farmers for this project will be selected from the mentioned categories farmers who have a cultivable pond of 15 - 25 decimal (600-1,000 m²) of water area. Women farmers will be given emphasis. For smooth supervision, it will be considered to select the farmers from the closer villages based on the above criteria.

3. Result transfer:

From the third year, field days will be organized for demonstrating results of this project to other pond owners. Not only the pond owners but also the other stake holders like local NGO/GO aquaculture practitioners, fry traders will be invited in field days. Through these field days farmers will be encouraged, informed about sources of quality fingerlings, culture practice etc. The interested farmers will be linked with the fingerling rearers and will be treated as contact fish growers. The fingerling rearers/suppliers will act as extension agent in the locality for sustainable aquaculture. Secondly, this approach will be replicated in new areas for new farmers with the revolving fund. The lessons learned through this project will be published as news letter and circulated to other stakeholders. Besides workshops, the end result will be disseminate through folk songs at the community level, mass media like daily newspapers, television channel etc.

4. Credit arrangement:

The farmers will be supplied with fingerlings, fertilizers, lime and feed. An estimated per decimal (40 m²) input cost is as follows:

Per decimal (40 m²) cost (estimated)

Fingerlings 60.00

Fertilizer 40.00

Feeds 40.00

60

Lime 15.00

Netting & others 10.00

160.00

The project farmers will receive input cost at an average of Tk 3200.00 for each. This input cost will be provided 2 times (2 culture year) to each farmer. This is interest free credit assistance for fish culture for poor farmers. At the end of each year, farmer will repay the principal amount from the sale of fish and will receive second year input cost and so on. The farmers will enjoy the excess benefit from fish sale. After two culture years, the farmer will be merged with RDRS main credit programme. The recoverable credit of this project will be replicated to other new framers for two-culture years again. Thus utilizing this credit assistance of this project will benefit more farmers.